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Different Phases of Journalism

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Amity School of Communication
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EDITORIAL

Different Phases of Journalism

The present era is all revolving around data. Data is around which all reporting, news, research are built up.

The wide range of digital information and statistics being used in journalism provides a depth to the stories and news shared and goes a long way in validating the information shared. In this digital age, data plays a crucial role in catching the eye of the readers and wider acceptance of the information dissemination. Reporting and newswritingget a face-lift when supplemented with statistics and data. Data journalism is being practiced worldwide since long and gradually 'data journalism research' is also strengthening its footprints globally. Additionally, use of social media platforms in reporting is a newer phenomenon. The data harvested through social media platforms can be quite useful for journalistic articles.

The current issue comprises array of papers ranging from No-Mobile-Phobia (Nomophobia) and its impact on investor's decisions, Social Media and Protests Engagement and its linkage with gender based on the famous theory of Planned Behavior and Herd Behavior using PLS-SEM, study on Pilgrimages in Digital Media using qualitative content analysis,linkage of community participationand communication for economic and social empowerment through Microfinance Intervention of women SHG members. Through the technique of 'Sentiment Analysis and Time-series plots, Use of Twitter as a Customer Service Management Platform by Banks has been emphasized. Then critical need to engage conversations on health ecosystems via mass media platform of cinema in the incident of Bhopal Gas Tragedy in another interesting study followed by a systematic review based comprehensive work on knowledge sharing through virtual community depicting diverse theories on the topic, another Indonesia based study on Data-driven journalism emphasizes on using big data analytics in journalism. Another Indonesian study has given new insights for future climate change communication using social media platforms like Twitter. Highlighting impact of making greater use of Infographics over text during the current COVID – 19 pandemics is a Content Analysis based study on mass media.

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WHAT DRIVES RETAIL INVESTORS' INVESTMENT DECISIONS? EVIDENCE FROM NO MOBILE PHONE PHOBIA (NOMOPHOBIA) AND INVESTOR FEAR OF MISSING OUT (I – FOMO)

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ABSTRACT

The main objective of the study is to investigate the impact of No-Mobile-Phobia (Nomophobia) on retail investors' investment decisions. The relationship was further analysed by incorporating the role of Investor related Fear-of-Missing-Out (I-FoMO) which is different from traditional FOMO in Indian Financial Markets. The information asymmtary as generated by absence of mobile phone coupled with fear of missing important information in financial markets used for extensive investment decisions was determined by conducting survey method. A total of 265 retail investors were used for analysing the data and to explore this new phenomenon by Partial Least Square Structural Equational Modelling (PLS – SEM) in SmartPLS version 3.3.2. Further, Importance Performance Map Analysis (IMPA) was applied to investigate the critical factors for determining investor behaviour. The results revealed that there is a tendency to exhibit overtrading by retail investors in the state of fear of no investment information and lack of convenience due to news in smartphones. The similar phenomenon was experienced where Nomophobia lead extensively to I-FoMO which mediates the relationship of No-mobiles and investor behaviour. The study provides a new dimension to the theoretical frameworks in behavioural finance where media studies and information dissemination through smartphones to understand investor behaviour. The study not only validates NMP-Questionnaire in media studies but also investigates new scale of I-FoMOin behavioural finance to understand the aspects of fear and anxiety among human behaviour in Information Systems (IS) Research.

Keywords: Nomophobia, I-FoMo, Fear of Missing Out, SmartPLS, Information Systems, PLS-SEM.

INTRODUCTION

Investment is one of the most important decisions that consumers make in their lives, as it involves risk and can have life-long consequences for their wealth management (Raghubir and Das, 2010; He et al., 2008).The investment decisions attain much more significance with the use of modern technology and the rapidly changing information in the stock markets. The use of mobile phone has brought radical changes in the investment decisions by the Indian population, since the initiation of the liberalization policies in India in the 1990s. With the explosive growth in the availability and affordability of the mobile phones in societies, even in the poor and most remote communities, the investors are using the digital communication revolution in making their investment decisions (Shana et al., 2019). The mobile phone has become the primary access point to the information and for social media interaction, with nearly five billion current active users in the global market, which is many times the number of active internet-connected personal computers (Shana et al., 2019). However, two negative phenomena of no mobile phone phobia

(Nomophobia) and the fear of missing out (FOMO) on social media have emerged with the modern technology (Gezgin et al., 2019), which present a high risk especially for the investors, who are dependent on the technology for making their investment decisions.

The Nomophobia has created a state of panic in the minds of the investors about staying away from their smartphones, and creating a sense of anxiety for being out of the network range or out of battery power (Gezgin et al., 2019). This has resulted in several behavioural pattern among Nomophobic individuals (Durak, 2018). The Nomophobic individuals develop the habit of checking their mobile phones frequently, sleeping with their mobile phone besides their pillow, and always carrying an extra battery power bank with them (Durak, 2018). These individuals spend lots of time on social media to reduce their anxiety in the FOMO on important information (Franchina et al., 2018; Przybylski et al., 2013; VandenAbeeleand and Van Rooij, 2016). Therefore, Nomophobia individuals follow up the messages on social media in the mobile applications frequently and obtain updates about developments in the country and social environment.

The research literature in this area has only focused on the prevalence of Nomophobia and FOMO among the younger generation, and the common disorders due to the excessive use of smartphones and social media (Ak and Yıldırım, 2018; Gezgin and Çakır, 2016; Gezgin et al., 2017; Gezgin, 2017; Gőkler et al., 2016). However, there have not been any studies to our knowledge that focus on understanding the behavioural patterns of Nomophobic individuals.

The mobile phones may have increased the access of the investors to the real-time investment information; however, it has vastly impacted their behavioural patterns in making investment decisions (Brown et al., 2015). The investors develop I-FoMO, the fear of missing out on investment information, if they don't remain continuously connected (Saft, 2015; Wadhwa, 2017). The stochastic information on social media, the lucrative looking advertisements, and I-FoMO on investment information interact together to affect the investors' investment decisions. Past quantitative studies found that investors' investment behaviour affects capital markets (Miller and Skinner, 2015), market information (Bushee et al., 2010), trading behavior (Engelberg and Parsons, 2011), cash flow (Drake et al., 2014), and market pricing efficiency (Twedt, 2016). However, there are no combined qualitative and quantitative studies that study the impact of Nomophobia and I-FoMO on investors' investment decisions. In order to investigate whether there is an impact of Nomophobia on retail investors' decisions by incorporating the mediating effects of I-FoMO, the present study offers a novel approach in interdisciplinary studies of behavioural finance, marketing and media studies. The major objectives of the study are: (a) to investigate the impact of Nomophobia on retail investors' decision making in financial market and (b) to analyse the mediating effects of I-FoMO between the relationship of Nomophobia and Investor behaviour in Indian Financial markets.

The rest of the paper is organized as follows. Section two provides theoretical framework and conceptual model under the head of Literature Review. Section three presents research methods and techniques applied to investigate the phenomenon. Section four presents data analysis and results of the study. Section five explains the theoretical and managerial implications followed by limitations of the study and the directions for future research.

LITERATURE REVIEW

Theoretical Framework

In behavioural finance, there are many biases which investors tends to exhibit while incorporating their investment decisions in any financial market. Human beings are generally called as social animals and thus possess an inherent bias commonly followed in financial market is called as Herd Behaviour. In any capital market, investors exhibit behaviour where they follow groups to avoid any predatory activities, which might land them up in financial loss (Baddeley, 2010; Kumar and Goyal, 2015; Spyrou, 2013). In this regard, the most common tool used is a mobile (smart) phone to gather information either through social media pages, brokers, investment advisors' tips, and many other platforms to keep them updated. The continued usage of smartphone for generating information is useful also, but making investors addictive to compulsory checking habits too (Chiu, 2014; Lee, 2014). Thus, in case the mobile phone is lost or in any working day and investor does not possess this vital organ for taking strong and bold investment decisions, the investors might represent a distressed and depressed behaviour and can lead for higher anxiety levels full of fear and irrational decisions. This phenomenon was addressed in detail by 20-item Nomophobia questionnaire (NMP-Q) by Yildirim and Correia (2015). The present study is adopting this 20-item NMP-Q to investigate the fact that how much it has an impact on investors' decision making and contributing to herd behaviour in financial market. The scenario of Nomophobia corroborates the findings of Compensatory Internet Use Theory (Kardefelt-Winther, 2014), where people go for online transactions to alleviate negative feelings and adverse life situations caused by an addition, that is, no-mobile-phones and investment decisions.

The another aspect in the present study is Investor Fear of Missing Out (I-FoMO), where investors are largely effected by the information disseminated by mobile devise applications on non-professional investors' decisions (Clor-Pronell et al., 2019). The I-FoMO scale is different from the traditional FOMO scale that exists in social media setting as proposed by Przybylski et al. (2013). The scale developed in I-FoMO states that mobile phones have a direct relationship with the investment decisions of retail investors and varies under different zones of I-FoMO. The presence of I-FoMO can also trigger overtrading in terms of speculative activities as to satisfy greed or to reduce the future grief of losing vital investment, the investors tends to exhibit the biases of "Hot Hand" fallacy and Gamblers' fallacy succumbing to Wobegon Lake effect in financial market (Maciejewski and Lesznik, 2020). Thus, the theoretical foundations of the present study is based on Nomophobia (Yildirim and Correia, 2015) leading to diverse investors decisions (Livanas, 2011; Maciejewski and Lesznik, 2020; Shiva and Singh, 2019) under the scenario of Investor FoMO (I-FoMO) scale as developed by Clor-Pronell et al., 2019.

The role of Investor FoMO as a mediator is thoroughly investigated in this study to give new insights in the existing literature especially in a developing economy like India comprised of second largest population of the world.

Conceptual Model

The mobile phones have become a part of life for not only the younger generations, but also for people of all age groups, who are now dependent on the mobile phones for their daily needs. There are smartphone applications for almost everything to sustain daily life through communication, recreation, entertainment, education, and social media, and for catching up with the latest developments in today's world (Alfawareh and Jusoh, 2014). With an increased dependence on the mobile phones, many negative impacts have also been noticed due to the excessive use of mobile phones, which include reduced concentration and focus (Alt, 2015), increased loneliness and depression (Casey, 2012; Gezgin et al., 2018), and sleep disorders (Demirci et al., 2015; Gezgin, 2018; Hughes and Burke, 2018; Lemola et al., 2015). This has resulted in two major behavioural issues among the users of mobile phone, Nomophobia and FOMO.

Nomophobia and Investor Behaviour

The Nomophobia is the anxiety syndrome related to the non-availability of the mobile phone (King et al., 2014). People get panic attacks in the fear of staying away from their mobile phones, and in getting out of the network coverage area or out of battery power. These panic attacks can lead to complex behavioural patterns seen in the Nomophobic individuals, including frequently checking their mobile phones, not paying enough attention to the present situation around them, and depression in the long run. Several studies have been conducted in the past to understand these behavioural patterns in the Nomophobic individuals, especially focusing on the younger generations' performance in studies (Burucuoglu, 2017; Durak, 2018; Erdem et al., 2016; Gezgin, 2017; Gezgin and Çakır, 2016; Gezgin et al., 2018; Gezgin et al., 2017; Sırakaya, 2018; Yıldırım et al., 2016). Thus, similar phenomenon can be investigated for Nomophobia on investor behaviour caused by lack of information in financial markets (Saft, 2015; Wadhwa, 2017 especially in the importance of media's role for information dissemination in capital markets causing information asymmetry (Bushee et al., 2010; Clor-Pronell et al., 2019; Engelberg and Parsons, 2011; Miller and Skinner, 2015). On these premise, we hypothesize that:

H1: Nomophobia influences investment decisions of the retail investors.

I-FoMO and Investor Behaviour

The FOMO syndrome is related to the fear and anxiety of missing out on important information and developments through not being connected to the social media all the time (Przybylski et al., 2013). People with FOMO syndrome also suffer from panic attacks, as they check their mobile phones frequently to continuously update themselves with the latest developments in the social environment (for example, family, friends, and places around them) (Franchina et al., 2018; Przybylski et al., 2013; VandenAbeeleand and Van Rooij, 2016). Therefore, the behavioural patterns of FOMO individuals are very similar to the Nomophobic individuals, and both suffer from mood swings, and lower levels of satisfaction with life (Przybylski et al., 2013). Studies conducted on FOMO individuals also found a strong correlation between excessive use of social media and high levels of stress, and fear of loneliness (Beyens et al., 2016).

The retail investors in India are also making their investment decisions through mobile phone applications. A recent survey of investors indicates that the younger investors are making almost all their investment decisions through mobile phone applications (Shana et al., 2019). This is because of the availability of large number of investment applications on mobile devices and easy access to the real-time market information (Brown et al., 2015). The dependence of retail investors on mobile phones for making their investment decisions has also resulted in more retail investors having Nomophobic and FOMO syndrome (Saft 2015; Wadhwa 2017), and these individuals find it difficult to ignore interruptions in investment information (Basoglu et al., 2009). In the past literature, the FOMO related to the investment information has been given a distinct identity (I-FoMO), to make it different from the traditional FOMO related to the social information (Shana et al., 2019). Past studies have found that I-FoMO is more effective in retail investors decision making if received in smaller pieces with breaks in between (Kupor and Tormala, 2015). The length and delivery mechanism of the investment information (email and text alerts) release also has an impact on I-FoMO retail investors (Blankespoor et al., 2018). On these premises, we posit next two hypotheses:

H2: Nomophobia influences the I-FoMO behaviour of the retail investors, and
H3: I-FoMO influences the investment decisions of retail investors.

Mediating Role of I-FoMO

The literature on the behaviour of Nomophobia and FOMO individuals has been building rapidly (Shana et al., 2019). The majority of the studies are based on the quantitative design models, where the focus is to identify the variables leading to the symptoms of Nomophobia and FOMO among individual investors (Miller and Skinner, 2015). FOMO has been investigated in many studies where mediation effects are documented in many studies (Abel et al., 2016; Alt, 2015; Beyens et al., 2016; Buglass et al., 2017; Oberst et al., 2017; Przylylski et al., 2013).

However, there are no qualitative studies to our knowledge, which focus on how the behavioural patterns among Nomophobia and I-FoMO individuals impact the investment decisions of retail investors (Basoglu et al., 2009; Clor-proell et al., 2019; Schuur, 2017). Our study fills that gap using a conceptual model that integrates qualitative and quantitative data. As more and more retail investors fall into this category of Nomophobia and I-FoMO individuals, it is important to understand how their investment information, obtained through the use of mobile phones, impacts their investment decisions. The retail investors' investment behaviour further affects capital markets, market information asymmetry, trading behavior, cash flow, and market pricing efficiency (Shana et al., 2019). The results of our study fill the gap in literature through an understanding of the individual retail investors' behaviour, who have been exposed to these two negative concepts (Nomophobia and FOMO), using an interpretation of the quantitative and qualitative findings. Thus, we focus on seeking an answer to the hypotheseswhether Nomophobia and/or FOMO behaviour positively influences the investment decisions of the retail investors, and if FOMO mediates the relationship between the Nomophobia and investment decisions by the retail investors. Thus we propose another hypothesis:

H4: I-FoMO mediates the relationship between the Nomophobia and investment decisions by the retail investors.

The study would be incomplete with the control variables and it for this reason, the literature review suggested the under the Investor FoMO environment on investor decisions in a financial market, vital factors like age, gender and education of investors play a pivotal role in both investment decisions and I-FoMO (Alt and Boniel-Nissim, 2018; Przybylski et al., 2013). Thus, by controlling the effects of age, gender and education of retail investors, the impact of Nomophobia and I-FoMO on investors' decisions were investigated and the proposed conceptual model was shown in Figure 1.

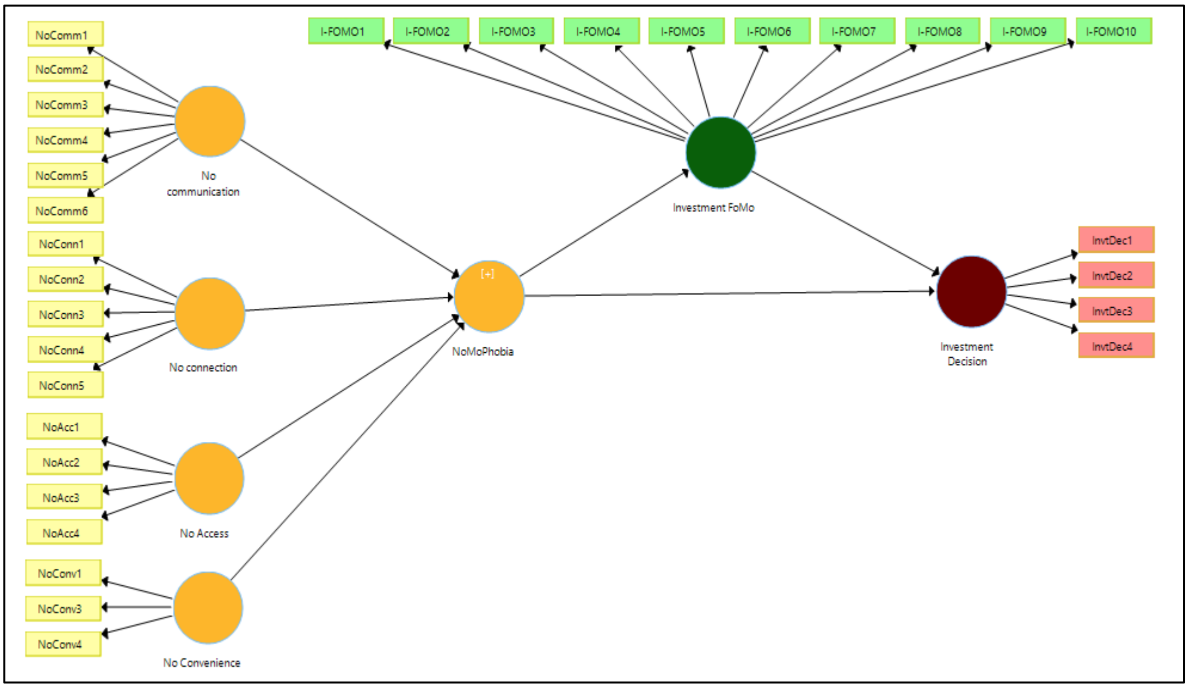

Figure1: Proposed Conceptual Model

RESEARCH METHODOLOGY

The present study was conducted on the major financial markets located in Mumbai and Delhi. Further data was collected from other major cities of India to represent the behaviour of Indian investor by an online questionnaire due to the lockdown imposed during the months of March to May 2020. Online survey was conducted by applying non-probability purposive sampling method to collect data through a questionnaire as mentioned in Appendix – 1. The questionnaire was adapted from the 20 item explored by Yildirim and Correia(2015) in order to validate the constructs of Nomophobia, and from Clor-Proell et al.(2019),Przybylski et al.(2013, p.1841) for Investment related Fear of Missing Out 10 item construct (I-FOMO). Finally, the construct of investment decision was obtained from the studies of Livanas (2011), Shiva and Singh (2019), and Maciejewski and Lesznik (2020). All items were measured on a 7-point scale ranging from 1 – 7, representing strongly disagree to strongly agree.

In total, 265 correct responses were received and used for final analysis by Partial Least Square Structural Equational Modelling (PLS-SEM) in SmartPLS Software 3.3.2 version. PLS – SEM is considered as a preferred method in this analysis since the conceptual model contains the construct of Nomophobia, which is a second order construct to be assessed by formative modelling. Further, where the model consists of reflective and formative modelling, then PLS-SEM in SmartPLS offers higher flexibility in such complex models and thus is widely accepted multivariate analytical method (Hair et al., 2017; Hair et al., 2019; Nitzl et al., 2016; Richter et a., 2016; Rigdon, 2016; Ringle et al., 2014; Ringle et al. 2015; Hair et al., 2020). We have applied the PLS-SEM approach to study the impacts of Nomophobia and I-FoMO on investors' behaviour towards their investment decisions. The sample size was determined by applying G*Power software 3.1.9.7 version in order to investigate the minimum required sample size (Faul et al., 2007; 2009). The actual power of 0.95 was duly obtained by a minimum sample size of 226 respondents, whereas the study used a sample size of 265 which satisfies the appropriate sample size requirements. The minimum sample size estimations are reported in Figure 2.

bias in the study (Babin et al., 2016; Podsakoff et al., 2003).

RESULTS

Descriptive Analysis

The descriptive statistics of the study are well reported in Table 1. All surveyed investors were actively engaged in the investment decisions related to buying and selling of stock. The demographic figures show that majority are males (53.2%), young investors

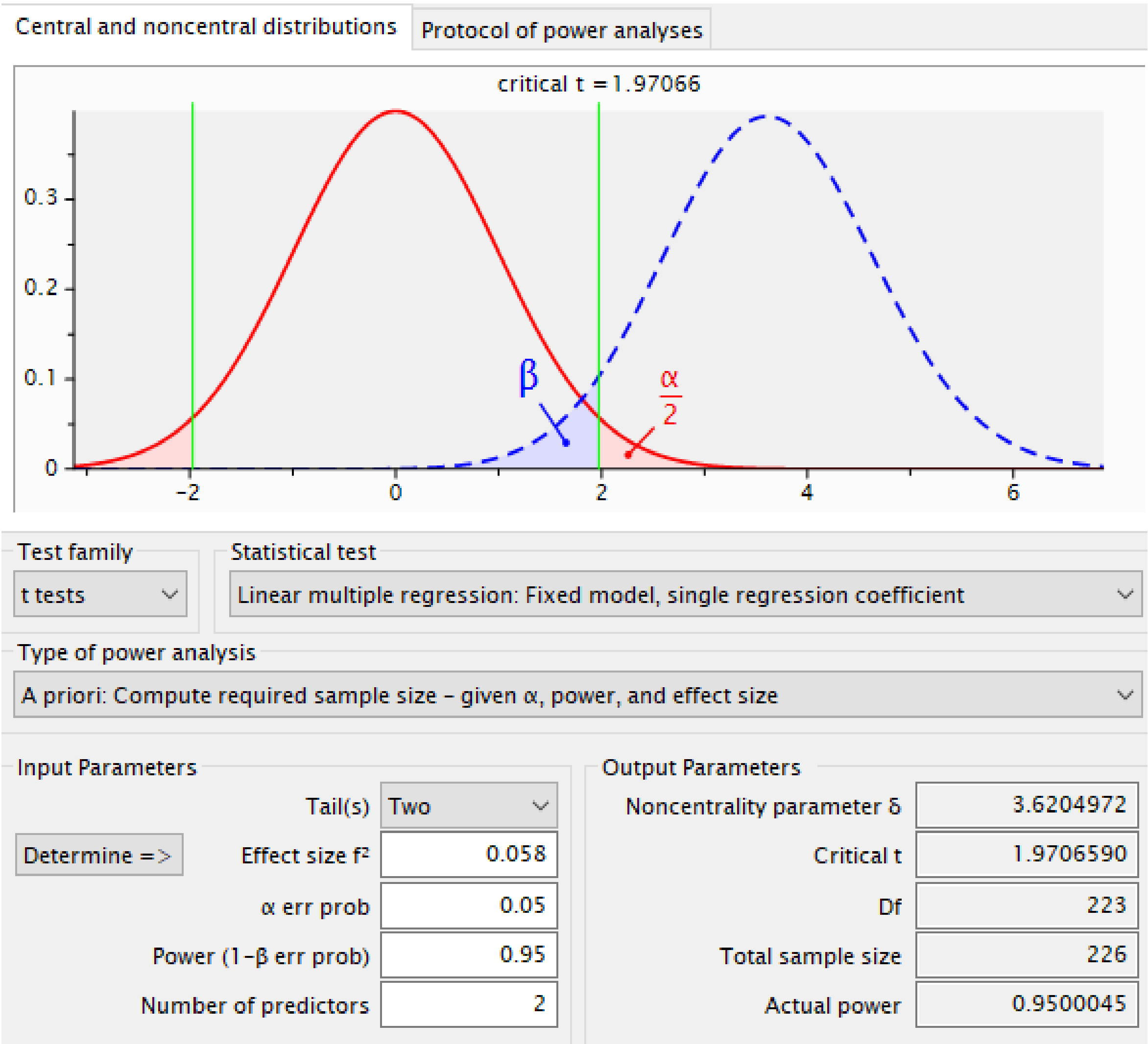

Figure 2: G*Power Analysis (Faul et al. 2007; 2009)

Source: Authors' Calculations

Finally, Harman' single factor analysis was applied to investigate whether any Common Method Bias exist in the study. In this process, all statements were loaded to single factor and the results revealed that there is a total of 34.007percent variance, which is below the threshold maximum limit of 50 percent variance, recommending no common method

(74.3%), well-educated (52.1%) and experienced (57.9%) for investing money in stock with a good deal of risk appetite (55.1%).

Measurement Model Assessments

The study investigated outer model specifications applying internal reliability and convergent validity checks of the model. In partial least square structural Equational modelling, the study used Confirmatory study(Schuberth, Henseler and Dijkstra, 2018; Nitzl et al., 2020).

Table 1: Sample demographics (N=265)

Age	Frequency	Percent	Educational Qualification	Frequency	Percent
Below 30	197	74.3	Graduate	77	29.1
30-39	44	16.5	Post Graduate	138	52.1
Above 40	24	9.1	Professional	50	18.8
	265	100		265	100
Gender			Trading Experience		
Male	141	53.2	Up to 5 year	114	43.1
Female	124	46.8	6 - 10 years	69	26.1
	265	100	Above 10 years	82	31.8
				265	100
Income			Risk Aversion		
Below 30000 p.m.	113	43.80	Risk Averse	119	44.9
30000 – 50000 p.m.	110	42.64	Risk Lover	146	55.1
Above 50000 p.m.	35	13.56		265	100
	258	100			
Marital Status					
Married	178	67.2			
Unmarried	87	32.8			
	265	100			

Source: Author's Calculations

Composite Analysis (CCA), whereby Nomophobia was investigated by reflective-formative measurement assessments as proposed by Yildirim and Correia(2015). In the first stage of Two-Stage reflective-formative assessments, first the latent variable scores of all four dimensions of Nomophobia were assessed by applying Mode A. Then the scores of first order constructs were applied to measure the second-order construct in a formative mode in the second stage. Therefore, second-order composite was designed to investigate the impact on I-FOMO and investment decisions of retail investors in the

All internal reliability checks were investigated through Cronbach's Alpha, Dijkstra and Henseler'srhoA, Composite Reliability (CR) which were above the threshold limit of 0.70 (Ali et al., 2018; Hair et al., 2017; 2020). The Cronbach's Alpha for No convenience construct was below the value of 0.70; however the value of rho A was sufficiently above the limit of 0.70 to establish the reliability of the constructs. (Hair et al., 2019). The convergent validity was also established with average variance extracted (AVE) score, which were sufficiently above the threshold value of 0.50 and above for all the major reflective constructs in the model (Fornell and Larcker, 1981;Hair et al., 2019). The findings of internal reliability and convergent validity are explained in Table 2.

The study further investigated discriminant validity with the help of Fornell and Larcker's Criterion (1981) whereby the under root of AVEs of the constructs on the diagonal was higher than their inter-item correlation values. Table 3 explains that each construct had a clear distinction with other and thus the study is fit

Table 2: Quality Criterionfor reflective model assessments and Composite Model

Construct	Items	Type	Loading/ Weights	Cronbach's Alpha	rhoA	CR	AVE
No Communication	NoComm1	Reflective	0.777	0.821	0.832	0.871	0.532
	NoComm2		0.574				
	NoComm3		0.793				
	NoComm4		0.769				
	NoComm5		0.673				
	NoComm6		0.766				
No Connection	NoConn1	Reflective	0.758	0.758	0.772	0.837	0.509
	NoConn2		0.686				
	NoConn3		0.738				
	NoConn4		0.601				
	NoConn5		0.771				
No Convenience	NoConv1	Reflective	0.834	0.690	0.71	0.828	0.617
	NoConv3		0.816				
	NoConv4		0.699				
No Access	NoAcc1	Reflective	0.788	0.737	0.749	0.835	0.559
	NoAcc2		0.648				
	NoAcc3		0.760				
	NoAcc4		0.787				
I-FOMO	I-FOMO1	Reflective	0.643	0.863	0.863	0.893	0.511
	I-FOMO10		0.714				
	I-FOMO4		0.68				
	I-FOMO5		0.733				
	I-FOMO6		0.787				
	I-FOMO7		0.697				
	I-FOMO8		0.747				
	I-FOMO9		0.709				
Investment Decisions	InvtDec1	Reflective	0.805	0.769	0.831	0.854	0.602
	InvtDec2		0.695				
	InvtDec3		0.600				
	InvtDec4		0.958				
Nomophobia		Composite		NA	NA	NA	NA
	No Comm		0.885				
	No Conne		0.785				
	No Conve		0.891				
	No Access		0.784				

***NoConv2; I-FOMO2 and I-FOMO3 were deleted from analysis due to low loading**

Source: Author's Calculations; Note: TF-Trading Frequency

Table 3: Discriminant Validity assessments

Constructs	Investment Decision	Investment FoMO	No Access	No Convenience	No communication	No connection
Investment Decision	**0.776**					
Investment FoMO	0.622	**0.715**				
No Access	0.545	0.575	**0.748**			
No Convenience	0.559	0.706	0.605	**0.785**		
No communication	0.64	0.625	0.539	0.681	**0.73**	
No connection	0.51	0.607	0.698	0.653	0.563	**0.714**

Source: Author's Calculations

for conducting the final analysis.

In addition to the traditional method of investigating discriminant validity of the constructs, a new criterion of Heterotrait-Monotrait ratio of correlations (HTMT) is also used in this study. As per the latest criterion, all HTMT values must be less than 1 as suggested by $HTMT_{inference}$ method, however to be on a stricter note Heterotrait-Monotrait (HTMT) Ratio of correlations with a maximum ratio of 0.85 (Henseler et al., 2015; Voorhees et al., 2016) and 0.9 permissible value (Gold et al., 2001). In this study, the HTMT values were exceeding beyond 0.90 in case of the constructs of No convenience and I-FOMO for which $HTMT_{inference}$ was applied to establish discriminant validity on a liberal side. Similar treatment was provided for the constructs of No connection and No access where the HTMT value was 0.924, however the confidence intervals for $HTMT_{inference}$were well within the limits, thereby establishing the uniqueness of all the constructs as per the empirical standards as represented in Table 4.

Structural Model Assessments

The relationship between the constructs and their predictive relevance were examined in structural model assessments (Hair et al., 2017). The process was conducted with the bootstrapping process with recommended 5000 bootstraps without sign change in order to find out the required p-values for the hypotheses framed in the study (Hair et al., 2020). Firstly, in the structural inner model, each set of he predictor constructs are assessed separately by considering them as a formative measurement models (Cassel et al., 1999). It is for this purpose, tolerance and Variance Inflation Factor (VIF) values were calculated, which were found to be below 3.33 (Diamantopoulos et al., 2008). The inner VIFs were found to be below the threshold limits with Investment FOMO (2.234) and Nomophobia (2.234) on Investment Decisions to report that no collinearity issues were involved in the study (Hair et al., 2017). After investigating for any collinearity issues in the inner model, the next step was to check the significance and relevance of the path coefficients, which could have varied between -1 to +1 by following the bootstrapping process with 5000 subsamples in PLS Algorithm. In the structural model, Nomophobia was assessed as a second-order composite for which latent variable scores of four reflective constructs were considered as a formative assessment. The outer weights of all second – order composite were found to be significant at 1 percent level and different from zero (Van Riel et al., 2017; Henseler, 2017; Muller et al., 2018; Nitzl, 2020). The structural model assessments are represented in Figure 4 as below:

The coefficient of determination (R^2) of the

Table 4: HTMT Ratio of Correlations for Discriminant Validity Assessments

HTMT Criterion	Investment Decision	Investment FoMO	No Access	No Convenience	No Communication
Investment Decision					
Investment FoMO	0.754 $CI_{.900}$[0.630;0.854]				
No Access	0.711 $CI_{.900}$[0.539;0.835]	0.71 $CI_{.900}$[0.566;0.818]			
No Convenience	0.751 $CI_{.900}$[0.611;0.857]	**0.926** $CI_{.900}$[0.843;0.991]	0.819 $CI_{.900}$[0.637;0.959]		
No communication	0.77 $CI_{.900}$[0.643;0.875]	0.743 $CI_{.900}$[0.596;0.850]	0.682 $CI_{.900}$[0.510;0.818]	0.886 $CI_{.900}$[0.764;0.973]	
No connection	0.642 $CI_{.900}$[0.472;0.779]	0.74 $CI_{.900}$[0.604;0.841]	**0.924** $CI_{.900}$[0.798;0.1.08]	0.869 $CI_{.900}$[0.707;0.988]	0.692 $CI_{.900}$[0.529;0.813]

Source: Author's Calculations

endogenous construct investment decision was found be significantly moderate to high at 50.1 percent. In behavioural sciences, any value of $R^2$0.20 and above is considered to be high (Rasoolimanesh et al., 2017), and it this study investment decisions of retail investors are significantly determined by Nomophobia and I-FOMO. Further, the goodness of fit criterion was investigated by the Standardised root mean square residual (SRMR) global fit indices.

In present times of research with PLS –SEM Models, a global model fit index like SRMR is vital to evaluate the goodness of it model (Hair et al., 2020). The study shows SRMR value of 0.067 in the model and is well below the threshold value of 0.08 to indicate that the model under the study had a good explanatory power (Henseler et al., 2016; Hu and Bentler, 1999). The structural model assessment and hypotheses testing is well explained by Table 5.

Table 5 results revealed that Nomophobia is the most prominent feature which positively influence I-FoMO by the investors to make investment decision in stock trading in financial market (β=0.746, $p<0.001$), thereby supporting H2.

The second most important impact was found

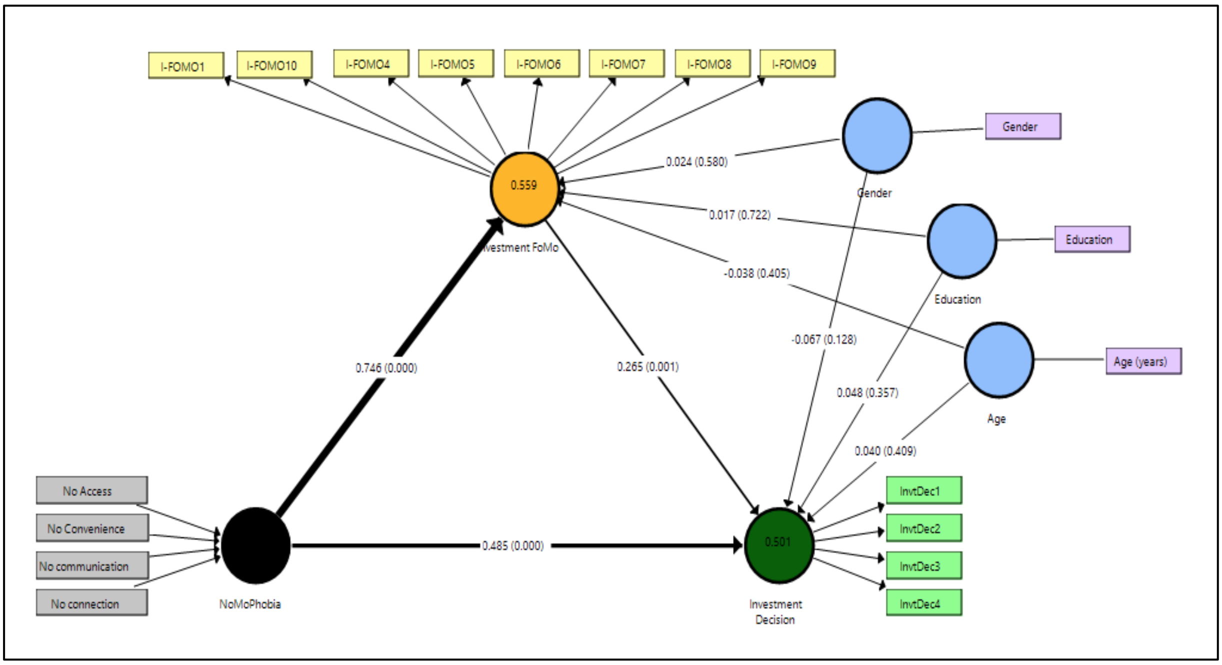

Figure 4: Structural Model Assessments with control variables

Table 5: Structural Model Assessments

Hypothesis	Path Relationships	Std. Beta	Sample Mean (M)	t-values	CI 2.5%	CI 97.5%	Decisions
H1	NoMoPhobia -> Investment Decision	0.485	0.489	6.321***	0.327	0.622	Supported
H2	NoMoPhobia -> Investment FoMO	0.746	0.745	16.698***	0.643	0.817	Supported
H3	Investment FoMO -> Investment Decision	0.265	0.261	3.401***	0.119	0.42	Supported
H4	NoMoPhobia -> Investment FoMO -> Investment Decision	0.198	0.195	3.277***	0.088	0.323	Supported
	Age -> Investment Decision	0.04	0.04	0.81	-0.06	0.133	Not Supported
	Age -> Investment FoMO	-0.038	-0.037	0.837	-0.13	0.05	Not Supported
	Education -> Investment Decision	0.048	0.05	0.928	-0.057	0.143	Not Supported
	Education -> Investment FoMO	0.017	0.015	0.353	-0.074	0.117	Not Supported
	Gender -> Investment Decision	-0.067	-0.067	1.552	-0.152	0.016	Not Supported
	Gender -> Investment FoMO	0.024	0.026	0.545	-0.065	0.11	Not Supported

Source: Authors' Calculations; Path Co-efficient (*p<0.01, **p<0.05, ***p<0.001)

to be from Nomophobia on investment decisions as reported by the investors in trading decision of stock purchases (β=0.485, p<0.001), thus supported H1. Next, investors under study exhibited that one I-FoMO is experienced by them then it leads to immediate investment decisions in financial market (β=0.265, p<0.001) and also supported H3.

Further, all control variables are found to be insignificant in the present study as the results are not supported at 5 percent. However, some inferences can still be drawn where investors above the age of 40 years are engaged in investment decisions whereas younger investors are more prone to I-FoMO. In addition to this, males are more prone to execute the investment decisions in comparison to females, whereas females are more likely to bear the fright of I-FoMO in financial markets. In terms of education, highly educated investor are driving their investment decisions carefully, whereas less educated investors are more likely to exhibit I-FoMO.

The predictive importance and relevance were tested through the effect size (f^2) and (Q^2) of the proposed model. The proposed limits of investigating the change in R^2 due to the impact of exogenous constructs on endogenous constructs are 0.02 (small effects), 0.15 (moderate effects) and 0.35 (large effects) (Cohen, 1988). In this study, I-FoMO (f^2=0.061) discloses weak effect size on Investment Decisions, however Nomophobia (f^2=0.206) is the most important composite which is responsible for explaining the endogenous variable of trading frequency in financial markets by retail investors. Lastly, predictive relevance of the structural model with second-order composite of Nomophobia and I-FOMO and Investment Decisions were investigated by Stone-Geisser's Q^2 as was found to be 0.284 for Investment Decisions representing with a moderate predictive relevance of the model (Geisser, 1975; Stone, 1974).

Any value above 0.02 can be used to generalise the results later on and have sufficient predictive power (Richter et al., 2016). The Stone-Geisser's Q^2 for I-FoMO was also found to be 0.270 which concludes that both independent constructs are important in the conceptual model of the study and the results can be generalised in different contexts ahead in future.

Importance Performance Map Analysis (IMPA)

In order to further strengthen the results of constructs under study, we have applied priority map analysis which is also termed as impact-performance map or importance performance matrix (Ringle and Sarstedt, 2016). The key objective of applying IMPA in this study is to identify which of the Scale, that is, Nomophobia or I-FoMO is important to shape up the performance of target construct of investment decisions (Fornell et al., 1996; Martilla and James, 1977; Ringle and Sarstedt, 2016; Slack, 1994). In this process the strong total effects towards the target construct were identified with a relatively high important construct in the study. IMPA is more suitably applied when there are mediators in the study and especially where there are complex mediation effects (Direct effects + Indirect Effects= Total Effects) with the help of Variance Accounted For (VAF) method.

Table: 6 Importance – Performance Map (Construct wise unstandardized effects)

Constructs	Importance	Performance
Nomophobia	0.262	76.199
Investment FoMO	0.747	79.711
Mean Value	**0.5045**	**77.955**

Source: Authors' Calculations

In Table Number 6, we have investigated Construct Total Effects of Nomophobia and I –FoMOon Investment Decisions for the unstandardized effects to facilitate the ceteris paribus interpretation of predecessor constructs' impact. The unstandardized effects are exactly similar to the unstandardized weights of Ordinary Least Square Regression modelling (Hair et al., 2010). The performance of the construct Investment Decisions is calculated as 77.562. In order to report the IMPA results, the direct effects, indirect effects and the total effects of antecedents on the consequent construct Investment decision is calculate by Variance Accounted For (VAF) by investigating the mediation effects.

The results of IMPA are reported in Table 7 as below:

Table: 7 Direct, Indirect and Total effects

Predecessor Constructs	Direct Effects on Investment Decisions	Indirect Effects on Investment Decisions	Total Effects on Investment Decisions	Significance of Total Effects?
Nomophobia	0.485	0.198	0.683	Yes
Investment FoMO	0.259	------	0.259	Yes

Source: Authors' Calculations

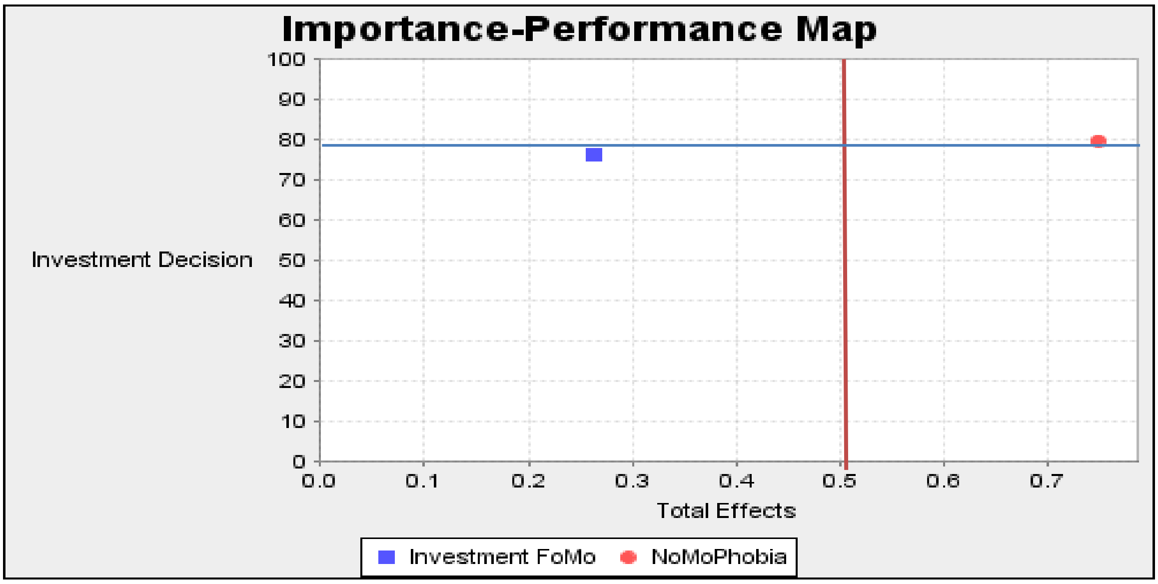

Figure 5: Adjusted Importance Performance Matrix for Investment Decisions.

The basic condition was also met that all indicators were having significant loading and weights and were all positive (Ringle and Sarstedt, 2016) to apply IMPA. The four quadrants were derived successfully based on the mean values of importance and performance values of the constructs.

In figure 5, one unit change in Nomophobia performance from 79.711 to 80.711 would enhance the performance of investment decisions from 77.562 to 78.242 with a total effect of 0.683. Further, for one unit increase from 76.199 to 77.199 in the performance in I-FoMO would raise the performance of Investment Decisions from 77.562 to 77.821. Therefore, out of the two predecessors of the dependent variables towards Investment Decisions, the most striking and important construct is Nomophobia which relatively more important construct in the four quadrants in the figure number 5 and would have more impact on the performance of Investment decisions of retail investors. Therefore, financial advisors, telecommunication industry, opinion makers and especially the media industry should critically look into the aspect of Nomophobia where lack of information in mobile phones would impact the mind of retail investors for erratic investment decision while making the investment decisions (Mirchandani and Gaur, 2019; Malik and Narula, 2019).

DISCUSSION AND THEORETICAL IMPLICATIONS

The major aim of the study was to investigate the impact of Nomophobia on the retail investor decision making in the financial market. The study confirms the belief that without mobile the fear of missing a vital information from the stock market would be very high. The relationship of Nomophobia on I-FoMO is extremely high in the Indian financial markets and the results are in line with the scale validation conducted by Clor-Proell et al., 2019. In media studies, technology and media do have considerable impact on investors' reactions and the behaviour is different for the normal decisions primarily accounting for speculative decisions (Cade, 2018; Guggenmos and Bennett, 2018; Brown et al., 2019). The study is in line with the theory of compensatory internet use theory to exhibit the aspect of gamblers' fallacy by doing overtrading in the absence of information asymmetry caused by Nomophobia. Thus, this line of argument is providing value to the existing literature where Nomophobia is accounting for the behavioural biases like herd behaviour and gambler's fallacy to account for excessive trade. Secondly, the scale developed by Clor-Proell et al. (2019) for I-FoMO is duly established and validated in this study to justify its impact on investment decisions in financial market (Basoglu et al., 2009; Schuur, 2017) and the phenomenon is altogether different from the traditional FOMO (Przybylski et al., 2013). Lastly, the aspect of investors' decision making options are duly validated in the present study (Maciejewski and Lesznik, 2020; Shiva and Singh, 2019). The proposed conceptual model can add value to the domain of behavioural finance where Nomophobia is considered to be an important construct coupled with I-FoMO yielding for investor biases.

Managerial Implications

The predictive relevance of I-FoMO was found to be moderate in this study thereby indicating that in diverse context and in difference financial markets, similar results might occur to represent the investor behaviour. The IMPA has further added a very importance dimension for the investment advisors, brokers, telecommunication companies and corporates to see that smartphones are the key ingredients and considered to be an inseparable part of human lives these days where lot of information can be fuelled to keep the investors engaged in the quality decisions. Further, in case investors face issues like fear, anxiety or exhibit irrational decisions, the same can be corrected by information symmetries by smartphones in financial markets. The aspect of I-FoMO is completely different from traditional FOMO and thus is more related to monetary gains to the investor by regulating the information and news provided by media agencies to their respective clients. The present study also caters to the psychologists to identify the additive behaviour of investors to their smartphones and can suggest way and means to rectify this erratic behaviour, but the cost of monetary gains.

LIMITATIONS AND FUTURE RESEARCH DIRECTIONS

The present study does possess certain limitations in the study, which accounts for other aspects of investor behaviour especially in the domain of behavioural finance. More constructs can be added to the existing model since the proposed model is a modest attempt to link the aspect of Nomophobia to investor behaviour. Further, the study can be conducted in South East Asian markets to investigate whether similar results are obtained by the investors, although the predictive relevance of the present model is good. The role of personality can be investigated ahead in this model where the moderation effects can provide diverse results for extrovert and introvert investors as has been tested for the traditional FOMO.

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Appendix A. Measurement Scales Used

Constructs	Type of Scale	Source

20 Item Nomophobia Questionnaire

Construct – 1: Not being able to Communicate

I would be worried because my family and/or friends could not reach me.	**7 point Likert** 1=Totally Disagree 7= Totally Agree	**Yildirim and Correia, 2015**
I would be anxious because I could not keep in touch with my family and/or friends.		
I would feel nervous because I would not be able to receive text messages and calls.		
I would be nervous because I could not know if someone had tried to get a hold of me.		
I would feel anxious because I could not instantly communicate with my family and/or friends		
I would feel anxious because my constant connection to my family and friends would be broken		

Construct – 2: Losing Connectedness

I would be nervous because I would be disconnected from my online identity	**7 point Likert** 1=Totally Disagree 7= Totally Agree	**Yildirim and Correia, 2015**
I would be uncomfortable because I could not stay up-to-date with social media and online networks		
I would feel awkward because I could not check my notifications for updates from my connections and online networks		
I would feel anxious because I could not check my email messages		
I would feel weird because I would not know what to do		

Construct – 3: Not being able to access Information

I would be annoyed if I could not look information up on my smartphone when I wanted to do so	**7 point Likert** 1=Totally Disagree 7= Totally Agree	**Yildirim and Correia, 2015**
I would be annoyed if I could not use my smartphone and/or its capabilities when I wanted to do so		
I would feel uncomfortable without constant access to information through my smartphone		
Being unable to get the news (e.g., happenings, weather, etc.) on my smartphone would make me nervous		

Construct – 4: Giving up Convenience

Running out of battery in my smartphone would scare me	**7 point Likert** 1=Totally Disagree 7= Totally Agree	**Yildirim and Correia, 2015**
If I could not use my smartphone, I would be afraid of getting stranded somewhere		
If I did not have a data signal or could not connect to Wi-Fi, then I would constantly check to see if I had a signal or could find a Wi-Fi network		
If I were to run out of credits or hit my monthly data limit, I would panic		
If I could not check my smartphone for a while, I would feel a desire to check it		

Investment Related Fear of Missing Out (I - FOMO)
(Adapted from Clor-Proell et al., 2019; Przybylski et al., 2013, p.1841)
(7 point Likert Scale: 1= Totally Disagree, 7=Totally Agree)

It bothers me when I don't hear news about my investments until the next day.
I get anxious when I don't know what the companies I'm investing in are planning.
It is important to me that I am "on top" of the latest news for the companies I'm interested in investing in.
When I go on vacation, I continue to keep tabs on my investments
I feel anxious if I'm "unplugged" from news about my investments.
I would prefer to be interrupted by breaking news about my investments rather than to receive the information later at a more convenient time.
I get worried when I am not able to check in on my portfolio.
I would get anxious if my phone battery ran out when I was expecting news about one of my stocks.
When I miss out on industry news it bothers me.
I fear being the last to know about news that is relevant to my portfolio.

Construct – 6: Investment Decisions(Adapted from Livanas, 2011; Shiva and Singh, 2019; Maciejewski and Lesznik, 2020)(7 point Likert Scale: 1= Totally Disagree, 7=Totally Agree)

Retail Investors invest in Balanced and Capital Guarded stocks for over a month.
Retail Investors invest in Diversified stocks for within a month.
Retail Investors invest in High Growth stocks within a week.
Retail Investors invest in Cash Portfolios and conduct Intra Day trading.

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SOCIAL MEDIA AND PROTESTS ENGAGEMENT: WHAT'S GENDER GOT TO DO WITH IT?

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ABSTRACT

Social media allows people to organize themselves and take action against social injustices and policies. Used to spread information, social media has been linked to the dissemination of political protests around the world. Relying on the Theory of Planned Behavior and Herd Behavior, this studied aimed at identifying gender differences in social network protests' participation. Making use of multivariate data analysis through Partial Least Squares Path Modeling (PLS-SEM), 318 Brazilians responded the study and the results indicate that there are differences between the relationships of the antecedents of the use of the social network between users of different genders. The differences are in the relationship between the attitude and the use of social networks to participate in protests, with a positive effect on men and negative on women. This means that men understand that participating in online protests through social networks can improve awareness of events, giving strength to the movement and helping to ease the tension of protests, while women do not. The results go beyond the studies on which they were based, including the gender multigroup analysis and presenting a new model of technological adoption with new elements, such as the herd behavior, embracing the imitation, and the uncertainty constructs. There is also a contribution to a greater understanding of the influence of social media on collective activism or movements.

Keywords: Social Media, Online Movements, Protests, Gender.

INTRODUCTION

Media is a powerful tool for communication and socialization (Fong et al., 2019). It has an important effect on perceived public opinion about the reality and it also allows dominant groups into shaping individuals' values, attitudes and opinions (Fong et al., 2019; Gitlin, 1980).Social media, for that matter,not only presents itself as a real-time intelligence tool to get business insights (Mirchandani & Gaur, 2019) but also as an enabler for individuals to gather themselves and take action against social injustices and policies rapidly (Lance Bennett & Segerberg, 2011). It enables individuals to mobilize others into taking part, either in a short or longlength, turning it into a challenge the persistence of these movements (Selander & Jarvenpaa, 2016).

Facebook and Twitter are often considered as both disruptive and nondisruptive platforms that could shape political participation (Jost *et al.*, 2018). Social media analysis enables opportunities to observe collective action and social movements behaviors (Jost *et al.*, 2018). According toJost*et al.*(2018), social media use has been linked to the spread of political protests in several countries around the world (Hong Kong, Moscow, Kiev, Madrid, New York, Los Angeles, among others). This paper aims at identifying gender differences in social media protests' participation. The results may provide relevant information regarding online movements against social injustices, showing beliefs and the differences regarding the participants' motivations towards these movements.

The comprehension of online communities and behavior is relevant once it may affect real-world outcomes and it also reflects on how citizens look for information and how they relate to media (Batista et al., 2017). In Latin America, online gender is a trend, especially when hashtags are analyzed (Batista et al., 2017). According to Batista et al., (2017), most trendy hashtags in 2015 among Brazilian userswere marked by gender issues (e.g. #Feminism #ViolenceCannotBeJustified, #Feminist, #SpeakWithoutFear) and also a political hashtag, such as the one in favor of firing the ex-president of Federal Chamber, in Federal Supreme Court (Batista et al., 2017).

Around the globe, studies on females' representativeness online behavior has been pointed as sparse (Fong et al., 2019), as women's participation in protests (regarding females' rights and also other subjects) are also under-researched (Roth & Saunders, 2019), this paper intends to fill in the research gap, presenting an analysis of differences regarding the subject in Brazil.This article is structured in five chapters. The next section presents the theoretical background divided in three subjects, followed by the methodology,hypotheses, and results of the research. Afterward, adiscussionwith conclusions, limitations, and opportunities for future studies are going to be exposed.

LITERATURE REVIEW

This chapter presents a literature review on the main topics of this research, as it is structures: (2.1) Activism and Movements through Social Media, introducing studies about movements through social network and the current significance, (2.2) Behavior Theories Related to Information Technology, in which is presented theoretical behavior model supporting the technological information and (2.3) Females' use of Social Media presenting gender participation in this manner of activism.

Activism and movements through social media

Social media engage an important role in information diffusion, mainly referring to online social movements, connecting people promptly (Isa & Himelboim, 2018), and has proved to be very potent in many situations (Howard *et al.*, 2011; Hughes & Palen, 2009), attracting the attention of researches(Boyd & Ellison, 2007).

The online social movements are heterogeneous due to the different modes of strategies and actions developed by the social actors and their particular reasons for participation (Passy & Giugni, 2001), and can be understood as the popular access to claiming their rights or even as the participation in the democratic process of public policies according to a specific context.

As an effective tool for activists and social movements, it provides human interaction resulting in successful outcomes, such as the movement to free Al Jazeera journalists imprisoned by Egyptian authorities between 2013 and 2015 (Isa & Himelboim, 2018), the impact on the Arab Spring between 2014 and 2016 (Howard *et al.*, 2011),mass convergence to manage emergencies in the politic field (Hughes & Palen, 2009)or social movements, as My Stealthy Freedom against the compulsory veiling of women in Iran (Stewart & Schultze, 2019), among others.

However, the use of social networks does not assure the success of the movements. The results of a study carried out to identify factors that led people to use social media to participate in the protests that occurred in 2013 in Brazil demonstrated disbelief about any positive effect on solving problems. Nevertheless, the intended to continue protesting virtually remained(Moraes *et al.*, 2018).

Behavior theories related to information technology

To identify factors that led people to use social networks to participate in the social movements, a model has been developed based on some theories and constructs used in the Information Technology (IT) area, in the technological adoption field.

The Theory of Reasoned Action (TRA) proposes that an individual behavior is determined by the person's intention to perform a behavior and, consequently, this intention is determined by the attitude towards the behavior and the subjective norms (Fishbein & Ajzen, 1975). Therefore, it is necessary to understand the individual beliefs as well as the environmental context, determinants of the normative, and attitude components (Fishbein & Ajzen, 1975).

The Theory of Planned Behavior (TPB) was developed as an extension of TRA, adding the perceived behavioral control construct, which influences both intention and behavior(Ajzen, 1991). The relative importance of attitude, subjective norm, and perceived behavioral control in predicting intention fluctuate according to the different situations to which the theory is applied.

According to TPB, human behavior is based on behavioral beliefs, that is the possible consequences of human behavior leading to a favorable or unfavorable behavioral attitude, on normative beliefs, which would be the social pressure on behavior, and also on beliefs about control, referring to factors that can facilitate or impede the performance of the individual's behavior (Ajzen, 1991).

The behavioral attitude concerns, in this work, to the respondent's understanding about the possibility of their participation in an online social movement contributing to better awareness about the subject, strengthening the movement, contributing to the current debate, and increasing the importance of social actions. Beliefs about control, in this present study, refer to the perception of ease or difficulty in using social networks to participate in protests and activism, as post, share and comment posts about movements.

In contrast, the subjective norm construct was not considered the most appropriate for this research(Krueger *et al.*, 2000), and constructs referring to research on Herd Behavior (HB) toward the use of IT(Walden & Browne, 2009) were used to replace these values. Researches about HB have been carried out in different situations, such as the downloading software applications (Duan *et al.*, 2009; Moraes, 2016; Walden & Browne, 2009), and the development of television programs (Kennedy, 2003), and, in general, two primary conditions are necessary for the occurrence of HB: uncertainty about the own decision and observation of the others' actions.

Females' use of Social Media

The use of internet and social networks for political or social engagement has attracted researchers' attention in the past decades (Schuster, 2013). Discussions approach how online activism could actually reach the *real world* (Livingstone *et al.*, 2005), other even points that Facebook accounts have been disregarded when it comes to political participation (Christensen, 2011; Schuster, 2013). While several researches suggest many ways on how social media can impact on collective action (Selander & Jarvenpaa, 2016; Valenzuela, 2013; Valenzuela *et al.*, 2016), few has dedicated efforts to understand females' behavior regarding protests participation (Loiseau & Nowacka, 2015; Schuster, 2017).

Social media has proved itself as a powerful tool to bring females' interests and rights to public knowledge (Loiseau & Nowacka, 2015). The unprecedented use of social media by women represents an important step to bring opportunities and several discussions regarding (in)equality, gender gap, among others into media attention (Loiseau & Nowacka, 2015).

Easy access and low in cost, online participation in protests is a preference for many young women, especially the ones who lack of resources, furthermore, this option enables a choice regarding how much of their identity will be exposed (Schuster, 2013).

In Brazil, political movements in 2013 were marked by a strong online engagement and participation, which brought a different way of making protests in the country (Queiroz, 2017), during 2018s presidential election, females created the world famous hashtag #EleNão (#NotHim)(Baronas *et al.*, 2019).

Regarding females' participation on online activism, the literature points to a wave of feminist forces trying to direct efforts into transforming online social movements into actual change: the Feminist fourth wave (Hollanda, 2018). According to the author(Hollanda, 2018), this new wave would be marked by the intense use of social media as important vectors of change.

Accordingly, it is within the online environment where women organize themselves and take a stand against abuse, gender discrimination, by developing a support network, where it is possible toshare stories and testimonials, and also organizing campaigns, social actions and protests

(Madsen, 2015). Differently from previous decades, the internet and social media enable a much broader capability of information dissemination, where people could get information and also debate their ideas (Madsen, 2015).

On the other hand, previous research on females' behavior towards political engagementpoints to evidence that women engagein less visible political behaviors on social media because they are more likely to use social media for relationship maintenance and seem to be able to overcome political's confrontations and exposure(Bode, 2017).

METHODOLOGY

The research was developed through a quantitative methodology, with the use of multivariate data analysis. Due to social movements online theories are less developed and the objectives are the constructs hereby presented, Partial Least Squares Path Modeling (PLS-SEM) was chosen to reach this paper's objectives (Hair *et al.*, 2017).

The preliminary questionnaire was evaluated by a group composed by 5 specialists in Information Technology area, who had already used models of technology adoption to asses content validity of the statements (Netemeyer *et al.*, 2003). Five potential respondents were used to perform a pre-test with the questionnaire. Scales were adapted from previous studies.The questionnaire was posted in social media through a link in groups of social movements. The sample accounted with 318 respondents, once others were discarded due to incomplete answers. As recommended by the literature (Chin & Newsted, 1999), to evaluate sample's size and statistic power, G* Power 3.1.5 was used (Cohen, 1988). Considering the predictors, significance level of 5%, statistical power of 0.8 and average effect size (f^2 = 0.15, which is equivalent to r^2 = 13%), we have that the minimum sample size is of 77. As the sample was 318 respondents, it is suitable for estimation by PLS-PM.

The sample included 55% of male respondents, and 45% of female respondents. Most respondents were young, aged between 16 and 19 years old (50%). 30% were 20 and 29 years old and the remaining 20% were over 30 years old.

The post hoc analyzes for the sample obtained indicate that: (a) any r^2 greater than 3.35% would be detected as significant, maintaining the power of 0.8 and a significance level of 5%; and (b) for the medium effect size, the power is 0.999, which is well above the recommended value of 0.8 (Hair *et al.*, 2017).The SmartPLS 3.0M3 software (Ringle *et al.*, 2015) was used for calculations and validations of statistical tests.

HYPOTHESES

This paper had as an objective to identify gender differences in protest's participation through social media. Therefore, the main hypothesis for this research is described as follows:

Hypothesis 1: There are differences between the relationships of the antecedents of behavior of using social networks to protest among users of different genders.

In this context, the paper's sub-hypotheses were developed based on the main theories in the area of information technology that were related to the focus of the research.

The first two sub-hypotheses of the study were based on TPB:

Hypothesis 1a: There are gender differences in the relationship between attitude towards behavior and the use of social networks to participate in protests.

Hypothesis 1b: There are gender differences in the relationship between perceived behavioral control and the use of social networks to participate in protests.

The third and fourth sub-hypotheses of the study are related to herd behavior when using IT:

Hypothesis 1c: There are gender differences in the relationship between imitation and the use of social networks to participate in protests.

Hypothesis 1d: There are gender differences in the relationship between uncertainty and imitation.

Figure 1 presents the conceptual model of research:

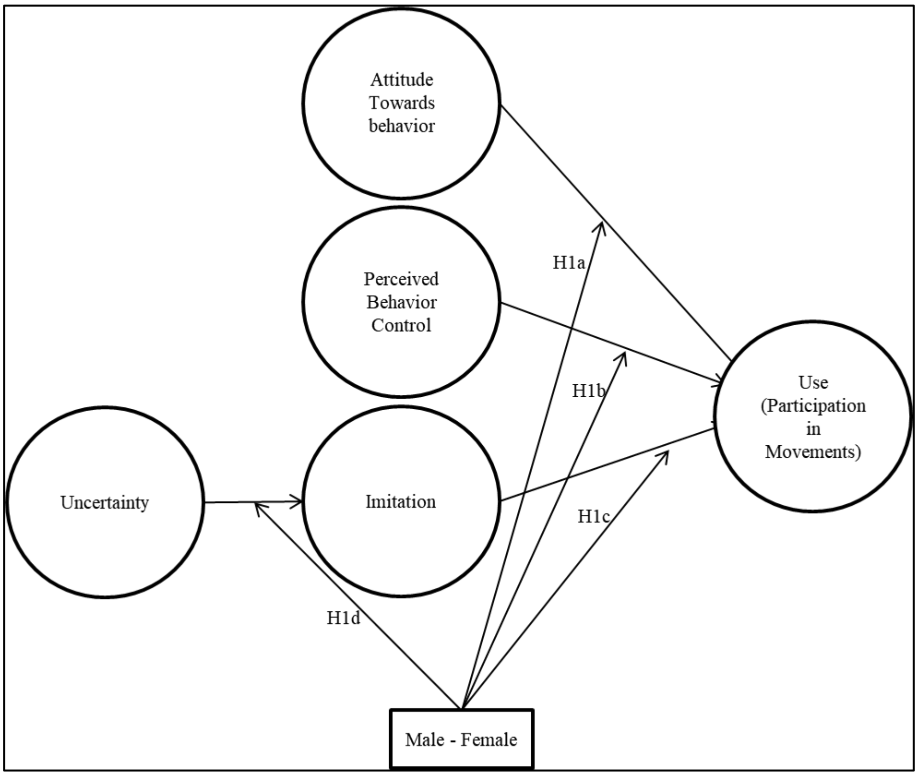

Figure 1: Research conceptual model.

It is acknowledging the existence of other influential factors on the use of social network and protests' participations online, however, the hypotheses presented in this paper show a broader relationship to the chosen object of study.

RESULTS ANALYSIS

The model's indicators are reflective, and the criteria for evaluation are: internal consistency, reliability of the indicator, convergent validity and discriminant validity (Hair *et al.*, 2017).

The discriminant and convergent validities were assessed at the level of indicators and latent variables. In the analysis of crossed factor loads, all indicators showed high factor loads in their latent variables, greater than 0.70, and low in the other latent variables.
Another indicator used for convergent validation of the model is the value of the average variance extracted (AVE), which, as a criterion for validation, must present a value greater than 0.5 (Hair *et al.*, 2017).

To assess the measurement model, the composite reliability of each construct was also used (Hair *et al.*, 2017). To analyze the convergent validity, the internal consistency was verified. Another indicator of discriminant validity between the constructs is to calculate the square root of the average variance extracted from the constructs. Table 1 presents these values, the square root of the average variance extracted is shown in bold diagonally, this value must be greater than the correlation between the latent variables (Fornell & Larcker, 1981). Table 1 presents all the indicators mentioned and shows that all values are within the limits established by the authors.

Table 1 Summary of evaluation measurement models

	Attitude	BC	IM	UNC	USE
Attitude	**0,753**				
BC	0,421	**0,839**			
IM	0,361	0,321	**0,908**		
UNC	0,191	0,093	0,613	**0,858**	
USE	0,493	0,549	0,587	0,342	**0,838**
AVE	0,567	0,703	0,824	0,737	0,701
Cronbach's Alpha	0,754	0,861	0,929	0,883	0,857
Composite reliability	0,840	0,904	0,949	0,918	0,904

Note: BC = Behavioral Control; IM = Imitation; UNC = Uncertainty

Before evaluating the structural model, it is necessary to assess the collinearity of the structural model. To assess collinearity, the VIF values were analyzed for each subpart of the structural model. All values are within the established, below 5 (Hair *et al.*, 2017).

To analyze the meanings of the indicators, a bootstrapping technique was used(Efron & Tibshirani, 1998). A Student's T test analyzes a hypothesis that the correlation coefficients are equal to zero. If the results of this test indicate values greater than 1.96, a rejected hypothesis and significant correlation (Efron & Tibshirani, 1998; Hair *et al.*, 2017).

Table 2: Coefficients of the Structural Model

Relationships	Average	Standard error	T Value	P-value
Attitude -> Use	0,177	0,067	2,521	0,012
BehavioralControl -> Use	0,313	0,072	4,292	0,000
Imitation -> Use	0,351	0,073	4,912	0,000
Uncertainty ->Imitation	0,617	0,069	8,907	0,000

Table 2 presents the coefficients of the structural model. The relationships are imposed by the values of the construction coefficients and as Student's T statistics. All the values of the arguments presented show T-Values above 1.96 and P-values below 0.05 (significance level = 5%).

Thus, these results guarantee the significance of relationships and allow differences between genders to be tested.

According to the analysis, the Use construct presented a r^2 determination coefficient of 0.541, considered high, and the Imitation construct presented an r^2 of 0.376, considered high as well. In addition to evaluating the magnitude of r^2 values as a predictive precision criterion, the Q^2 value, which is an indicator of predictive relevance of the model, was evaluated. The Q^2 measure applies an example reuse technique that omits part of the data matrix and uses model estimates to predict the omitted part. Specifically, when a PLS-SEM model has predictive relevance, it accurately predicts indicator data points in reflective measurement models. Table 3 shows the values of r2, adjusted r2 and Q2.

Table 3: Results of R2, adjusted R2, and Q2 values

Construct	R2	Q2
Imitation	0.376	0.102
Use	0.541	0.207

For SEM models, Q^2 values greater than zero for a specific reflective endogenous latent variable indicate the predictive relevance of the path model. In the case of this study, the value is greater than zero.

To test the hypotheses of the study in relation to differences between relationships and gender differences, a multigroup analysis was performed.Table 4 presents the results of the analysis of the significant relationships of the constructs between groups of male and female respondents.

Table 4: Relationship differentiation analysis – Genders

	Coefficientdifference - Gender	p-Value
Attitude -> Use	0,341	0,016
BC -> Use	0,103	0,229
IM -> Use	0,206	0,914
UNC -> IM	0,122	0,167

Note: BC = Behavior Control; IM = Imitation; UNC = Uncertainty

From the results of Table 4, it is observed that there are significant differences only in the relationship between Attitude and Use in terms of gender. The effect is positive in males (0.330) and negative in females (-0.011).

Improved Model and Synthesis of Hypotheses Tests

The adjusted model resulting from the research is presented in Figure 2.

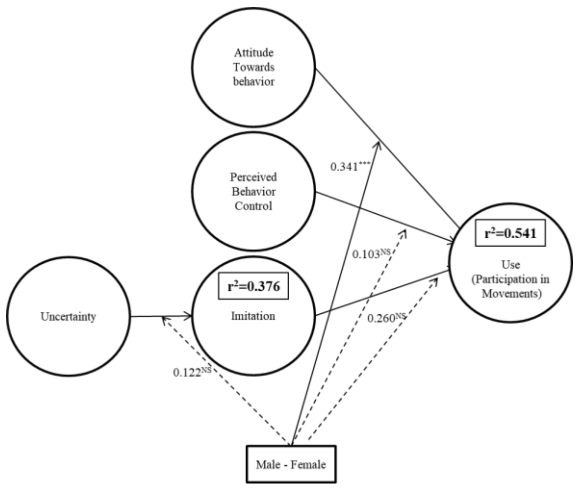

Figure 2: Complete empirical model

Note: * = significant at 5%; ** = significant at 1%; *** = significant at 0.1%; NS = not significant

With the obtained validations, the synthesis of the hypothesis tests of the study follows in Table 5.

Table 5: Hypotheses confirmation

Hypotheses	Description	Results
H1	There are differences between the relationships of the antecedents of behavior of using social networks to protest among users of different genders.	**Confirmed**
H1a	There are gender differences in the relationship between attitude towards behavior and the use of social networks to participate in protests	**Confirmed**
H1b	There are gender differences in the relationship between perceived behavioral control and the use of social networks to participate in protests.	Not Confirmed
H1c	There are gender differences in the relationship between imitation and the use of social networks to participate in protests.	Not Confirmed
H1d	There are gender differences in the relationship between uncertainty and imitation.	Not Confirmed

Regarding the attitude construct, the results show that the attitude effect on participation in protests by social networks influences positively in men and negatively in women. In other words, men believe that using the hashtag can contribute to improve awareness of events and strengthen protest movements, women do not believe.

The high explanatory value of the *imitation* construct demonstrates that people used social media to imitate other people, be they known, personality or artists. The values obtained in the construct *uncertainty* enhance this result and show the behavior of the herd in this case, demonstrating that people imitated others, even though they were not sure of the whole context about the movements. In the case of this relationship, there are no differences in behavior between men and women.

Another factor of high impact in the use of the application was Behavioral Control. This result indicates that the fact that using the application is easy for the respondent audience,makes it more used. In this relationship, there are also no differences between genders.

DISCUSSION

The selection of both constructs use of social networks for participation in movement and imitation are reasonably explained by the values of the coefficient of determination equal to 54.10% and 37.60%, respectively. Farther, the study demonstrates that participation in online movements through social networks is explained by the constructs attitude, behavioral control, and imitation preceded by uncertainty.

The results of the presented model go beyond the studies on which they were based, including the gender multigroup analysis and presenting a new model of technological adoption with new elements, such as the herd behavior, embracing the imitation, and the uncertainty constructs. There is also a contribution to a greater understanding of the influence of social media on collective activism or movements(Gil de Zúñiga et al., 2012; Lance Bennett & Segerberg, 2011).

In order to identify gender differences in social network protests' participation, the results feature relevant effect, between gender, of the attitude on participation in protests by social networks influences.The positive effect verified for the male gender could indicate that, in his understanding, participating in online protests through social media can improve awareness of the events, giving strength to the movement and helping to reduce the tension of the protests. For women, the effect is almost null, with negative values, which leads to the conclusion that females do not participate in movements thinking about participation as helping raise awareness or strengthen the movement.This attitude towards the female gender can be explained through studies on female political engagement, where there is evidence that women engaging in less visible political behaviors on social media because they are more likely to use social media for relationship maintenance and seem to be able to overcome political's confrontations and exposure(Bode, 2017).

Although the results show the influence of the attitude's effect in protests by social networks has been positive in relation to men and negative in relation to women, this subject is still in an incipient stage of study andthere is still unexamined proofs.Such evidence is presented as the phenomenon of the hashtag #EleNão (#NotHim), created mostly by Brazilian female citizens and shared worldwide, what evidence an opportunity of engrossing in this theme.

Meanwhile, the difference between genders for the other relationshipswas not confirmed through this analysis, being the tendency to imitate through social networks when there is no deep knowledge about the subject explained by HB is the same between males and females, as well as the perceived behavioral control at the use of social networks to participate in protests.

Among the limitations of the study, can be highlighted the representativeness of the sample,which included only Brazilians who participated in social networks, and the cross-section nature of data, that also hinders the analysis to understand how the association between variables of interest evolve over times.

As suggestions for future research, it is recommended to review the questionnaire and adapt it to a wider range of real situations that represent the constructs, test the model presented in new technologies, and with a larger sample, test other moderators and conduct longitudinal studies with qualitative methodologies.

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THEORIES AND ANTECEDENTS OF KNOWLEDGE SHARING BEHAVIOUR IN VIRTUAL COMMUNITY: A SYSTEMATIC REVIEW

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ABSTRACT

Virtual Community (VC) is regarded as the best platform for professionals in various fields to share their expertise and knowledge. Since the escalation of web 2.0 and the internet within the last decade and the booming interest in big data and expansion of industry 4.0, VC is deemed as an ideal proxy for practitioners to share and earned instant knowledge that can beimplemented within business activities and day to day application. Despite this emerging interest, there has been no comprehensive study on the overall antecedents of KS in VC. Applying a systematic review, a total of 68 relevant articles that discusses knowledge sharing (KS) via VC are evaluated. Several central themes of theories applied in this field within the literature are discussed on its importance and relevance. Important antecedents arealso reviewed on its practicality and implementation in understanding the role of KS in VC. The implication of this review would benefit stakeholders in maintaining the sustainability of VC as the platform for a knowledge-based society.

Keywords: Theories, Antecedents, Knowledge Management, Knowledge Sharing, Virtual Community.

INTRODUCTION

Knowledge is vital in ensuring that organizationsand industries to sustain in the current challenging business world. As the world shifted towards the advancement of internet and digitalization, virtual platform has served as a vibrant tool in knowledge distribution. Virtual communities (VC) provide a platform for users to communicate and interact without having to meet face to face (Chang et al., 2015). Practically, employees have been found to seek knowledge by consulting their peers through various virtual networks and social media rather than accessing knowledge database and repository (Akhavan et al. 2015; Djelantik, 2019). Hence, the proposition and availability of VC have provided employees the chance to interact and look out for peers that can give instant knowledge by the community through the web.

Many of the previous studies have focused on the aspect of individual, organizational, and technological factors (Al-Kurdi et al., 2018). The three elements are embedded within the underpinning theories applied in KS studies throughout the literature. With the extensive studies on VC as the emerging area of knowledge management, there have been various theories implemented in understanding the KS behavior among members in this community (Fauzi et al., 2018). Among the commonly used theories are related to social-related theories such as social capital, social cognitive, social exchange, and social identity. Other theories that are known to the knowledge management communities

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are the theory of planned behaviour and theory of reasoned action. In understanding the underlying foundation of member's engagement on KS within VC, relevant and related theories should be recognized and correlated among each other'sin developing a holistic model consisting of relevant antecedents of KS in VC.

With this in mind, this paper tends to review all related studies from the year 2006-2019, thirteen years on KS within the VC. The main objective of this review is to provide insight and an in-depth understanding of the theories and essential antecedents that have been applied in the literature associated with the user's KS behaviour in VC. In parallel with today's digital development, knowledge should be shared freely and safely to ensure that implicit and explicit knowledge could be captured for the benefits of members in VC. Hence, a knowledge-based society can be enhanced and maintained for the betterment of society.

Knowledge sharing in virtual community

KS is a process where knowledge, expertise, experience, skills, and information that is exchanged between families, friends, communities, and organizations (Charband and Navimipour 2016). Virtual or online knowledge communities consist of people having the same interest, profession, or goals. They share and interchange knowledge for their use in daily life by engaging in social interaction (Feng and Ye, 2016). People use VC not only for knowledge exchange but also a tool for retrieving information, social support, entertainment, and also recreation (Phang et al., 2009; Fauzi, 2019).

Despite that VC is widely research and applied, the term and notion of VC application differ from one industry and context to another (Bolisani and Scarso, 2014).Several scholars have termed it as community of practice (Zboralski et al, 2009, Jeon et al, 2011a; Hau et al 2013; Chu et al., 2014; Tseng & Kuo, 2014; Nistor et al., 2015), virtual community of practice (Usoro et al, 2007; Fang & Chu, 2010; Majewski et al., 2011, Chang et al., 2016), professional virtual community (Lin et al., 2009; Chen & Hung, 2010; Chiu et al., 2011; Tamjidyamcholo et al., 2014), online communities (Ma & Agarwal, 2007; Phang et l., 2009; Chai & Kim, 2010, Erden et al, 2012; Lai & Chen, 2014), online knowledge communities (Ye et al., 2015; Feng & Ye, 2016), online question and answer community (Jin et al., 2013; Khansa et al 2015; Guan et al., 2018), online health community (Yan et al., 2016; Zheng et al., 2017), virtual innovation community (Zhang et al., 2017a; Pirkkalainen et al., 2018), online user community (Hau & Kang, 2016), online discussion communities (Kumi & Sabherwal, 2018), online travel community (Ku, 2012; Yuan et al., 2016), peer to peer problem solving (P3) virtual community (Zhao et al 2013) and virtual learning community (Chen et al., 2009; Lu et al., 2013). As there are many terminologies used within this area, VC will be used throughout this paper as the majority of studies had used this term as it is more general and involveda broad definition describing the aspect of a virtual platform.

The theoretical framework of this review is based on the frequently adapted theories used in VC. These include the theory of planned behavior/reasoned action, technology acceptance model, social capital theory, social cognitive theory, social identity theory, social exchange theory, expectancy disconfirmation theory, motivation theory, and use & gratification theory. All the studies included apply at least one theory or integration of two or more, that could facilitate in understanding KS behavior in VC.

METHODOLOGY

This section delineates the method in assessing this systematic review of KS within the scope of VC. The review includes all articles within the indexed journal of Scopus and Web of science. The eight databases that were included in the review include Science Direct, Emerald Insight, Taylor & Francis, Wiley Blackwell, Springer-Link, IEEE Explore, Wiley & Blackwell, Inderscience, and JSTOR. These databases are selected because they are reliable database and has an extensive record of peer-reviewed articles within the scope of VC. The process in retrieving articles related to Knowledge sharing in VC. The author used the PRISMA method (Moher et al., 2015). This method enables the ease of the systematic review by having exclusion criteria, review process steps, data analysis, and abstraction.PRISMA serves as a checklist to clearly explain the need for a specific topic (Wormald & Evans, 2018). It adds to the future

avenues prioritizing on the fundamental aspect of VC knowledge sharing context.
PRISMA

Identification
The first process is keyword identification. Searching process for related and identical terminologies. These terms and synonym were searched through dictionaries, thesaurus and encyclopaedia. The search string used in this study includes the keyword ("knowledge sharing" OR "knowledge exchange" OR "knowledge transfer" OR "knowledge distribution" OR "knowledge acquisition") AND ("virtual community" OR "online community" OR "community of practice" OR "professional virtual community" OR "virtual team"). The initial result had found a total of 1,502 articles having keywords, as stated. After screening using PRISMA methodology, the final relevant studies accepted for review were 68. Table 1 presents the study selection process results.

Table 1: Study selection process results.

Online database	Initial result	Relevant studies
Science Direct	243	30
Emerald Insight	127	8
Springer-Link	234	4
Taylor & Francis	486	12
IEEE Explore	117	2
Wiley & Blackwell	237	6
Inderscience	49	1
JSTOR	9	2
Google Scholar/ other publishers (second stage screening)	-	3
Total	1,502	68

Screening
Before the articles are accepted for review, the inclusion and exclusion criteria process was conducted to screen the articles. Based on article type, only articles with empirical data are taken. Review article, book chapter, conference proceeding is not included. Secondly, only articles in English are accepted, to avoid problems in translating and having originally written articles in English. Thirdly, all the studies are from the period of 13 years, from 2006 to 2019. This is considered to be adequate time in viewing research evolution in the VC field of study. Lastly, studies that are chosen within the context of VC or related terminology are accepted. Studies from other disciplines and contexts are excluded. Table 2 summarizes the criteria for this review.

Table 2: Inclusion and exclusion criteria

Inclusion criteria	Exclusion criteria
Available as a full-text article	No full text available
Written in English	Other than English
Within the domain of virtual community and other related terminology	Qualitative study
From the year 2006 to 2019	

Eligibility
A total of 69 articles made up to this stage. This stage requires the authors to screen related article based on the title and abstract. It is a second stage screening to ensure that the articles included are based on KS in VC studies. A total of 68 articles were included for analysis.Figure 1 summarizes the four-stage process of the PRISMA method, indicating identification, screening, eligibility, and finally, included articles.

RESULT
Overview of studies
All the articles were searched in 8 databases, resulting in 68 studies. The summary of the reviews is shown in table 2. Most of the studies were found in computer cyberpsychology journals, with other areas including management and social psychology. The majority were conducted in the Asia Pacific region that includes Taiwan, South Korea, Hong Kong, and China. Other prominent countries have the USA, Singapore, Malaysia, Australia, and several European countries. Respondents of the studies vary from professional, students, teachers, teenagers, and the common public using VC as education and entertainment purpose. Most of the studies applied related social theories by integrating 2 or 3 theories with the minority using only one theory or underpinning framework. Table 3 summarizes the 68 articles found from this review.

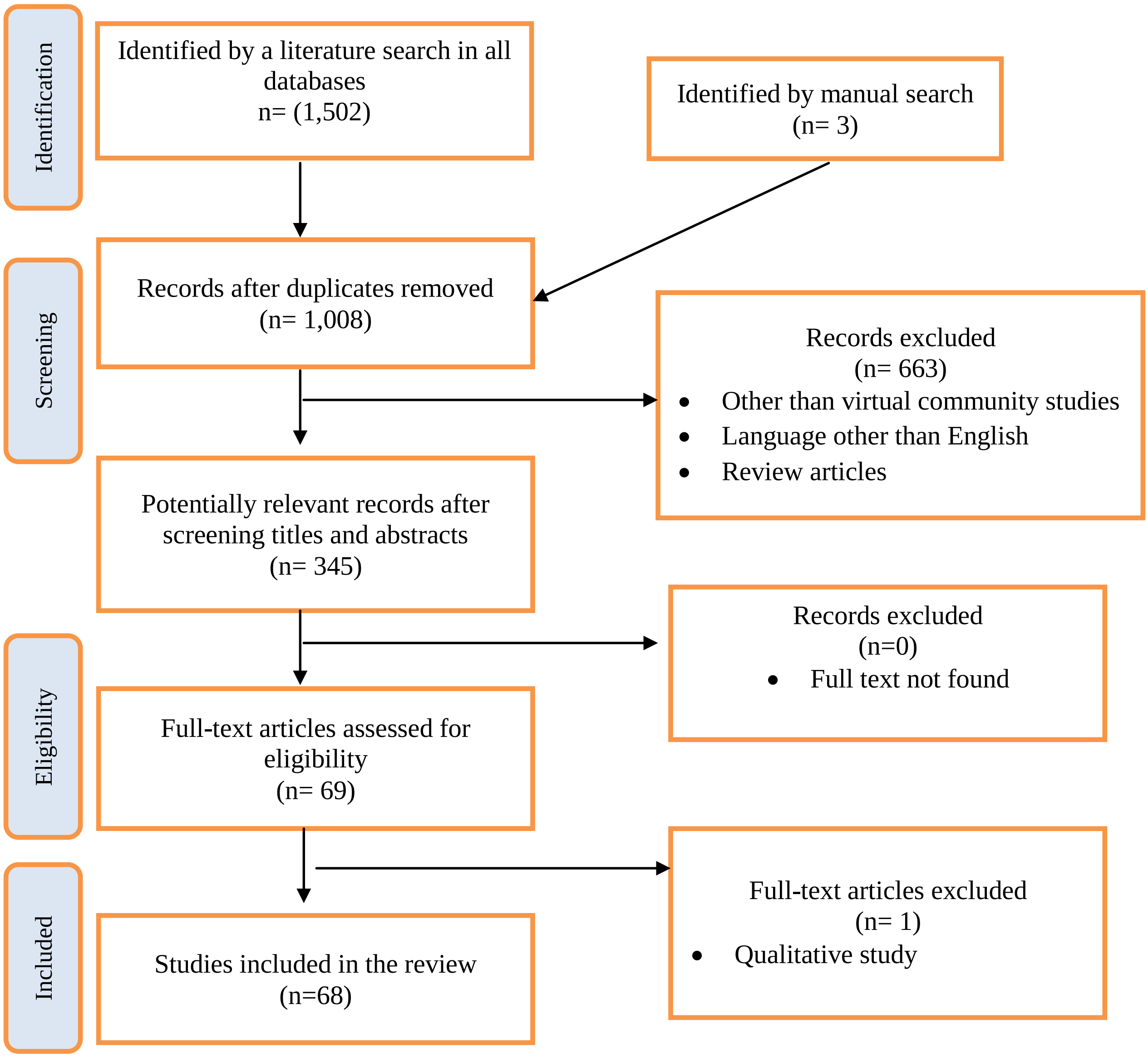

Figure 1: PRISMA diagram Four-phased flow diagram of studies' selection procedure

Table 3: Summary of knowledge sharing in virtual community studies

No	Authors	Sample	Country/ countries	Term used	Theory/ theories/ framework	Antecedents
1.	Chiu et al. (2006)	310 members from one professional virtual community	Taiwan	Virtual communities	social capital + social-cognitive	Social interaction ties, trust, norm of reciprocity, identification, shared language, shared vision, personal outcome expectations, community-related outcome expectations
2.	Ma & Agarwal (2007)	666 from two online communities	USA	Online communities	attribution theory + self-presentation theory	Virtual co-presence, persistent labeling, self-presentation, deep profiling, tenure, offline activity, satisfaction, information need fulfillment, group identification, offline activity.
3.	Usoro et al. (2007)	75 community members	US (45%), UK (34%) and Australia (11%). Switzerland,	virtual communities of practice	Trust factors	Three categories of trust: Integrity-basedtrust Competence-basedtrust Benevolence-basedtrust

No	Authors	Sample	Country/ countries	Term used	Theory/ theories/ framework	Antecedents
			Spain, Denmark, and India (10%).			
4.	Hsu et al. (2007)	274 respondents	Taiwan, Hong Kong, and China	Virtual community	Social cognitive theory	Trust (economy, information-based, identification) self-efficacy, expectation (personal, community)
5.	Staples & Webster (2008)	824 respondents	Canada	Virtual team	Social exchange theory	Task interdependence, trust, virtualness, team effectiveness
6.	Lin et al. (2009)	Three hundred fifty respondents from 3 club (Programmer-Club, Blue-Shop, and Pure C)	Taiwan	Professional virtual communities (PVCs)	Social cognitive theory	Trust, self-efficacy, perceived relative advantage, and perceived compatibility.
7.	Phang et al. (2009)	115 students from computing course	China	Online communities	Value theory + Social exchange theory	Ease of use, system reliability, knowledge tracking fulfillment, social interactivity, perception of the moderator, perceived usability, perceived sociability
8.	Zboralski 2009	222 CoP members multinational company	Germany	Community of practice (CoPs)	interaction frequency (notheory)	Members' motivation, community leader, management support, interaction frequency, interaction quality
9.	Chen et al. (2009)	396 MBA students enrolled in virtual courses.	Taiwan	Virtual learning communities	Theory of planned behavior + SCT (social network ties)	Knowledge creation and web-specific self-efficacy, social network ties, TPB variable
10.	Fang and Chiu (2010)	142 IT-oriented VCoP	Taiwan	Virtual community of practice (VCoP)	Social exchange theory + organizational citizenship behaviors (OCB)—	Justice, trust, altruism, personality (conscientiousness)
11.	Zhang et al. (2010)	144 professionals	China	Virtual communities	Psychological safety	Psychological safety, Trust Self-consciousness
12.	Yu et al. (2010)	442 from 3 online communities	Taiwan	Virtual community	three community sharing cultural factors: fairness, identification and openness	fairness, identification, and openness, enjoy helping, usefulness/relevancy
13.	Cho et al. (2010)	223 respondents	Singapore	Wikipedia community/virtual community	Theory of planned behavior + motivations theory + cognitive belief + social-relational factors	Belongingness, general reciprocity, altruism, attitude, reputation, subjective norm, self-efficacy, controllability
14.	Chai and Kim (2010)	485 respondents (bloggers)	United States of America	Online community	trust in multiple dimensions	Trust: categorized into bloggers, economy, trust in the Internet, trust in a blog service provider
15.	Chen and Hung 2010	323 members of two PVCs communities	Taiwan	Professional virtual communities (PVCs)	Social cognitive theory	Norm of reciprocity, interpersonal trust, self-efficacy, perceived related advantage, perceived compatibility.
16.	Shen et al. (2010)	430 registered Members from 4 VCs	United Arab Emirates	Virtual communities	social presence theory + social identity theory	Awareness, affective, social presence, cognitive, social presence

No	Authors	Sample	Country/ countries	Term used	Theory/ theories/ framework	Antecedents
17.	Chiu et al. (2011)	270 members of a professional virtual community	Taiwan	Professional virtual community	Expectancy disconfirmation theory + social network factors + justice theory	Playfulness, satisfaction, disconfirmation, justice
18.	Hsu et al. (2011)	324 technical VC members	Taiwan	Virtual communities	Trust building factors	Trust (in members, in the system), knowledge growth, perceived responsiveness, social interaction ties, shared vision, system quality, and knowledge quality
19.	Kim et al. (2011)	185 Members of Cyworld (a virtual community of relationships, interests, and transactions)	South Korea and a few other countries using Cyworld	Virtual community-blogging communities	Social identity theory	Involvement, kindness, social skills, creativity
20.	Jeon et al. (2011a)	formal CoP members (125) and informal CoP members (157) N= 282	South Korea	Community of practice (CoPs)	Theory of Planned Behaviour + Motivation Theory + Triandis model	Extrinsic motivation (image, reciprocity), intrinsic motivation (enjoyment in helping, need for affiliation), type of CoP, attitude, PBC, subjective norm
21.	Majewski et al. 2011	152 respondents	USA, UK, Netherlands, Germany, Canada, and Australia	Virtual community of practice	Social factors (trust, norm of reciprocity)	Norms of reciprocity, trust, perception of community, knowledge provision and reception
22.	Shu & Chuang. (2011)	217 respondents online virtual communities	Taiwan	Virtual communities	Theory of reasoned action	Expected return, absorption capacity, organization-based self-esteem, trust, attitude
23.	Jeon et al. (2011b).	179 members from 70 CoPs of a large multinational electronics firm	South Korea	Communities of practice	Triandis model + expectancy theory of motivation (perceived consequences)	Facilitating conditions, social factors, affect anticipated recognition, anticipated reciprocal relationship, anticipated usefulness, perceived consequence.
24.	Yoon and Rolland (2012)	209 VC users	South Korea	Virtual communities	Self-determination theory	Familiarity, anonymity, perceived competence, perceived autonomy, perceived relatedness
25.	Xu et al. (2012)	199 Chinese undergraduates and 200 USA undergraduates	China and the United States of America	Virtual communities	Social cognitive theory	Attachment motivation, trust, social support orientation
26.	Erden et al. (2012)	531 Online photo community	South Korea	Online community	Theory of planned behavior	Community munificence, attitude, subjective norm, perceived behavioral control.
27.	Ku 2012	235 online travel communities	Taiwan	Online travel community	Social identity theory + Technology acceptance model	Trust, commitment, website design quality, website service quality
28.	Hau et al. (2013)	2010 respondents from multiple industries	South Korea	Community of practice	Rational action theory + Social capital	Organizational reward, reciprocity, enjoyment, social capital (social tie, social trust, social goals

No	Authors	Sample	Country/ countries	Term used	Theory/ theories/ framework	Antecedents
					theory	
29.	Chen et al., 2013	219 professional IT VC	Taiwan	peer-to-peer problem solving (P3) Virtual Community	uses and gratification theory (U&G theory)	Entertainment. Social need, information need, attitude
30.	Liao et al. (2013)	473 undergraduate and graduatesstudents	Taiwan	virtual communities	Social exchange theory	Self-efficacy, reward, reciprocity, reputation, enjoying helping, expected relationship, sharing culture (fairness, identification, openness), attitude
31.	Lin and Huang (2013)	167 respondents	Taiwan	Virtual communities	Theory of reasoned action	self-efficacy, altruism, reward, and the sense of virtual community
32.	Yan et al. (2013)	232 users of Web 2.0 virtual communities	China	Virtual communities	Self-perception theory	Perceived enjoyment, attention focus, employee creativity
33.	Hung & Cheng (2013)	218 members from My3q website	Taiwan	Virtual communities	Technology acceptance model + Innovation Diffusion Theory	Personal technology (optimism, innovativeness, discomfort, insecurity), technology perceived (perceived usefulness, perceived ease of use, compatibility
34.	Zhao et al. 2013	185 patients from 3 diseased focused POC	United States of America	Patient online communities (POC)	Social identity theory	Trust, social identity, empathy
35.	Shan et al. (2013)	205 teachers and students from colleges and universities	China	Virtual community	social cognitive theory + social capital theory + characteristics of emergency events	Emergency events, shared vision, shared language, social interaction ties, outcome expectations, identification, trust.
36.	Papadopoulos et al. (2013)	175 respondents from Thailand weblogs	Thailand	Virtual communities (weblogs)	social influence theory + technology acceptance + social cognitive theory + individual factors	Subjective norm, social identity, group norm, perceived usefulness, perceived ease of use, perceived enjoyment, self-efficacy, personal outcome expectation, altruism, attitude
37.	Lu et al. 2013	321 academics of a training program	China	Virtual learning community (VLCs)	Social cognitive theory	Instructors, peers, management, self-efficacy, outcome expectance
38.	Jin et al. 2013	241 respondents from Yahoo! Answer China community	China	Online question answering communities	Expectation confirmation theory	Reputation enhancement, reciprocity, enjoyment in helping others, knowledge self-efficacy, confirmation, satisfaction, continuance intention
39.	Chu et al. 2014	120 respondents from a company	Australia	Communities of practice (CoPs)	Personality traits	Personality traits
40.	Tamjidyamcholo et al. (2014)	142 respondents online from LinkedIn	Malaysia	professional virtual communities (PVC)	Triandis model + expectancy theory of motivation (perceived	perceived consequences, affect, social factor, facilitating conditions

No	Authors	Sample	Country/ countries	Term used	Theory/ theories/ framework	Antecedents
					consequences)	
41.	Zeng et al. 2014	211 members of the online hotel industry	China	Virtual communities	Social cognitive theory + social capital theory + Social identity theory	Social interaction ties, trust, norm of reciprocity, identification, shared vision, expected results, self-efficacy, loyalty
42.	Tseng & Kuo (2014)	321 teachers from largest CoPs in Taiwan	Taiwan	Community of practice (CoPs)	Social Capital Theory + Social Cognitive Theory	Tie strength, self-efficacy, altruistic commitment, performance expectation
43.	Lai & Chen (2014)	324 (n=146 for poster and n=178 for lurker)	Taiwan	Online communities	Value theory	Reputation, reciprocity, enjoyment in helping, self-efficacy, perceived moderator's enthusiasm, offline activities, enjoyability.
44.	Tsai & Bagozzi (2014)	Collectivist Members Subsample (N = 517) Individualistic Members Subsample (N = 455)	Taiwan, Hong Kong, and China	Virtual communities	Extended Theory of planned behavior + social identity theory + theory of collective intentionality	Subjective norm, group norm, social identity, anticipated emotions, desires, attitude PBC, we-intentions
45.	Nistor et al. (2015)	136 German and Romanian scholars	Germany and Romania	communities of practice (CoP)	Sense of community theory	time in CoP, centrality in CoP, and socio-emotional interpersonal knowledge (SEIK)
46.	Gang & Ravichandran (2015)	118 experts from Global Network of Korean Scientists and Engineers (KOSEN)	South Korea	Virtual communities (VCs)	Theory of reasoned action + Social exchange theory	Trust, anticipated reciprocal relationships, attitude, perceived information quality
47.	Chang et al. (2015)	150 members of a technical virtual community	Taiwan	Virtual communities	Social cognitive theory + Trust-commitment theory + Theory of planned behavior	Trust, commitment, knowledge self-efficacy, experience
48.	Ye et al. (2015)	169 from 6 online knowledge communities	Did not state	Online knowledge communities	Organizational support theory + Social exchange theory	Pro sharing Norm, information need fulfillment, perceived recognition from the leader, perceived presence of a leader, perceived community support, perceived leader support.
49.	Yao et al. (2015) .	222 members from various VC	Taiwan	Virtual communities	Social capital theory	Social capital, team learning, e-loyalty
50.	Cheng & Guo (2015)	348 members of Baidu Space (online platform)	China	Virtual communities	Social identity theory + Social capital theory	Social interaction, membership esteem, social identity, self-identity
51.	Khansa et al. 2015	2,920 Yahoo! Answer users	United States of America	Online question-and-answer communities	Goal-setting theory	Incentives, level of membership, tenure, current behaviors, prior behavior
52.	Yen 2016	201 teachers'/educators users	Taiwan	virtual community (VC), social network sites (SNS),	social capital theory + social identity	Trust, social interaction tie, shared vision, interactivity (online and offline), emotional

No	Authors	Sample	Country/ countries	Term used	Theory/ theories/ framework	Antecedents
					theory + use and gratification theory	support, social identity (cognitive, affective and evaluative)
53.	Chang et al. (2016)	253 respondents from Zclub and Jorsindo online communities	Taiwan	Virtual communities of practices (VCoPs)	Social capital theory + Theory of collective action	Social interaction ties, shared vision, shared language, trust, commitment, sense of virtual community (SOVC)
54.	Yan et al. 2016	323 users of two well-known OHCs	China	Online health community	Social exchange theory	Sense of self-worth, perceived social support and reputation enhancement, face concern, cost (cognitive and executional)
55.	Yuan et al. (2016)	364 airline passenger online community	China	Online travel communities	consumer psychology literature + Technology Acceptance Model	Innovativeness, subjective knowledge, perceived ease of use, perceived usefulness
56.	Hau & Kang (2016).	140 online community user	South Korea	Online user community	lead user theory + social capital theory + social cognitive theory	Social capital (tie, trust, goals), lead users, perceived behavioral control (self-efficacy, controllability)
57.	Feng and Ye (2016)	169 from online English forum	China	Online knowledge community	equity theory + Social Identity explanation of De-individuation Effects (SIDE)	Community norm, indebtedness, perceived anonymity, intention to reciprocate
58.	Zhang et al. (2017a)	443 sample from three famous online health communities	China	Online health communities	Motivation theory	Reputation, reciprocity, self-efficacy, altruism, empathy
59.	Liao (2017).	176 college students	Taiwan	Virtual communities	Social influence theory	cognitive benefits, social integrative benefits, personal integrative benefits, and hedonic benefits
60.	Alsharo et al. (2017)	193 respondents from LindkedIN.com	Jordan	Virtual team	Social capital + Social exchange	Trust, collaboration, team effectiveness
61.	Zhang et al. (2017b)	516 college students (VIC users')	China	Virtual innovation community (VIC)	social cognitive theory + social exchange theory	Self-efficacy, hope, optimism, tenacity, material reward, reciprocal relationship
62.	Park and Gabbard (2018)	141 scientist	United States of America	Virtual community	Social exchange theory	Reciprocal benefit, anticipated relationship, reputation, altruism, fear of losing one's value
63.	Pirkkalainen et al 2018	205 respondents	Finland	Open innovation communities	psychological ownership theory	Personal outcome expectation, organizational innovativeness, previous online KS experience, commitment, openness to experience, psychological ownership
64.	Guan et al. 2018	1599 Q&A online users	China	online Q&A communities	Social capital theory + social exchange	Identity-based trust, social feedback, identity communication, social exposure, norms of

No	Authors	Sample	Country/ countries	Term used	Theory/ theories/ framework	Antecedents
					theory + social identity theory + social cognitive theory	reciprocity
65.	Xiong et al. 2018	666 of online communities (Baid Bar)	China	Virtual communities	Social capital + Social identity + Social exchange	Status of opinion leader, self-identity, reciprocity, social interaction tie
66.	Kang et al. (2018	359 respondents	United States of America	Virtual communities	Social capital theory	Anonymity, virtual network connectivity, virtual network closeness
67.	Kumi and Sabherwal (2018)	144 users from two online communities	United States of America	online discussion communities (ODCs)	Social identity	Intrinsic motivation, extrinsic motivations, social identity (cognitive, affective, evaluative), satisfaction with community
68.	Hao et al. (2019	219 virtual team members	China	Virtual team	personality traits theories + Job Characteristics Model + Job Demands-Resources Model + social cognitive theory	Conscientiousness, job demands of skill variety, knowledge sharing self-efficacy

Theories in Virtual community studies

There were various theories used to understand member KS in VC. As the VC platform involve social interaction among members, the majority of researchers applied theories related to social factors that can ultimately understand the antecedents of member's behavior. In this section, a list of mostly used theories are discussed:

Theory of planned behavior and reasoned action

This theory is probably the most used in understanding KS behavior. It was first developed by Ajzen and Fishbein (1975) as theory of reasoned action. An individual intention towards a behavior is determined by the attitude and subjective norm. In 1991, Ajzen had extended the theory of reasoned action into the theory of planned behavior by introducing perceived behavioral control as the third independent variable. Perceived behavioral control explains the ability of a person to perform the behavior in question. The use of TPB in VC studies enables scholars to understand the behavior of members to share depend on the personal attitude, perception of other people towards the behavior (subjective norm), and the perceived ability of the person to perform it. Studies that applied the theory of reasoned action were done by Shu and Chuang (2011) and Lin and Huang (2013), while Gang and Ravichandran (2015) integrated the theory with social exchange theory. Various studies had used TPB in VC KS studies. This includes Erden et al. (2012) and Chen et al. (2012). Some studies integrated this theory with other relevant theories by incorporating social-related factors and extending the TPB model (Jeon et al. 2011b; Cho et al. 2010; Tsai& Bagozzi 2014; Chang et al. 2015).

Technology Acceptance Model (TAM)

TAM is a model that explains individual behavior that is dependent on an individual's attitude in executing that specific behavior. It evaluates each of that outcome as a function of one's belief on the expectation in performing such behavior (Ku, 2012). the model constitutes the concept of usefulness and perceived ease of use (Davis, 1989). Perceived usefulness is a person's perception that using technology can bring benefits and enhance their application performance. Perceived ease of use is the ability to use such technology without having any difficulty (Papadopoulos et al., 2013). The review found thatfour relevant studies applied the technology acceptance model (Hung & Cheng, 2013; Ku, 2012; Papadopoulos et al., 2013; Yuan et al., 2016).

Social Capital Theory

The social capital theory explains the network of relationships that are created among individuals or a group of people with the set of resources within it. This system would have enhanced and positively impact interpersonal KS among the members (Chiu et al. 2006). Nahapiet and Ghoshal (1998) described social capital theory in three perspectives, based on KS in communities. The structural capital (nodes that are interconnected, creating a pattern), relational capital (leveraging and creating assets through connection), and cognitive capital (systems of meaning among members that produce resources by having shared representation and interpretations). Among the factors identified in social capital are trust, recognition, common language, and shared vision. Among studies that practiced only social capital theory was Yao et al. (2015). In practice, social capital theory usually combined with other theories in assessing members of virtual communities KS behaviour. Many studies integrated social capital with either social cognitive theory, social identity, social exchange and other related theories (Chiu et al. 2006; Shan et al. 2013; Zeng et al. 2014; Tseng & Kuo, 2014; Hau & Kang 2016; Cheng & Guo, 2015, Yen, 2016; Chang et al., 2016; Al-Sharo et al., 2017; Guan et al. 2018). A theory related to social capital is the theory of collective action. The theory explained how problems should be avoided, arising from the existence of conflicting incentives. It suggests individuals engage with action in context due to social capital (Coleman, 1990). The study that applied this theory was Chang et al., (2016).

Social Cognitive Theory

The social cognitive theory comprises three factors, personal, environment, and behavior that play essential roles in influencing individual interactivity (Hsu et al. 2007). The social cognitive theory explained that individual personal factors interact with the behavior and environmental aspect, which ends up with triadic reciprocity (Lu et al. 2013). Among the determinants in personal factors are self-efficacy and outcome expectations, as both can predict a person's behavior (Bandura, 1997). While trust and altruism are considered as an environmental factor as it can influence personal characteristics and the behavior itself (Papadopoulos et al., 2013). Others had considered the norm of reciprocity as factors in the environment while perceived relative advantage and perceived compatibility as personal factors (Lin et al., 2009; Chen and Hung 2010), There is one study that tested on several individual factors such as hope, optimism, and tenacity (Zhang et al. 2017a). The social cognitive theory had been applied solely in many studies (Hsu et al., 2007; Lin et al., 2009; Chen & Hung, 2010; Xu et al., 2012; Lu et al., 2013). There are also many studies had combined and integrated with other theories (Chiu et al. 2006; Cho et al., 2010; Shan et al., 2013; Papadopoulos et al. 2013; Zeng et al., 2014; Tseng & Kuo, 2014; Chang et al., 2015; Hau & Kang, 2016; Zhang et al., 2017b; Guan et al., 2018 Hao et al., 2019).

Social Identity Theory

Based on social identity theory, the characteristic of a person determines their sharing behavior rather than the distinctive feature, according to their social identification (Turner, 1982). This theory is rooted in personal belongings to a group. It is an individual-based perception that defined the team within a group membership. Social identity differentiates a person and other members of a group from other group members (Kim et al. 2011). Social identity consists of three main domains of the interactive process of psychology: cognitive, evaluative, and affective (Kumi & Sabherwal, 2018). Personal identification within social groups enables members to develop self-esteem and positively influence attitudes and behaviors. The affective domain plays a role in the group's emotional attachment. Evaluative, on the other hand, is vital to personal self-esteem as an outcome of association with groups. Cognitive in self-identity is the creation of awareness belonging to a group and having an objective in pursuing goals. These three main attributes of social identity explain how individual develop identities and hence leads to attitude and behaviors (Tajfel, 1978).Studies that applied social identity theory include Kim et al. (2011), Ku (2012), and Zhao et al. (2012). Studies that integrated identity theory with other theory include social presence (Shen et al., 2010) social cognitive and social exchange and social capital (Zeng et al. 2014; Cheng & Guo; Guan et al. 2018) and extended theory of planned behavior (Tsai & Bagozzi, 2014).

Social Exchange Theory

The social exchange was developed in explaining a non-contractual relationship between individuals (Staples & Webster, 2008). Social exchange in VC studies posits that the engagement between individuals in online communities enables them to receive some form of benefit (Phang et al. 2009). VC serves as a platform for users to contribute and receive different information and resources from various sources. These resources are a form of social exchange, either tangible or intangible. During the exchange, it may constitute cost or benefits. The use of social exchange theory may facilitate scholars to assess which dimension or factors that are highly perceived by individual either in knowledge contribution or act of seeking. Social exchange theory explains that the factors that lead the individual towards social interaction are based on the expectation that he or she would receive social rewards, such as respect, status, and approval (Liao et al. 2013). The level of interaction is based on cost and benefits consideration. If the benefits are more than the cost, the chance for them to engage in such interaction is high. Among the crucial factors in social exchange theory is trust. For the social exchange to be realized, reciprocation among the exchange members should be rooted in trust (Blau, 1964). This is to ensure a complete exchange to note the perceived obligation and strengthen trustworthiness among members in VC.

Literature shows that plenty of studies had applied this theory (Staples & Webster, 2008; Liao et al. 2013; Yan et al., 2016; Park & Gabbard, 2018). Some other studies had combined with different theories, such as the theory of reasoned action (Gang & Ravichandran, 2015), the theory of social capital, identity and cognitive (Guan et al., 2018; Xiong et al. 2018) and value theory (Phang et al., 2009). An extension of the social exchange theory is value theory. It explained that an individual is attached to different values based on objects or concepts that can fulfill their requirement (Harper, 1974). Studies that applied value theory were Phang et al. (2009) and Lai & Chen (2014). Another theory that is similar to the social exchange theory is rational action theory. According to rational action theory, if a person perceived that there is benefit from a particular behavior, it will be more likely for them to engage with the said behavior (Hau et al. 2013). In line with this theory, expected benefits such as organizational reward, reciprocity, and enjoyment would encapsulate one to share in an online platform.

Meanwhile, equity theory corresponds to the perception and request of fairness/equity of individuals concerning a relationship (Cohen & Greenberg, 1982). According to Feng and Ye (2016), equity theory is the assessment of an individual in social exchange. It includes the ratio of the input and output from a relationship. It also has other person ration of the production from their input. Equity theory suggests that a healthy relationship between individual existed when each of them perceived that their output is equal to what they have provided in the input, suggesting fair as key to KS.Organizational support theory is also an extension of the social exchange theory. The theory proposes that there two categories of perception (organizational support and supervisor support) that constitute one behavior within an organization (Eisenberger et al., 2002). It also refers to the general belief behold by an individual concerning how the organization values their contribution and welfare is being taken care of (Eisenberger et al., 1986).

Expectancy Disconfirmation Theory (EDT)

Another theory in VC KS behavior is expectancy disconfirmation theory (EDT) that was proposed by Oliver (1980). It explained that person repurchase intentions are depending on their satisfaction. This theory explains an individual continuance to share knowledge based on their satisfaction as the main factor (Jin et al., 2013). It is also known as expectancy confirmation theory. Satisfaction, on the other hand, is depending on one pre-purchase expectation and post-purchase disconfirmation of expectations. In 1993, EDT was revived by including affection, performance, and equity as the antecedents of customer satisfaction and repurchase intention. This theory work by the customers resulting in expectations positively confirmed (perceived performance more than expectation), confirmed (perceived performance same as expectation), and negatively confirmed (perceived performance less than expectation). Customer's or user's expectation is the basis of evaluating satisfaction. In an event where confirmation occurs, the satisfaction will fall either lower or more than the expectation. A common theme found in this theory, regardless of its application, is the disconfirmation size and direction. Consumers would be satisfied in the case of positive disconfirmation and dissatisfied when negative disconfirmation occurs (Venkatesh & Goyal, 2010). In the VC context, members would have a certain expectation in using the platform to search for knowledge. Their future participation will depend on their satisfaction on whether their participation would enable them to receive relevant knowledge based on their needs. Studies in VC that had applied this theory were Chiu et al. (2011) and Jin et al. (2013). Chiu et al. (2011) had integrated with justice theory and social network factors.

Motivation Theory

Three theories are based on motivation: motivation theory, self-determination theory, and expectancy theory of motivation. Motivation theory was developed to understand human behaviorderived from the expectation of beneficial outcomes (Zhang et al., 2017a). The two main motivation is intrinsic and extrinsic. Self-determination theory (SDT) is a theory explaining human motivation that is concerned with tendencies of one's inherent growth and the needs of their psychology. These two main domains have a direct effect on their self-motivation (Yoon and Rolland, 2012). On the other hand, the expectancy theory of motivation is based on the perceived consequences factor that relies on the action and value of each consequence (Vroom, 1964). The perceived consequence is known as the chances of a specific consequence that would like to happen as a result of a behavior.

Use and Gratification Theory (U&G theory)

U&G theory originated from the field of communication, where scholars apply it to determine why members engage in the community as a tool in fulfilling their needs (Chen et al. 2013; Mairaru et al. 2019). Katz et al. (1974) posited that the U&G theory was introduced to understand the user's application of media. How the users take the initiative, rather than being a free rider in receiving the message and manipulating medium in searching for an information meeting their needs. As the fast increment of internet usage since the last two decades and a rapid level of interactivity compared to conventional media has paved the way for U&G theory to assess internet use motivations. The theory has been adapted in user acceptance of instant messaging, the internet, emails, electronic bulletin boards, and VC (Yen, 2016). With the development of the internet, the user's acceptance of the theory has been empowered due to easy conversion from one medium to another (Xu et al., 2012).

U&G is based on three dimensions: process, socialization, and content (Peters et al. 2007). These three dimensions can be further illustrated as entertainment (process), social needs (socialization), and information (content). The user's motivation to participate in acquiring knowledge in VC is different. Knowledge required in professional forums is perceived to be more critical than social-based VC, thus focusing on the content dimension. While members in social-based, their weigh is more on the social needs and entertainment aspect. In studying VC KS behavior, these three dimensions would vary depends on the platform basis and the community involved. Studies applying U&G theory were Chiu et al., (2013) and Yen (2016).

Other theories

Other relevant theories used in this study are the Triandis model (Jeon et al., 2011a; Tamjidyamcholo et al., 2014). This theory explains an individual towards behavior in question. The behavior is influenced by facilitating factors that can positively impact, such as perceived consequences, social factors, and affect. Another critical theory is the sense of community theory. It was first formulated by McMillan and Chavis (1986), which was further enhanced by McMillan (1996). The purpose of community theory is described as the belonging feelings and feeling that the group members are matter to one another, having a shared faith among members. Each member needs to commit to meet the member's need. While an advanced definition of this theory is described as a "feeling of belonging spirit, having trust feeling on the structure of authority. Awareness and mutual benefit that come from being together with the spirit that exhibits from shared experience, preserved as art" (McMillan, 1996, p. 315). The study that applied a sense of community theory was Nistor et al., (2015). Other theories applied were self-perception theory (Yan et al., 2013), goal setting theory (Khansa et al., 2015), lead user theory (Hau and Kang, 2016), social influence theory (Liao, 2017), attribution and self-presentation theory (Ma & Agarwal, 2007)

DISCUSSION

Understanding the theories used in VC members, KS is vital. A majority of studies focused on the aspect of social within all the theories presented; understandably, social factorsare deemed to be of the utmost importance. Even the theory of planned behavior and reasoned action is based on human relationships with one another on the aspect of the subjective norm (Erden et al., 2012). Almost all the major studies have used social-related theories directly in their studies (social exchange, social identity, social cognitive, and social capital). Even though other studies did not apply a direct social theory, mostly other theories have embedded a social foundation underlying construct or having social-relational constructs such as trust, reputation, norm of reciprocity, and enjoyment in helping others. These factors are so important in VC studies as interaction with other people may lead to trustworthiness that builds up from such a relationship.

Trust is the most studies factor in KS literature (Bandura, 1997). The importance of trust in understanding VCmembers KS is deemed crucial as sharing on the internet comes with the possibility of risk and liability. Trust, together with commitment, is considered to be supported by the feeling of belongingness (Chang et al. 2016, Capello and Fagian, 2005). The concept of trust is well documented within three theories, namely social capital, social identity, and social exchange. Documented from this review, the majority of studies applied the construct of trust either directly from the three theories or by having the trust construct as an indirect factor. Multiple studies applied theories that are based on trust by nature such as applying trust in multiple dimension (Chai & Kim, 2010), trust-building factors (Hsu et al., 2011), Social factors which include trust (Majewski et al., 2011) and trust-commitment theory (Chang et al., 2015). The three most cited categories within the trust domain are ability, integrity, and benevolence (Zeng et al., 2014). Meanwhile, Usoro et al.(2007)termed the ability to trust as competence-based trust. Integrity is regarded as the expectation of an individual that everyone within VC is following a prescribed general set of rules, principles, and values (Chiu et al., 2006). Benevolence is a preference to commit to a kind and charitable act. Meanwhile, competence or ability is known as the activity based on one qualification, skills, and training (Usoro et al., 2007). These three domains are distinct among each other, but the result shows that they are empirically inseparable. For a proper KS to be realized, all three dimensions of trust should be inculcated. Apart from the trust domain, there have been researchers that studied trust within a different aspect. Such as work by Hsu et al. (2011) that studied trust in members and trust in the system. This is the only study that focuses on the trust in the system. It is deemed vital in such a way when every member of VC can be trustworthiness, but the system might jeopardize a member's personal information. If the system is compromised, data can be leaked to the wrong hand, to the extent used for criminal activities. The two different categories of trust have made an understanding of trust in different aspects of KS via VC. On the other hand, Hau et al. (2013) have adopted a trusted domain in measuring the different types of behavior of sharing based on tacit and explicit knowledge. It was identified that trust and risk profiles of users are different based on the type of knowledge they share (tacit and explicit) (Becerra et al., 2008).

Social exchange theory has a very significant impact on the study of VC members KS. This theory is based on the perceived benefits and the return of sharing behaviors of members in VC. The human being would want something in return when they contribute and participate. As this basis, the theory has led to other related or derivation from a social exchange such as respect, approval, and status (Liao et al., 2013). This social reward would be the main reason whether members are willing to share their knowledge freely. The theory perceived that human would weigh the cost and benefits before engaging in any social interaction. Phang et al. (2009) and Lai & Chen (2014) applied value theory that suggests members value realizing from VC that confides on participation in knowledge seeking and contribution. According to Harper (1974), a different type of profession and group value knowledge differently which lead to their specific behavior. Professionals may value VC as a source of knowledge within their specific filed while it is different from a socially-oriented VC. A VC that focuses on social may regard it as a platform for entertainment. Meanwhile, in equity theory (a similar theory to social exchange) suggest that fairness or equity should adhere when individual engage in any relationship. The theory suggests that when one provides certain input in a relationship, he or she should attain the same amount of output. Other theories having a similar concept to social exchange are rational action theory and organizational support theory. It can be understood from the literature that having much exchange within the community is vital in ensuring that knowledge can be circulated within the VC network. Factors related to self-attainment must be attached within the scope of KS. This attainment is considered not only in virtual setting but in a physical KS environment.

FUTURE WORK

Future avenues should see in the context of personalities that are significant towards VC member's KS. From the 68 studies, no studies hadapplied the big five personalities that are commonly used by scholars in organizational studies. Despite that were few studies undertaken on a broader aspect personality (Chu et al., 2014) and preferably on some specific personality of the big five such as conscientiousness (Fang & Chiu, 2010; Hao et al., 2019) and openness to experience (Yu et al., 2010). From these extensive and latest studies on KS behavior on VC, it can be seen that personality traits were somewhat neglected and received little attention. By understanding which traits are having the most impact on KS behavior, scholars and practitioners can make use of the VC platform to be the best possible mean in ensuring that knowledge can be disseminated. For example, it may be postulated that those who are high in extroversion and conscientiousness would have no problem communicating and sharing knowledge due to their inclination towards open interaction and enjoy helping others. On the other hand, a person high in neuroticism might be more cautious, and having a calculative measure to share and received information either from peers or strangers. All the social-related factors can be related to individual personality traits that can provide meaningful insight into organizational behavior studies such as in VC.

With extensive studies on VC, there have been many terms used in describing individual online knowledge participation. Another term used by Hsseinoiun et al. (2018) is big data community, focusingon how scholars are actively participating in information and knowledge retrieval from big data. The domain focused on knowledge quality, system quality, use, user satisfaction, and community success. With the enhanced development of industrial revolution 4.0, the need to engage within big data analytics would see as a significant leap towards advanced technological adoption. As younger members participate in VC, the perceived ability to apply advanced tools in VC is deemed appropriate. Those who are not able to commit to using recent technology would be left behind and thus unable to make benefits from it. Future work should look into using the theory of acceptance model with the application of industrial revolution software and tools. Furthermore, the use of big data and data analytics should pave the way for VC moderators and stakeholders in acquiring useful information that can further improve the function of VC in the near future.

CONCLUSION

VC has provided the best possible environment for the communities to engage in KS activities. As the world develops even further, people would prefer to attain information and knowledge within a short period. The availability of VC realizes this rapid information retrieval. More and more professional individuals from various professions and socially orientedcommunities have used VC to acquire or share their knowledge. This paper has managed to review 68 studies within the 13-year period (2006-2019) that has conducted KS studies within the scope of VC. Most of the studies were focusing on the related social theories that involved much domain of social variables such as trust, reputation, norm of reciprocity, enjoyment in helping, and many others. All these antecedents are within the scope of main theories available within VC literature encompassing the theory of planned behavior, technology acceptance model, social capital theory, social identity theory, social exchange theory, expectancy disconfirmation theory, and use & gratification theory. Other related theories and antecedents had also been briefly discussed throughout this review process.

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INTEGRATING SOCIAL MEDIA AND DIGITAL MEDIA AS NEW ELEMENTS OF INTEGRATED MARKETING COMMUNICATION FOR CREATING BRAND EQUITY

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ABSTRACT

Communication with target prospects results cost to the company. In this highly competitive environment all marketers work on cutting cost. They try to allocate their marketing budget very carefully to create brand equity and achieve their marketing objective within the given budget. The selection of integrated marketing communication tools has become problematic task for marketers. This paper provides how integration of digital and social media within integrated marketing communication helps to create brand equity of hospitality and tourism industry in India. This paper also examines the effectiveness of each IMC tool to create brand equity. The nonprobability convenience sampling technique was used to gather opinions from 512 tourists of Himachal Pradesh state of India. The findings reveal that both social media and digital media are more effective than the traditional IMC tools. The study also found that the efficiency of Modern IMC tools is better than the tradional IMC tools. Smart PLS-SEM 3.0 software has been used to scrutinise data and validate conceptual framework.

Keywords: Integrated Marketing Communication, Social Media, Digital Media, Modern Integrated Marketing Communication.

INTRODUCTION

Though the first 'P' of marketing is product but marketing starts with communicating products or services related information to target prospects. This creates awareness about products or services to the customers and helps in convincing them to buy the offered products (Naeem & Naz, 2013). As a marketer, we try every communication channel that helps to make effective reach of information to target audience. Message reach has become a key aspect of successful marketing and helps to achieve objectives of the company and brand equity (Cvetkov, 2019). Today, organizations are using various forms of media to reach target customers (Brunello, 2013). This has given birth to Integrated Marketing Communication (IMC). Integrated marketing communication is defined as a strategic process to choose, develop, execute, evaluate, and coordinate with all the stakeholders of organization for a given period of time (Belch. & Belch, 2007). Effective use of integrated marketing communication has recognized a valuation instrument to achieve marketing objectives. Marketers can use it strategically in order to gain competitive advantage, and increase sales volume, market shares, and brand equity (Mongkol, 2014; Bao, et al., (2019)).

Integrating marketing communication tools is regarded as prime concern these days because of efficiency of these communication tools

(Shafi & Madhavaiah, 2013; Valos et al., 2017; Mortimer & Laurie, 2017). However, there are many reasons of growing integrated marketing communication practices in today's business (Brunello, 2013) such as targeting mass consumers, event marketing, social networking sites & direct emails, accountability of media, payment methods, etc. In this globalization era, it is not possible to research all target consumers because of diversified characteristics of customers and availability of diverse range of communication tools. Development in technology and communication media is remodelling integrated marketing communication (Keller, 2016; Zwerin, Clarke & Clarke III, 2020). Many companies are increasing their budget for advertising their offerings on programmatic advertising and social media to gain competitive advantage (Valos, et al., 2017). So far, traditional IMC consists of few popular tools such as advertising, sales promotion, direct marketing, and public relations (Jones & Schee, 2008), which are not enough to research generation-Z (Bhatt, Goyal and Yadav, 2018; Adeola, Hinson & Evans, 2020).

Therefore, digital media marketing, and social media have to be integrated into the traditional IMC tools to make it modern IMC. Digital marketing is defined as an exploration of digital technologies which is a channel to research potential customers and communicates required information to achieve organisational objectives and brand awareness (Sawicki, 2016; Lee & Cho, 2020). Social media is collection of applications build on technological foundation of Web 2.0 and helps to create community and exchange users' generated contents (Kaplan & Haenlein, 2010). Digital and social media helps to engage target audience, personalization of message, user generated contents, ubiquitous connectivity, social graph, and is environment friendly (Sawicki, 2016; Mairaru, et al., 2019). Digital media grew by 33% and social media grew by 47% whereas television advertising shrank by 1.3% in 2019. Digital and social media has likely become 2nd largest media with market share of 26.9% in 2020 (Sawatzky, 2019).

The major role of IMC is to convey consistent messages and build long term healthy relationship with customers. This process helps to increase brand equity of the company (Shafi & Madhavaiah, 2013). Brand equity is considered as an asset for the company and is incorporated in balance sheet of the company. The effective marketing activities improve the valuation of brand equity. Because of huge advertising cost, immense competition, and flattening demand, companies try to improve the efficiency of marketing overheads. The power of brand depends on the minds of consumers. The minds of customers depends on how they have experienced and perceived brand offering over the period of time. Aaker (1991) has suggested five dimensions of brand equity and which add value to it are awareness, perceived quality, associations, loyalty, and other proprietary brand assets. These dimensions can be improved through modern IMC approach.

The impact of traditional IMC on brand equity has been studied by several scholars however, there are few literatures where social media has been integrated into traditional IMC. There is a study gap in this area where both digital media and social media are integrated into traditional IMC to create brand equity. This signifies that there is a need to study modern IMC to improve brand equity. This study is going to integrate both digital media and social media into traditional integrated marketing communication and upgrading it into modern integrated marketing communication to achieve marketing objectives and increase brand equity. This study is targeted to tourism and hospitality industry of India. This study has considered IMC tools such as advertising, sales promotion, direct marketing, public relations (Brunello, 2013; Jones & Schee, 2008), social media (Braojos, Benitez & Liorens, 2015; Valos, et al., 2017), and digital media marketing. This study will also find the effectiveness of Modern IMC over Traditional IMC to create brand equity in tourism and hospitality industry.

REVIEWS OF LITERATURE

Brand Equity

Promotion and positioning of any product in the market needs several types of marketing communication channels. These marketing communication elements make clear understanding of the message and enforce brand image in the mind of consumers (Shakeel Ul Rehman & M Syed Ibrahim, 2014), although marketing communication channels need to be modified according to customers' demographic factors. In the field of marketing, major promotional activities are taking place under IMC and result in brand awareness, brand loyalty and brand equity among customers (Selvakumar, 2014). Branding and brand equity are the most valuable intangible assets of the organizations. Outcome results of marketing activities are the end results of brand equity which place and maintain an identified value preposition in the mind of customer (Hartley & Pickton, 2010). One of the key benefit and a rationale behind building a strong brand of a product or an organization is to increase effectiveness of marketing communication and positioning in the mind of customer (Keller, 2017).

Traditional Integrated Marketing Communication (IMC)

Integrated marketing communication is one of the major element of promotional marketing strategy. Prior to digitalization, integrated marketing communication consists of advertising, sales promotion, word of mouth, direct marketing, and public relations (Philip J. Kitchen & Don E. Schultz b, 2009). These major elements were benefiting businesses in terms of creating product's awareness and yielding more revenue (Selvakumar, 2014). IMC is basically a multi-facet communication technique which synchronizes the different promotional elements of marketing mix to create and provide greater value to target customer and promotional impact towards customers in the market (Rodney G. Duffet & Myles Wakeham, 2016).

American Association of Advertising Agencies (AAAA) formally defined Integrated Marketing Communications (IMC) as:

> *"a concept of marketing communications, planning that recognizes the added value of a comprehensive plan that evaluates the strategic roles of a variety of communications disciplines – for example, general advertising, direct response, sales promotion, and public relations – and combines these disciplines to provide clarity, consistency, and maximum communication impact"* Amanda Zwerin, Theresa B. Clarke & Irvine Clarke III (2019).

H1: Traditional Integrated Marketing *Communication has positive impact on building brand equity.*

Advertising

Unlike personal selling, advertising covers target market and mass potential customer base. It is basically a non-personal form of creating awareness (Victor A. Barger & Lauren I. Labrecque, 2013). The main concern of advertising is to disseminate the information to mass in a short time through various print and electronic media but major challenge was the selection of medium/ vehicle to advertise. Advertisement's effects or outputs are usually measured in terms of brand awareness (Selvakumar, 2014).

H3: Advertising has positive impact on building Traditional Integrated Marketing Communication.

Sales Promotion

Sales promotion is basically a small push to have more sale of a particular product which usually results in more revenue and brand preference while selecting the products to buy (Hartley & Pickton, 2010). Sales promotional activities are mainly helping and pushing actual and potential customers to take quick decisions to buy, making more and repeated purchases (Michael J. Valos, Vanya Louise Maplestone, 2017). Even marketers dealing in business to business trade are also promoting through trade shows, event marketing, sponsorships, special prices, or discounts but use of technology was limited to certain areas of operations (Kalyan Raman and Prasad A. Naik, 1991).

H4: Sales Promotion has positive impact on building Traditional Integrated Marketing Communication.

Public Relation

Public relation is an integral part of promotional strategy of the organization. This approach is the most cost effective preposition which results in long term customer's association with the company (Hilde A.M. Voorveld, 2019). The main functionality of public relation towards customer is to communicate about new introduced products, repositioning of the service or product, influencing new target customer, and reshaping the product and company's overall brand image (Victor A. Barger & Lauren I.

Labrecque, 2013). IMC facilitates all the functionality of public relation smoothly and timely (Jerry G. Kliatchko, 2009).

H5: Public Relation has positive *impact on building Traditional Integrated Marketing Communication.*

Direct Marketing

To bridge the gap between marketer and customer, direct marketing strategy works best to cover this gap and creates awareness about the product portfolio of company (Victor A. Barger & Lauren I. Labrecque, 2013). Various mediums or channels are being used to deliver personalized or customized promotional materials (Hilde A.M. Voorveld, 2019). In the modern era, direct marketing with internet covering wide range of customers globally whereas before internet of digitalization it was restricted to a location (Luangrath, Andrea Webb Peck, Joann Barger, 2017).

H6: Direct Marketing has positive impact *on building Traditional Integrated Marketing Communication.*

Modern Integrated Marketing Communication (MIMC)

MIMC is strategic approach that consists and integrates various communication channels to be more interactive to convey the message. MIMC facilitates new way of transferring or sharing information on multiple platforms and messages reach to actual and potential customers within seconds (Philip J. Kitchen & Don E. Schultz b, 2009). Marketers have divided MIMC strategy into four stages to get best result out of it. The first stage focuses on content creation and tactical coordination rather than hiring advertising agency (Amanda Zwerin, Theresa B. Clarke & Irvine Clarke III, 2019). The second stage evaluates and monitors the communication practices selectedconsidering customers' needs, wants, and evaluating the customers' feedback (Ogechi Adeola, Robert Ebo Hinson, 2020). The third stage monitors regular flow of information and finally fourth stage implements MIMC at organizational level strategically and ensures that all the department working together with coordination to broadcast a coherent organization's brand image (Claudia Elisabeth Henninger, Panayiota J. Alevizou, 2017). The main focus of MIMC is to work and integrate traditional IMC with social media through digital platforms and focusing on cost effective and result oriented approach (Šerić, 2017).

H2: Modern Integrated Marketing Communication *has positive impact on building brand equity*

Social Media (SM)

A rapid change in digital media is facilitating platforms for social communication with and without face to face interaction which is providing useful information and ease of use to customers. Social media is a key role player in influencing and attracting consumers' behaviour and perception towards products or brands (Duffet & Wakeham, 2016; Aydin, 2020; Ibrahim, Aljarah&Ababneh, 2020). Social media seems to be more influential than the normal or traditional marketing communication techniques (Lepkowska, Parsonsand Berg, 2019; Sümer, 2020). Consumers search product's information and reviews on social media platforms (Cheung, et al., 2019). Some social media supports customised marketing of products and services offered to customer toconsumer, business to business, and finally results in brand building (Swani, Brown, and Milne, 2014; Fonseca,Duarte& Gustavo, 2020). Social media communication is being used by marketers in their marketing strategies. Surprisingly, more than 90 percent of businesses or marketers are using social media platforms like Instagram, Pinterest, Twitter, Google+, LinkedIn, Facebook, Youtube, Whatsapp, Tumblr and other social media to create awareness and attract the new customers (Yurdakul & Bozdağ, 2018; Khan, 2017; Shiva& Singh, 2019).

H7: Social Media has positive *impact on building Modern Integrated Marketing Communication.*

Digital Marketing

Digitalization has brought a revolutionary change in data management, media management and finally in business. Digital media at global pace was estimated around 38.3 percent in 2017 and mobile advertising which is the most popular medium accounts for 63.3 percent of digital advertisement spending (eMarketer, 2017). Digital marketing provides wider coverage of customer base and provides insights to even smaller segment of customer base (Selvakumar, 2014). Content marketing is an integral part of digital marketing which focuses on creating and distributing relevant, consistent and valuable content to attract new customers and retain them (Rocha et al., 2019; Dinis, Breda& Barreiro, 2020). In fact Search Engine optimization (SEO) and blogs are also growing its presence among customers (Amatulli, Angelis & Stoppani, 2019; Alves, Sousa &Machado, 2020). Approximately 72 percent marketers state that search engine optimization is the most effective tactic, whereas approximately 32 percent consider content marketing as an effective tool in digital marketing (Yurdakul & Bozdağ, 2018; Adeyinka et al., 2020).

H8: Digital Marketing *has positive impact on building Modern Integrated Marketing Communication.*

Advertising

Before digitalization, advertising elements of IMC were totally dependent on physical materials and one way communication or non-personal communication. The current situation is totally different in terms of communication, customers' level of information, needs and wants of information in advertising and moreover customer seeks everything quick or immediately (Michael John Valos Fatemeh Haji Habibi Riza Casidy Carl Barrie Driesener Vanya Louise Maplestone, 2016). Modern era of technology provides these all solutions and multi-fold results in terms of quick information about new launch, interactive-two way communication, after sales service (Ogechi Adeola, Robert Ebo Hinson, 2020). Digital marketing including social media has provedto be a great support in modern advertising which provides all solution at one place (James G. Hutton, 2010).

Digital marketing facilitates advertising in terms of widespread and personalization of messages, time and cost effectiveness, more impactful, targeted, more interactive and responsive, building strong brand with less time frame, less use of resources and finally results in more return on investment (Michael J. Valos, Vanya Louise Maplestone, 2017).

H9: Advertising has positive impact on building Modern Integrated Marketing Communication.

Sales Promotion

Promotion through social media and other digital marketing tools provides a wide range of customer and work on multi-dimensional approach using digital self-promotional tools, products reviews, price based promotion campaign, loyalty programmes, drop shopping incentives and reseller promotion (Michael John Valos Fatemeh Haji Habibi Riza Casidy Carl Barrie Driesener Vanya Louise Maplestone, 2016). Traditional sales promotion was a short term increment in sales and has covered only a particular market segment whereas digital sales promotion is constant and having wide coverage because of huge traffic on social media platforms with less expensive and fastresults(Kalyan Raman and Prasad A. Naik, 1991).

H10: Sales Promotion has positive impact on building Modern Integrated Marketing Communication.

Public Relation

Modern digital marketing tools are focusing on building professional network between salespeople and company and / or corporate to corporate (Hilde A.M. Voorveld, 2019). These modern tools of integrated marketing communication tools also support marketing research, strengthen buyer- seller relationships, focusing on public flow of information on development in corporate governance, and promote customer relationship management (Wang, Pauleen, and Zhang, 2016). Digital content marketing is supporting significantly in public relations (Ogechi Adeola, Robert Ebo Hinson, 2020).

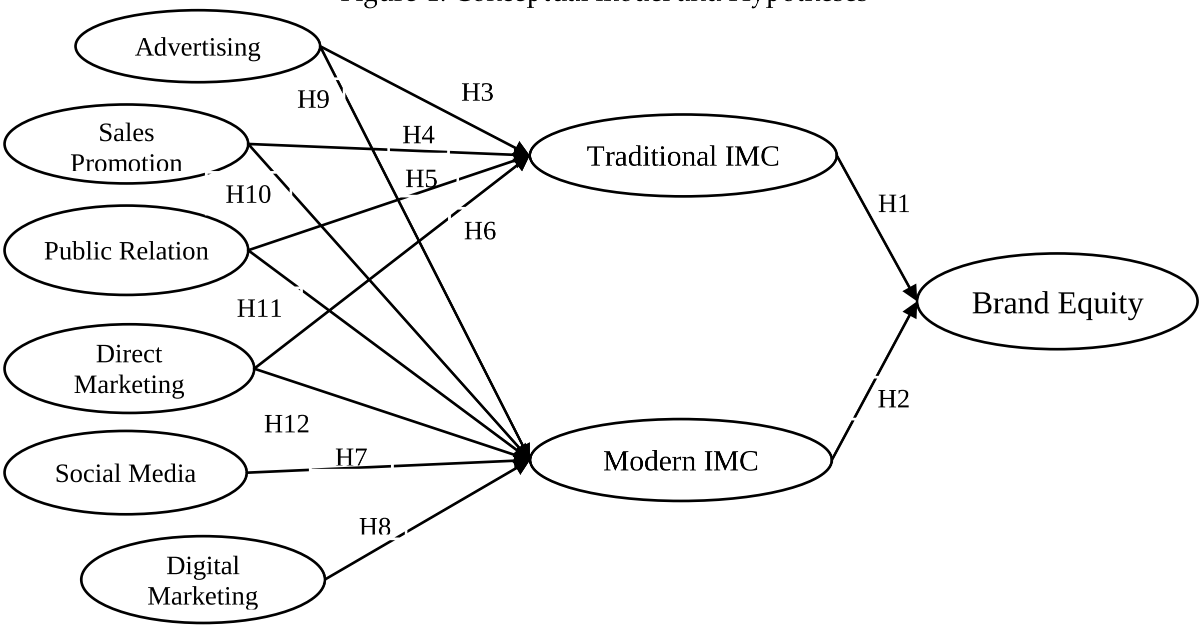
H11: Public Relation has positive impact *on building Modern Integrated Marketing Communication.*

Direct Marketing

Digital marketing has been proved to be the best supporting element for direct marketing which is being done through emails, e brochures, and spreading information through social media to actual and potential customers (Michael John Valos Fatemeh Haji Habibi Riza Casidy Carl Barrie Driesener Vanya Louise Maplestone, 2016). In the modern era of technological advancement phase, marketers are using face to face communication and textual paralanguage (Hilde A.M. Voorveld, 2019). Textual paralanguage includes nonverbal audible, visual elements that usually replace written language like symbols, images (emoji and stickers, etc.), and words like alternants (normally used in Whatsapp chat and differentiators like haha, ohh hoo) (Luangrath, Andrea Webb Peck, Joann Barger, 2017).

H12: Direct Marketing *has positive impact on building Modern Integrated Marketing Communication*

Figure-1: Conceptual model and Hypotheses



Source: Author's Observations

RESEARCH METHODOLOGY

This study is focused on tourism and hospitality industry of Himachal Pradesh. The survey method for opinion collection is conducted to study the impact of integrating digital and social media into traditional IMC to create brand equity (Adeyinka,et al., 2020). The survey instrument was self-administered questionnaire.

A series of questions were prepared with the help of extensive literature reviews, tour guides, and marketing consultants and categorised on the basis of six IMC tools under this study (Fonseca, Duarte & Gustavo, 2020; Dinis, Breda& Barreiro, 2020). The instrument's questions were related to the sources from which these respondents got information regarding present visit to Himachal Pradesh as a tourist. Shimla, Kullu, and Manali are the major tourist spots in Himachal Pradesh therefore tourist visiting these locations during the study period were interviewed.

The non-probability convenience sampling technique was applied to select 512 samples for this study. The sample units were tourist of Himachal Pradesh state of India who have visited this location from August, 2019 to February, 2020. These respondents were the residents of various states of India. SPSS and Smart PLS-SEM were used for data scrutiny.

DATA ANALYSIS AND INTERPRETATION

Measurement Model:Reliability and Validity

Table 1: Measurement Model Assessment

Latent Variables	Manifest Variables (Measured Variables)	Codes	Standardized Factor loading	Mean	SD
Advertising	TV Commercials, and Visual & Audio Ads	AV1	0.7958	3.97	.765
	Magazines and Newspapers	AV2	0.8263	3.96	.767
	Brochures, Pamphlets, and leaflets	AV3	0.7577	3.93	.752
	Posters, Banners, and Hording Boards	AV4	0.8125	3.89	.765

	Fair, and Event Advertising	AV5	0.7560	4.02	.769
Sales Promotion	Discount Offers	SP1	0.8315	3.66	.917
	Coupons, Contests, and Lottery Tickets	SP2	0.8754	3.64	.828
	Loyalty Programs and Sponsorships	SP3	0.8377	3.63	.815
Pubic Relation	Media Relations	PR1	0.8787	3.99	.751
	Investors Relations	PR2	0.7762	3.95	.712
	Community Relations	PR3	0.8446	3.95	.711
	Internal Relations	PR4	0.8143	3.58	.923
Direct Marketing	Tele-calling	DM2	0.8760	3.63	.862
	Door-to-Door Approach	DM3	0.8320	3.62	.915
	Text (SMS) Marketing	DM4	0.8910	3.59	.880
Social Media	Social Networking Sites	SM1	0.8283	4.00	.757
	Social Entertainment Apps	SM2	0.8458	3.96	.764
	Social Community Apps	SM3	0.8914	4.04	.724
Digital Media	Email Marketing	DG1	0.8589	3.95	.741
	Web Display Ads	DG2	0.8799	4.00	.757
	Search Engine Marketing	DG3	0.8586	4.01	.729
Traditional IMC	Advisements through Traditional Media	TIMC2	0.8154	4.00	.767
	Promotional Offers	TIMC3	0.8669	3.63	.864
	Maintaining Reputation on Public Domain	TIMC4	0.8540	3.64	.826
	Approaching Directly to prospects	TIMC4	0.8540	3.58	.866
Modern IMC	Advisements through Modern Media	MIMC1	0.8991	4.00	.757
	Promotional and referral offers	MIMC2	0.8380	3.95	.711
	Reputation building on Digital and Public Domain	MIMC3	0.9168	4.00	.729
	Modern Approach directly to prospects	MIMC4	0.0732	4.01	.763
Brand Equity	Brand Perceived Value	BE1	0.8701	4.00	.757
	Brand Awareness	BE2	0.8213	3.96	.710
	Brand Loyalty	BE3	0.8063	4.00	.766

Source: Author's Calculations

Table 3: Correlation Coefficients Matrix and Quality Criteria

	Advertising	Brand Equity	Digital Media	Direct Marketing	Modern IMC	Pubic Relation	Sales Promotion	Social Media	Traditional IMC
Advertising	1								
Brand Equity	0.6275	1							
Digital Media	0.7322	0.9032	1						
Direct Marketing	0.6556	0.7000	0.8147	1					
Modern IMC	0.6000	0.8981	0.8582	0.0885	1				
Pubic Relation	0.7195	0.9300	0.9599	0.7299	0.8630	1			
Sales promotion	0.6371	0.7209	0.8209	0.6857	0.0600	0.7518	1		
Social Media	0.7411	0.9057	0.8302	0.0895	0.9383	0.8580	0.7601		
Traditional IMC	0.6377	0.8019	0.0888	0.7448	0.0682	0.7216	0.8781	0.0823	1
Average Variance Extracted (AVE)	0.6244	0.6939	0.7497	0.5215	0.5891	0.6878	0.7198	0.732	0.7152
Composite Reliability (CR)	0.8925	0.8717	0.8998	0.8053	0.819	0.8979	0.8851	0.8911	0.8828
Cronbach's Alpha	0.8535	0.7826	0.8368	0.8505	0.689	0.8493	0.8069	0.8183	0.8028

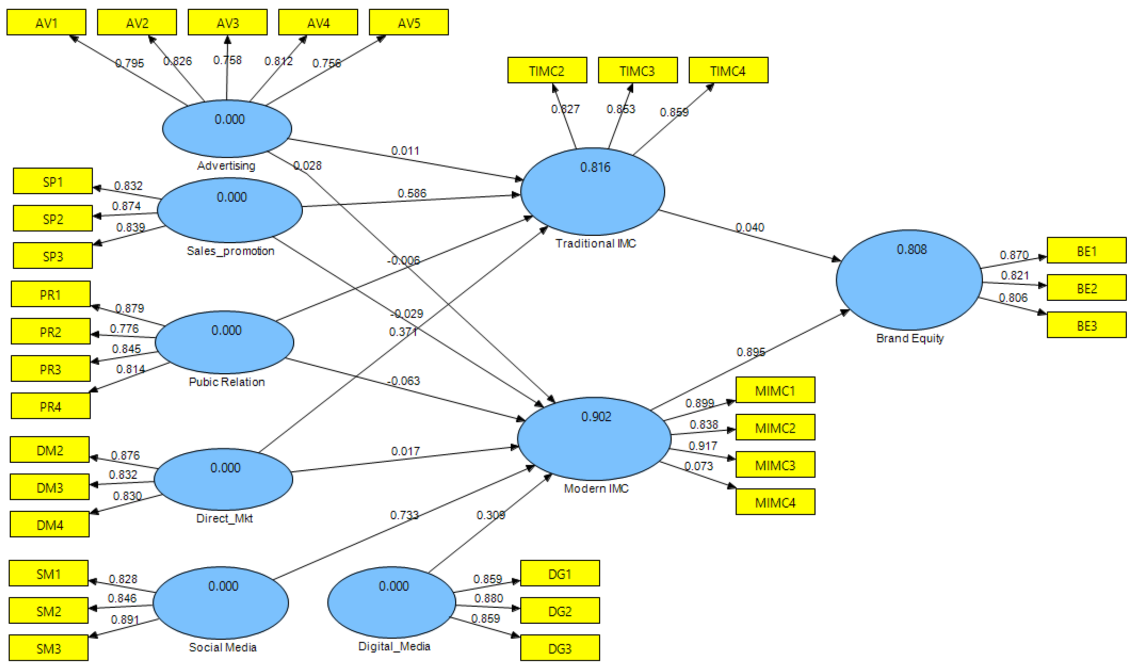
Source: Author's Calculations

The above assessment table-2 represents standardised factors loadings, mean value, and standard deviation value for all items. One item underdirect marketing construct has been removed, remaining all items were retained as the factor loading of these items are more than 0.70 (Sarstedt & Wilczynski, 2009). Mean and standard deviation values have been calculate for all the items to avoid any bias in analysis result. The mean values of all items under study lie between 3.58 and 4.04 and standard deviation values lie between 0.71 and 0.92 which reflect good data and is appropriate for further analysis (Hair et al. 1995).

The correlation coefficients matrix of constructs under this research in the above table-2 reflects that the correlation coefficients values in the above table are not so high therefore the issue of multicollinearity situation does not occur. The average variance extracted (AVE) score of all constructs are more than 0.50 which reflects the mean of squared loadings for all indicators are allied with constructs. Similarly, the constructs explain above 50% variance in its items thus, convergent validity of all constructs has been established successfully (Hair, Sarstedt, Ringle, et al., 2012). Likewise, the shared variance of all constructs with other constructs are greater than its AVE therefore, discriminants validity is established (Fornell and Larcker, 1981; Sarstedt, Ringle, et al., 2014). The composite reliability values of all constructs are falling between 0.80 and 0.89 which is more than 0.70 and less than 0.95 therefore internal consistency reliability is proven (Sarstedt, Ringle, et al., 2014). Cronbach's Alpha values are more than 0.70 for all constructs which denote the data passed the reliability test (DeVellis, 2003).

Structural Equation Model

Figure 2: Path Relationship Diagram



Source: Author's Calculations

Table 4: Structural Model Assessments

Hypothesis				Beta Estimate	S.E.	t-values	Final Decision
H1	Traditional IMC	→	Brand Equity	0.0403	0.0074	5.438***	Accepted
H2	Modern IMC	→		0.8954	0.0039	30.614***	Accepted
H3	Advertising	→	Traditional IMC	0.0112	0.0079	1.420*	Accepted
H4	Sales Promotion	→		0.5856	0.0156	37.590	Accepted
H5	Pubic Relation	→		-0.0064	0.0082	0.776^{ns}	Rejected
H6	Direct Marketing	→		0.3705	0.0166	22.332***	Accepted
H7	Advertising	→	Modern IMC	0.0281	0.0107	2.620**	Accepted
H8	Sales Promotion	→		-0.0286	0.0108	2.649**	Accepted
H9	Pubic Relation	→		-0.0629	0.0272	2.313**	Accepted
H10	Direct Marketing	→		0.0167	0.0104	1.612*	Accepted
H11	Social Media	→		0.7326	0.0133	55.050***	Accepted
H12	Digital Media	→		0.3091	0.0246	12.562***	Accepted

Source: Author's Calculations
***p≤0.01; **p≤0.05; *p≤0.10

The above figure-2 indicates path relationship between dependent and independent variables. It represents that the impact of modern IMC is quite higher than traditional IMC in creating brand equity in tourism and hospitality business. Social media and digital media plays vital roles in achieving the marketing objectives of an organization whereas there is negative impact of advertising, sales promotion, and publication on modern IMC. Similarly, advertising, sales promotion, and direct marketing have positive impact on traditional IMC.

The above table-4 indicates results of bootstrapping procedure with (512 cases, 5000 subsamples, and no sign change option). This indicates that hypothesis H5 is rejected which means there is insignificant impact of public relation tool of IMC on traditional IMC in context of tourism and hospitality business. However, rest all hypotheses H1, H2, H3, H4, H6, H7, H8, H9, H10, H11, and H12 are significant and accepted. This reflects that both traditional IMC and modern IMC have significant impact on Brand equity however, modern IMC has more impact than traditional one. Similarly, advertising, sales promotion, and direct marketing have significant impact on traditional IMC. Likewise, advertising, sales promotion, public relation, direct marketing, social media, and digital marketing have significant impact on Modern IMC. This reveals that modern IMC is more powerful than Traditional IMC for creating brand equity in tourism and hospitality industry.

FINDINGS AND DISCUSSION

Marketing programs are directly aimed to increase sale however, indirectly it is done to create brand equity. Brand equity is an assets which also plays roles in amalgamation and merger. Integrated marketing communication provides us a holistic marketing tools to reach target customers whereas modern IMC is more effective than traditional IMC which is proven from our empirical analysis. Most of the tools under traditional IMC have become obsolete to reach audience. Today, marketers are trying to reach customers in more customized way because every customer is different. Interest and preference of customers varies therefore, selection of tools to reach target prospect has to been done very tactically. Digital generation is hanging with digital devices most of the time. It is not possible to reach this segment through traditional tools of IMC. The modern IMC tools can helps us to overcome this problem. Social media and digital marketing have been proven the most effective tools of modern IMC. These both tools are cost effective because of accountability of such platform advertisers. These both platforms provide us more customized service to reach targetted segment of customers and paymentis purely based on reach of customers. These both platforms allows us to fix date, time and budget, and also allow us to characterise target audience & their locations. Modern IMC has assimilated all tools available in old IMC along with modern tools which provide us to reach both conservative and digital consumers. Thus, modern IMC allows us to reach old fashioned consumers also who can still be connected through traditional tools.

Theoretical Implications

Though, the existence of literature in this area is numerous however, there was gap in integration of digital and social media into integrated marketing communication. The existing studies were mostly carried out on traditional tools of IMC. This study has integrated both digital platforms of marketing to reach every segments of customers. It has also identified some of the tools which may not be useful for IMC of tourism and hospitality organisations. Tourism and hospitality industries marketers can neglect those tools for integrated marketing communications. This study has also proven that the traditional IMC is less effective than modern IMC. This has provided a new framework of understanding modern integrated marketing communication application for today's digital and competitive environment.

This supports the study of (Valos, Maplestone, Polonsky, & Ewing, 2017) who has firstly integrated social media into IMC. This also supports the study of (Shafi & Madhavaiah, 2013; Selvakumar, 2014) who have proven that integrate marketing commination helps to gain brand equity. This also supports the study of (Brunello, 2013; Mongkol, 2014) who has studied the importance of IMC in creation of brand equity of service organisations.

Practical Implications

The aim is to provide a way to reach target customers effectively integrating social media and digital marketing within IMC to create brand equity in the digital era. This paper also provides the impact of each tools in traditional and modern IMC which helps marketing managers to choose effective tools as per their objectives and characteristics of audience. This study provides solution to manager who face difficulty in deciding which media should be selected for communicating targeted audience. This will also helps to integrate social media where customer created content can be used for creating brand equity. This paper will assist senior marketing manager to frame marketing strategies for their offerings.

CONCLUSION

The basic agenda of this paper is to add digital tools into the most practicedintegrated marketing communication tools. The idiom 'old is gold' may not work for longer therefore we keep on modernising our existing system. The modern technologies are more efficient than older. Likewise, integration of social media and digital media into traditional integrated marketing communication have upgraded it tomodern integrated marketing communication. This study concludes that both new tools of IMC contribute better than the existing tools therefore it is requirement of these days for successful marketing activities. Marketing managers should use modern IMC tools rather than continuing with the older one. These tools will helps to reduce IMC budgets and achieve organisational objectives. The tools provides flexibility of payment and helps to target audience more efficiently.

The limitations of thisresearchis the location of study i.e. Himachal Pradesh state of India. However, the participants in this study are from every corner of India therefore, we can generalised the outcome in context of India. This study is focused on hospitality and tourism business which can also be studied on another segments of business like FMCG, Fashion, Automobile, electronics, etc.

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DATA-DRIVEN JOURNALISM BASED ON BIG DATA ANALYTICS: A MODEL DEVELOPMENT FROM INDONESIA'S EXPERIENCE

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ABSTRACT

This study aims to analyze the understanding and practice of data-driven journalism in Indonesia using big data analytics in media institutions such as data infrastructure availability, data structuring, data deepening, enrichment, presenting in the media, resource development, and management, and develop the model of data-driven journalism. The qualitative approach is used by in-depth interviews with 45 participants from media leaders, journalists, vloggers, and audiences. Besides, contents analyses are conducted on 48 samples of various media series along one year. The results showed that big data analytics was conducted for data-driven journalism step by step at national and local media in Indonesia. However, the knowledge and understanding of big data analytics and data-driven journalism in the newsroom and research supporters are still not adequate for both policy and technology. This study suggests the model development of the data-driven journalism process from Indonesia's experience and has managerial implications on empowering data-driven journalism in Indonesia.

Keywords: Data-driven Journalism, Big Data Analytics, Indonesian Media Newsroom.

INTRODUCTION

Changes in the technological environment continue without interruption for each generation. In viewpoint generation, technology is called new media, but for generations after that, there is the emergence of newer and newer media. Therefore, changes in the technological environment must be part of an increasingly better and more beneficial social change. Technology also changes the way individuals, groups, communities, organizations, and communities in large aggregates interact, communicate, and transact. Information and communication technology specifically has changed the way business is done, how to produce, and to distribute its results throughout the world.

Journalism is one of the essential tasks of modern society to maintain each other so that continuity is preserved in modern democratic human relations harmoniously to protect planet earth. The way of working, producing, distributing, and presenting in the world of journalism is also changing. Developments also occur in journalists, media organizations, work tools, data sources and resources, data search and collection, crafting, and presentation platforms. Likewise, innovations occur part of the public, and the audience concept becomes participants due to massive collaboration in all the above processes among all stakeholders. This transformation, from the perspective of Bhatt, Goyal & Yadav (2018), especially concerning social media and the society, is an "important aspect which is authentic and helpful for the development and growth of the society."

Inevitably there is intense competition between media institutions themselves and media institutions with grass-roots media. Now everyone is dealing with other individuals and media organizations fighting over viewers. The landscape of journalism is evolving, and each participant must be able to adjust to that terrible change. On the other hand, technology has been helping and shaping the way of producing content. Carlson (2015) said that most news content is automated, and this determines how this situation creates new challenges for journalists. This development became a "technological drama" of the potential of news technology related to the future problems of the journalistic workforce, rigid conformity between the form of news composition, and the normative foundation of journalistic authority.

The work of a journalist - like all other professions in all fields of life - is assisted by information and communication technology devices. Computer-mediated communication is a part of life that is inseparable from journalism. Previous studies have given in-depth attention to the availability of information resources in the cloud data. Information, the contents of earth and planets, is in the cloud that can be accessed by anyone, including journalists. According to Cheruiyot, Baack & Ferrer-Conill (2019), data journalism is now beyond legacy media, which needs a variety of actors within and outside the old media organizations. However, this previous research still discussed the new challenges for journalism, while our paper is more focused on practical models in the field.

Meanwhile, big data appears and grows as part of human life, and any field is always associated with this concept because all human activities on planet Earth are recorded and documented in it. Thus, big data is a social, cultural, and technological phenomenon - which, according to Lewis &Westlund (2015), is a complex amalgamation of digital data abundance, emerging analytic techniques, mythology about data-driven insights, and growing criticism of the overall consequences of big-data practices for democracy and society. However, Lewis and Westlund's view is still very philosophically fundamental about big data and journalism.

One of the most relevant issues regarding the growth and adoption of big data in journalism is about policy and the way models and streams of data journalism work practically. The model and flow of data journalism become essential at the information gathering, screening, production, and news presentation stages. Data journalism practices, especially the use of large data sets, could be used in many newsrooms. Uskali&Kuutti (2015) suggested three different models are needed for regulating data journalism work practices such as the traditional data desk model, the flexible data projects model, and the entrepreneur model (sub-contractor model). This thinking needs to be developed, and this study discusses models and streams of data journalism based on the principles of big data analytics.

Previous studies show a diversity of perspectives to discuss journalism data or the relationship between big data and journalism. Parasie&Dagiral (2013) who researched the role of "computer-assisted-reporters" and "programmer-journalists" in Chicago, USA, called the era of computer-mediated journalism as the revival era of "programmer-journalist" because journalists were armed with information technology skills and artifacts that influenced the way traditional journalism was expected to contribute to the public welfare. This research is essential as a reference because the direction was to find a "programmer-journalist" model, but the focus was more on efforts to strengthen democracy and transparency.

In Canada, Hermida& Young (2017) tried to open unicorn data as the basis of journalism data research by mentioning it as a hierarchy of hybridity in data and computational journalism. This unicorn basis has roles in influenced norms, practices, and news organizations. Then the hierarchy of hybridity is essential to see the concept of developing journalism data as a new way of working.

Data journalism is a form of investigative journalism that continues to grow. As in many other countries in the world, on the European continent, such as in Sweden, Appelgren& Nygren (2014) explained that data journalism began to be adopted into "old" organizations because journalism was something newly introduced as a genre of journalism. Previously, this form of data journalism was known as computer-based reporting and data-based journalism, as well as journalism of precision, computing, or database. However, Appelgren& Nygren only introduced new methods and genres of journalism into "old" organizations. As new methods and genres of journalism into "old" organizations may be similar in various countries, but our paper wants to formulate a model of Indonesia's experience.

Problems encountered are in the form and content. In the UK, Knight (2015) found data journalism practiced for its visual appeal and the quality of its investigations, and the overall impact, especially in the tabloid format, was decorative and informative. In the Guardian's big data journalism, content as evidence from creative reportage work in the UK media, according to Tandoc Jr. & Oh (2017), was related to aspects of norms, values, and routines. As the most popular media in the UK, The Guardian is a pioneer in contemporary big data journalism. His findings showed that big data journalism exhibited new trends in how sources were used, but still, in general, adhered to traditional news values and formats such as objectivity and visual use.

Further, in subsequent studies, Borges-Rey (2017) highlighted media at the local level in the UK, such as Scotland, Wales, and Northern Ireland, and discovered different characters based on three conceptual lenses such as materiality, performativity, and reflexivity. This perspective was considered in developing the model of this paper. However, research by De Maeyer et al. (2015) in Belgium, was still discussing the fundamental concept of the growth of data journalism, specifically in the French-language media. According to De Meyer, data journalism could be understood as a socio-discursive practice, not only in the production of artifacts alone but also in the eloquent efforts of all the actors involved in the newsroom.

As a comparison, other previous papers, and the development of similar research in Asia, especially in China, will provide a different perspective because the system and ideology of the country are different from the general Western democratic system. However, in China, the diffusion of data journalism as journalistic innovation also develops. The issue is more complicated than in Western countries if data journalism is applied in socialist-communist countries. In China, the media system has a complexity problem where the inheritance of Chinese quantitative reporting traditions is inadequate, and practitioners have difficulty with the availability of data. Nevertheless, researchers such as Zhang & Feng (2019) had different beliefs and opinions about data journalism that were apparently locally adapted and historically embedded in China, and what facilitated or inhibited them. However, the strengths and weaknesses of previous papers are used as contributions to develop a model in this study.

All things can be reported through social media, and it is often difficult to distinguish between fake and fact news so that journalism data can be the answer. In the South Asian region, such as India, news that is based on facts and quality needed to deal with the tide of fake news circulating in the community. Narula (2019) stated, "data journalism is the need of the hour to move from fake news to verifiable and reliable news rooted in facts. It would allow reporting an incident based on the facts as well as allow readers to examine the facts." Social media tends to be preferred by netizens over official channels. WhatsApp is considered more effective for sharing news (Kabha et al., 2019). Jamil (2019) also examined the practice of data journalism in Pakistan, whose use is increasing following the development of software, algorithms, programming, and data processing techniques by media organizations. Nielsen et al. (2016) see the challenges and opportunities for news media and journalism is increasingly digital, mobile, and social media environments. However, our study does not explicitly discuss the role of social media but rather the broader context that underpins social media: using big data.

As an analogy at the global level, research conducted by Heravi (2018) was a summary of results from the global data journalism survey of data journalism at the global level, which included the participation of journalists from 43 countries. Heravi explained various aspects of data journalism practices throughout the world, including demographics, skills, education, and the formation of data teams, as well as opportunities and values related to data journalism. In its current growth, the best practice of data journalism is needed, as a mechanism of expertise and skills to develop this environment.

Overall, in the context of big data and journalism, media and communication scholars have begun examining and theorizing about big data in the circumstances of media and public life at large, both regarding the specific implications for journalism, and the consequences of collaboration in presenting information among all stakeholders. All previous papers showed great attention to the development and practice of data journalism in various places around the world. However, they had not yet paid attention to how the conception and practice of journalism in big data analytics as a database of journalism in media institutions, and to understand the habits of journalists working with big data and the policy in building resources for data journalism. This study takes a position in the gap that has not been filled.

Based on the background above, the research aims, first, to analyze the understanding and practice of journalists regarding infrastructure data. Second, to analyze media institutions conduct data structuring. Third, to analyze journalists and media institutions conduct data deepening, enrichment, and presentation in the media. Finally, to analyze media institutions in perceiving the importance of resource management and developing data journalism models.

CONCEPTUAL FRAMEWORK

Big data and Data-driven Journalism

This concept of explication analyzes the relationship between big data and data journalism. Big data is the basis for almost all fields of business, including advocacy and public services, through the power of journalism. However, operational institutions, public institutions such as media corporations consider the management of their organizations of the companies. The term "big data" in media corporation has attention in fields of life and is discussed in broad scope, including in its derivation for the term data journalism. Kalyvas& Overly (2014) summarized what big data is:

Big data is a process to provide insight into decision making. This process uses people and technology to quickly analyse large amounts of data of various types (structured data with traditional tables and unstructured data, such as images, videos, emails, transaction data, and social media interactions) from various sources to produce actionable knowledge flows.

Based on the definition, it reflected how much data is collected every second and continues to grow to be accommodated in cloud computers. Contemporary journalists use various digital tools and services to collect, manage, and process information for public consumption. Even data journalism is considered as a new genre that brings change. Data journalism is welcomed by many because of the availability of data in digital form and the number of efficient online tools. Everything can help users to analyze, visualize, and publish large amounts of data (Veglis&Maniou, 2018).

Meaning data, according to Mayer-Schönberger&Cukier (2013), is no longer considered static, rigid or staled — the benefits are completed once the collection objectives are reached, such as after the aircraft has landed (or in the case of Google, after a search request has been processed). Instead, data becomes the raw material of business, vital economic input, which is used to create new forms of economic value. Even with the right mindset, data can be cleverly reused, chosen with humility, willingness, and listening instruments. All data that contains information and is suitable for the public to know is the raw material for journalism data.

Large amounts of raw data are stored on internal servers and web servers around the world, but only what is needed has valuable information to be withdrawn and presented to the public. Referral data journalism is the search and processing of data for journalism that relies on computer machines. It is like a journalist assisted by a machine to guide him in producing news, even Carlson (2015) called it a robot reporter. A nickname was given because the automatic style of journalism forced a redefinition of the workforce, the form of composition, and changing authority of journalism. The term "automatic journalism" indicated an algorithmic process that transforms data into narrative news texts with limited human intervention outside of initial programming choices. The consequences of increasing the ability of news texts that are written by machine signify a new possibility for a news content field that far exceeds the ability of human journalist production.

Journalists must realize that in this era of big data, the news reports will be more influential for public trust and transparency. Then, today, big data has become a necessity as the basis of journalism. Mayer-Schönberger&Cukier (2013) also explained that big data caused a revolution that would change the way we live, work, and think about things that were of an individual or other people's interest. Therefore, big data had the potential to influence society and science, how to produce and share experiences, and how to make decisions after receiving near-perfect information.

Debate about determination information technology into journalism, and it makes it a dichotomy between before and after the adoption of technology. However, it is essential to follow the thinking of Witschge et al. (2016), that instead of drawing a dividing line between traditional journalism and the future, mainstream and alternative, digital and nondigital journalism - where this condition shows the complexity and diversity of contexts and journalistic practices - it is better to understand fundamental changes in the field of journalism over several last decades due to various factors. Not merely technological issues as a causal factor, but also cultural, social, or economic changes make journalism find its place.

Another term put forward beside data journalism is digital journalism. It appears earlier, and the scope of meaning is broader than data journalism, but the practice of both in the field is the same. Josephi in Witschge et al. (2013) stated that digital journalism was not born from anywhere, but rather grew from technical possibilities and, in a short period, has changed the face of journalism, especially in North America, Europe, and Australia. Globally, traditional journalism is still in control, and for this reason, digital journalism must be seen concerning traditional journalism rather than in isolation.

Further and more contemporary, researchers like Lewis (2017) explained that journalism in the era of big data is a way of viewing journalism as an interpolation through a conceptual and methodological approach to calculation and quantification in the form of rows of numbers or visual graphics. However, the way to discuss journalism data must be comprehensive, including its practices and philosophies. Thus, it also means paying attention to the socio-cultural dynamics of previous calculations and quantifications. According to Anderson (2016), the breadth of the horizon means recognizing that big data algorithms and computational tools and techniques are not entirely material nor fully human but hybrids way of journalism. This issue, by Lewis and Usher (2013), was discussed as the role of technology in the newsroom, specifically the introduction of open-source culture.

Data-driven Journalism and Its Role in Society

The distribution and adoption of digital handheld devices can be stated to be evenly distributed throughout the world. Likewise, in Indonesia, smartphones and other gadgets are part of everyone's attributes, whether in urban, suburban, or even rural areas because telecommunications infrastructure is generally evenly distributed in a country consisting of thousands of islands in Southeast Asia. The distribution of digital devices to tens of millions of populations in countries with rapidly increasing education levels provides opportunities for the growth and development of big data in the national context of Indonesia.

Every smartphone owner is a productive person to create content and then share it with others, groups, communities, and the public. Currently, institutional media in Indonesia produce content by considering the role of viewers or similar collaborative mechanisms in citizen journalism. The public is increasingly media literate and increasingly smart as both citizen-producers and viewers to handle public issues. Tong & Zuo (2019) said that because of the social constructivism nature of data journalism, serving the public interest and building democracy is a more appropriate principle and objectivity for data journalism.

Journalism is undergoing digitization, changing from analog to digital bits. Besides, it is also experiencing digitalization, which captures how journalism is restructured by digital communication and media infrastructure (Brennen &Kreiss, 2018). The purpose of data journalism is threefold, "enabling the audience to find relevant information personally, uncovering extraordinary and previously unknown stories and helping the audience to understand better complex problems" (Hermida& Young, 2019). This explication is more practical because, previously, according to Royal & Blasingame (2015), the term "data journalism" began to be used instead of the more traditional "computer-assisted reporting" or "computational journalism"— a term that might be frightening to some journalists.

Royal & Blasingame (2015) described the development of journalism data, which later became a topic of academic research in various developed countries. Royal (2010; 2012) also explicitly examined and published a case study team of *The New York Times Interactive News*, spending one-week interviewing team members and studying the process of adopting journalism data. Identification of unique skills, workflows, and culture of an organization was identified and integrated with storytelling, combining quantification and quality concern. In another case, Royal (2013) also examined the diffusion analysis of the interaction of Olympic activities in *The New York Times* from time to time. Other researchers such as Parasie and Dagiral (2013) studied data-based journalism in *the Chicago Tribune* and found that practitioner programmer-journalists had provided new ways for journalism to deal with social kindness.

As Coddington (2015) stated, professional journalism was historically built from two elements, such as textual and visual. From this primary character, three forms of quantitative journalism emerged, namely computer-assisted reporting, data journalism, and computational journalism, all of which often overlap and diverge in the context of values and practices. Hammond (2015) also mentioned the use of data and computers in contemporary journalism, which gave rise to various terms such as data (-driven) journalism, computational journalism, programmer journalism, algorithmic journalism, robot reporting, and automated journalism. However, it is also characterized by a post-objective professional mindset that emphasizes the transparency of editorial processes, user integration, and new qualitative epistemological values from large data sets. Transparency is a quality management strategy by sharing an approach to gathering information with users. The new epistemological value of large data sets is that knowledge is obtained inductively by exploring data, discussing initial findings, and detecting meaningful data patterns with the assistance of algorithms (Rinsdorf& Boers, 2016). However, all the support instruments basically must be aimed at building a society that grows its democracy through transparency.

METHODS

This paper focuses on answering the following research questions: first, what is the understanding and practice of journalists regarding infrastructure data? Second, how do media institutions conduct data structuring? Then, how do journalists and media institutions conduct data deepening, enrichment, and presentation in the media? Furthermore, finally, how do media institutions perceive the importance of resource management regarding data journalism?

A qualitative approach is used to collect data in addition to the literature review. In-depth interviews were conducted with participants from several categories or levels in organizations and audiences such as media institutions, journalists, and ordinary viewers and news or events vloggers. At a media institution category, participants were taken from the chief editor or editor in chief of the media institution or manager or at the level of the reporting coordinator. In the journalist category, participants were taken from various types of media, such as television, online, radio, and newspapers. In the viewer category, ordinary people were taken as readers, news viewers in television, print, or online media. A few viewers were also members of the community who were actively producing and sharing content on YouTube as vloggers.

Based on these categories, this study gathered 45 participants consisting of seven managers or coordinators of national media coverage, five from local media in several provinces, five television journalists, two from radio, seven online, and five newspaper journalists. There are seven non-vloggers viewers and seven vloggers-viewers.

Open-ended questions were arranged in general and specifically addressed to each participant category. Some open-ended question items generally related to the research objectives discussed in this paper, namely, to find out precisely and in-depth about a few groups of indicators such as first, journalists' understanding and practice regarding infrastructure data. Second, practices of media institutions in conducting data structuring, then the practices of journalists and media institutions in conducting data deepening, enrichment, and presenting in their media. Moreover, finally, opinions and policies of media institutions regarding the importance of resource management related to data journalism.

In addition to the in-depth interview technique, there were also observations and contents analyzes on various media that were the work of active groups of workers and viewers. Observations were made at each media office, and content analysis was carried out on news manuscripts in each media whose samples were taken from 12 months in 2019 with a sample of one edition each month, to obtain a sample of four types of media multiplied by 12 editions, which produced 48 editions media content. In every media content, the news is searched using data journalism style such as included quantitative data and visual, and weekly trending topics rank.

In-depth interviews and content analysis pay attention to coding on each indicator (Kalyvas& Overly, 2014; Henry & Venkatraman, 2015), such as first, data infrastructure includes data domain, intelligent business domain, statistical domain, the home page, sentiment page, and weather page. Second, data structuring includes key-value stores, column-based stores, graph-based stores, docs-based stores, sentiment analysis, trending topics, and recommender systems, social media-language detection, social media-named entity recognition, data validation-parameters, data validation-methods, and data validation-results. Third, deepening and qualitative enrichment data includes news craft and improvement, in-depth interviews and confirmation, and performance optimization—finally, the resource management, and sustainable development policy of data-driven journalism. Data processing of the results of the interview is the primary data, which is the subject of analysis in addition to content analysis. Both are combined to describe adoption in practice and reasoning about data journalism in Indonesia. Data triangulation was carried out on interview transcripts, and summaries related to each context were presented in the results.

RESULTS AND DISCUSSION

Data Infrastructures in Media Institution

As the concept of explication before, big data is concerned with the existence of large, complex and ever-growing data sets that are enriched and derived from a variety of

Table 1. Availability of Data Infrastructure at Media Institutions in Indonesia

Media	Data domain	Business intelligent domain	Statistic domain	Home page	Sentiment page	Weather page
Koran Tempo	✓	✓	✓	✓	✓	✓
Kompas	✓	✓	✓	✓	✓	✓
Media Indonesia	✓		✓	✓	✓	✓
Republika	✓		✓	✓	✓	✓
Jawa Pos	✓		✓	✓	✓	✓
Bali Post			✓	✓		✓
Sriwijaya Pos			✓	✓		✓
Harian Fajar			✓	✓		✓
TV One	✓	✓	✓	✓	✓	✓
Metro TV	✓	✓	✓	✓	✓	✓
i-News			✓	✓		✓
Radio Elshinta			✓	✓		✓
Radio Sindo Trijaya	✓		✓	✓		✓
Detik.com	✓	✓	✓	✓	✓	✓
Kompas.com	✓	✓	✓	✓	✓	✓
Liputan6.com	✓		✓	✓	✓	✓
Kumparan.com	✓			✓	✓	✓

Note: ✓ : available

independent sources (Wu et al., 2014), such as from environmental and body sensors, cellular devices, administrative claims data, social media, email, laboratory studies, electronic medical records, internet, business transactions, and geospatial devices or sensors (Gerard et al., 2014, Barton, 2016; Chan, 2013). Big-data growth rates are high-speed, and it can be produced by machines or humans (Henry & Venkatraman, 2015). From this understanding, it means that all journalism activities are categorized as the work to build big data from time to time. Journalists' job is to create and store data on a continuity basis.

Most established media institutions have a data infrastructure that is used as an operational base to produce, distribute, and present news or articles on various topics. However, some media institutions are not pioneering to build their infrastructure, and the work takes time in line with the development of their respective media. Some local media in the area have been acquired or established by national media business groups so that the infrastructure data is also centered on the holding company. One of the influential media institutions in Indonesia, Tempo Media Corporation, which publishes Tempo Newsletter or *Koran Tempo*, has a robust data infrastructure base and has long been known as the Tempo Data Centre (TDC). B. Setyarso, editor in chief of *Koran Tempo* explained:

> In the media institutions where we work, the existence of data is essential. However, often journalists are overwhelmed to search, find, and process them. We have a research team to serve the editorial team. The seconded researchers are tasked with processing unstructured data into mature data and ready to be displayed in news presentations. They are also a capable visualization team that is equipped with the latest applications, including animation.

Tempo Data Center (TDC) is accessed by the public to search for data and information from various fields, so that educated people often come to conduct studies. Several other media institution groups are working hard to build their infrastructure data and thus have not yet opened public access for this purpose. N. B. Nugroho, head of the multimedia department at *Media Indonesia* newspaper explained:

> We often discuss big data as a topic of internal discussion, but indeed among the journalists, no one mastered what big data is and how it works. We had invited experts to discuss it, but in the discussion, there was a kind of gap, because the experts were information technology people while we as journalists were very diverse in their backgrounds.

Many practitioners of journalism, especially journalists themselves, are not aware that they have a role in building big data that is concentrated in the media institutions where they work. Journalists feel that they only work by collecting data through interviews, checking the internet to enrich writing, and submitting it to proofreading for later publication. However, some of them also realize the importance of building big data for data journalism.

Implementation of big data systems in media institutions is critical because, in that system, we will find home page views, sentiment pages, or even weather pages as a standard measure. However, it was found that the display of quantitative data often lacks in the narrative that gives deep meaning to graphic visuals. Research by Cushion, Lewis & Callaghan (2017) also found that statistics are often referred to in news coverage, but their role in interpreting situations is often unclear, lacking, and inaccurate. F. Pratama, the managing editor of *Detikcom*, explained the online news homepage he led:

> Like our print newspaper edition, the online edition that is sought on the homepage is a graphic display that is attractive and easily understood by the public. This data display is the result of processing from the graphic team whose materials are prepared by the research team or from the journalists themselves. Often, we also cite outside sources to be presented on the front page.

The data infrastructure of media institutions or the public can always rely on open access, including social media and institutions of statistical centers and the like. However, what is most talked about is digital journalism and social media producing large amounts of digital content every day, journalism scholars faced with new challenges to describe and analyze the wealth of information. Günther & Quandt (2016) illustrated this practice assuming a workflow of rule-based approaches, dictionaries, supervised machine learning, document grouping, and topic models. Arifin Asydhad, editor in chief of *Kumparan.com* explained the appearance of the online news homepage he led:

> Our online news homepage must be attractive, so viewers do not get bored visiting our site all the time. There is always something new and variations on the headlines and visual appearance. The main points of the identity and visual character of our website must still be there to be easily recognized by anyone. Our online news homepage is in the top ten on the number of viewers and their active involvement in the issues that interest them.

Often, sentiment analysis is carried out on data collected from the Internet and various social media platforms. Politicians and governments often use sentiment analysis to understand how people feel about themselves and their policies. Ilham Safutra, head of the *Jawa Pos* newspaper coverage which also has a regional newspaper network in various provinces in Indonesia, explains:

> Our media is very concerned about a topic that has an impact on public sentiment. However, so far, we have not been independent in processing sentiment analysis. The analysis needs external parties who usually do regular releases and hold press conferences for many media, and we are there. We try to do a text analysis process to interpret various data sources, such as viewers' opinions, but they are still limited.

Data Structuring Practices in Media Institutions

Data structuring is a big job that must be done by the media as an institution that advocates for the community, government, legislative, and judiciary institutions. Structuring owned by the media must be several steps ahead of other institutions because the media supervision is inherent as a watchdog for the state administration policy. Therefore, understanding, adoption, and practice of key-value databases in media institutions is a necessity for storing, retrieving, and managing associative arrays, and having data structures as a dictionary or hash table. Media institutions have dictionaries that contain a collection of objects, or historical editorial

Table 2a. Data Model Building Practices at Media Institutions in Indonesia

Media	Key-values stores	Column-based stores	Graph-based stores	Docs-based stores
Koran Tempo	✓	✓	✓	✓
Kompas	✓	✓	✓	✓
Media Indonesia	✓	✓	✓	✓
Republika	✓	✓	✓	✓
Jawa Pos	✓	✓	✓	✓
Bali Post	✓	✓	✓	✓
Sriwijaya Pos	✓	✓	✓	✓
Harian Fajar	✓	✓	✓	✓
TV One	✓		✓	✓
Metro TV	✓		✓	✓
i-News	✓		✓	✓
Radio Elshinta	✓		✓	✓
Radio Sindo Trijaya	✓		✓	✓
Detik.com	✓	✓	✓	✓
Kompas.com	✓	✓	✓	✓
Liputan6.com	✓	✓	✓	✓
Kumparan.com	✓	✓	✓	✓

Note: ✓ : available

records. All documents are stored and retrieved if needed by using a key that uniquely identifies the records and finds them quickly.

Media institutions in Indonesia relatively follow contemporary developments in the adoption of journalism, although it is still limited to large established media groups. However, significant work in data structuring as a key in data journalism is carried out by almost all institutional media, depending on the type. F.H. Santoso, general manager of research and development at *Kompas.id* said:

> Our institution has long building data storage, and this is our basis, that in the development process, there is a digitization of the library from the conventional form, so we have gone through it. We have been building sophisticated data centers, crossing the developments from time to time, especially regarding Indonesia and the relevant international world. Now the development is at its optimum so that it has added value and is continuously being updated. The public can access our data center with digital services with only a small fee.

Some established media institutions such as *Tempo Media* and *Kompas Gramedia* in Indonesia are known as media institutions that have advanced big-data structures because they have been built over decades and become models of big data media institutions. Besides, several groups of media institutions in the region also have sufficientbig data because of their excellent inter-island networks, such as the *Jawa Pos Network Group*, the *Media IndonesiaGroup*, and the *Media Nusantara Citra* (MNC) Group. Ample data storage in media institutions illustrates its ability to handle data journalism at high speed, high volume, and high data varieties.

Technically, media institutions have distributed file systems, NoSQL databases, graph databases, and NewSQL databases where data is stored securely, and privacy protected. According to Strohbach et al. (2016), databases that are built must pay attention to several things such as databases in memory, and column databases usually outperform traditional relational database systems. Also, the main technical barriers to widespread retrieval of large data storage solutions are missing standards. Moreover, there is a need to address open research challenges related to scalability and graphical database performance. Problems faced by media institutions, especially the skills and knowledge of individual journalists, are generally still low to utilize the availability of big data creatively and optimally. M. Hafizni, a senior journalist at *MetroTV*station, said:

> We are used to processing qualitative data from interviews so that if there is data in the form of tables or graphics, we are often overwhelmed to discuss it in an argumentative language. The news material is too severe and scientific for us. We often leave it to the research team whose part is to discuss it.

The same finding was also stated in research conducted by Young, Hermida & Fulda (2018), which showed that journalists had a lack of understanding and were less able to achieve the standard of excellence. Two main factors, which they should be familiar with (such as the use of free online options on Google Maps) turned out not to be easily adjusted, and the number of practitioners working on data projects was mainly within the framework of traditional journalism. According to him, the most widely used visual elements were dynamic maps, graphics, and videos. Concerning interactivity, all but one of the projects contained interactive elements. The most popular interaction techniques were inspection and screening, which is considered an entry-level technique in the field of information visualization.

As a comparison of other research findings, Loosen et al. (2017), examined, among other aspects, data sources and types, visualization, interactive features, topics, and producers in their research. The potential of data-based journalism was mainly aimed at community advocacy as a form of the social function of journalism. The existence of bar-charts was also commonplace in newspapers, magazines, or online news. Stalph (2018) also found the same thing after analyzing daily news from data-driven, which showed that daily journalism data illustrated two visualizations that tend to be bar charts. Most of these visualizations were not interactive, while maps turned out to be the most interactive type of visualization.

more professional news broadcast platform and a more participatory online platform. Researchers such as Johnson & Dade (2019) refer to it as local broadcast journalism with more considerable attention to user-generated content and boundary work. Not only in the radio broadcast, television, and online broadcast industries, print media also routinely include trending topics from social media databases (especially Twitter) whose measurements are obtained from internal or external data. The journalistic algorithmic engine allows media institutions to map quickly.

Table 2b. Data Model Building Practices at Media Institutions in Indonesia:Text-meaning

Media	Sentiment analysis	Trending topics	Recommender systems
Koran Tempo	✓	✓	✓
Kompas	✓	✓	✓
Media Indonesia	✓	✓	✓
Republika	✓	✓	✓
Jawa Pos	✓	✓	✓
Bali Post		✓	
Sriwijaya Pos		✓	
Harian Fajar		✓	
TV One	✓	✓	✓
Metro TV	✓	✓	✓
i-News	✓	✓	
Radio Elshinta	✓	✓	
Radio Sindo Trijaya	✓	✓	
Detik.com	✓	✓	✓
Kompas.com	✓	✓	✓
Liputan6.com	✓	✓	✓
Kumparan.com	✓	✓	✓

Note: ✓ : available

Sentiment analysis, trending topics, and recommender systems are the most vital elements and are widely adopted and discussed in journalism data. Likewise, in the eyes of viewers or online news users, trending topics are timely and are always sought every minute. The public is very enthusiastic to know and share about trending topics that occur on a daily or weekly basis. G. M. Sigit, the chief editor at *MNC Radio Networks-MNC Sindo Trijaya FM*, said:

> At the news radio station, we work based on trending topics that occur, per minute, daily, up to a week. Even routinely in the week, we count trending topics that have the highest audience reception. Based on that, we do face-to-face events with customers or listeners such as live or on-air discussions on weekends on the hottest topics of the week.

News and talk show radio pay attention to issues that are developing in society, and as such, journalists must work on the issue. Broadcasters need to be sensitive to what in the minds of the public or the community of listeners. *SindoTrijaya Radio* seeks to develop a

Dörr (2016) did mapping in the field of algorithmic journalism based on the evolution of natural language generation (NLG). He explained that with software that automatically generates text from structured data, NLG transforms traditional news production into fast computer-based. The public wants to know what is happening around them by turning on the radio, even actively participating on-air. Appelgren (2018) called this combination of human and computer machine sensitivity as hybrid journalism, namely contemporary data journalism that was inherent due to verbal and visual elements. Trending topics and sensitivity analysis were processed to be presented visually.

Table 2c. Data Model Building Practices at Media Institutions in Indonesia: Social Media and Data Validation

Media	Social media: Language detection	Social media: Named entity recognition	Data validation: Parameter	Data validation: Methods	Data validation: Results
Koran Tempo	✓	✓	✓	✓	✓
Kompas	✓	✓	✓	✓	✓
Media Indonesia	✓	✓	✓	✓	✓
Republika	✓	✓	✓	✓	✓
Jawa Pos	✓	✓	✓	✓	✓
Bali Post			✓	✓	✓
Sriwijaya Pos			✓	✓	✓
Harian Fajar			✓	✓	✓
TV One	✓		✓	✓	✓
Metro TV	✓		✓	✓	✓
i-News	✓		✓	✓	✓
Radio Elshinta			✓	✓	✓
Radio Sindo Trijaya			✓	✓	✓
Detik.com	✓	✓	✓	✓	✓
Kompas.com	✓	✓	✓	✓	✓
Liputan6.com	✓	✓	✓	✓	✓
Kumparan.com	✓	✓	✓	✓	✓

Note: ✓ : available

The tendency of social media to be the basis for information retrieval is very dominant in the newsroom. Heravi& Harrower (2016) also stated that Twitter formed a source and verification process in the editorial room. Carlson (2018) mentioned that the role of social media, especially Facebook, in writing news tends to be confidential and even haphazard. According to him, Facebook reacts to controversies with personalized writing, organized according to the popularity and involvement of its users. Most journalists do see the benefits of social media (Weaver &Willnat, 2016). The most common short cut for individual journalists was to verify social media content because there was an emerging journalistic verification practice concerning social media (Brandtzaeg et al., 2016). Therefore, the source of social media is vital, and the media must conduct language detection and named entity recognition in the data structuring process. Lewis, Zamith&Hermida (2013) argued that an approach that combined computational and manual methods throughout the content analysis process could produce more useful and exciting results in a case study of news sources on Twitter to illustrate the hybrid approach.

Owned technology is directed to build social engineering, and the two are inseparable. Cheruiyot, Baack & Ferrer-Conill (2019) said that the practice and role of nonprofit public institutions and civil technology, such as journalism, were essential for building society. Research conducted by Baack (2018) said something similar that it needed the terms between data journalism and civic tech that describe progressive datafication in social life. Public aspirations that reflected in social media, the implications of data journalism are, therefore, increasingly strong to pay attention to the public interest.

Furthermore, meaningful work in journalism is data validation, both regarding parameters or indicators set according to journalism ethics and internal organization, including methods and results. Data journalism practices in Indonesia show that data validation is essential so that it must be present in every media. Quantitative statistical data are essential, but the visual artifacts must be balanced with the qualitative side. Related to this, Rinsdorf & Boers (2016) analyzed the occurrence of qualitative changes in newsgathering caused by the availability of open data, big-data sources, and the consequences for quality management. Therefore, it is necessary to align and expand individual skills and inventory of new resources. Likewise, the management of newsroom quality must be adjusted to provide accurate news in data journalism.

Big data in social media exists and grows in large numbers but must be structured according to needs. Ilham Junaidi, the editor in chief of the *Republika* daily newspaper, said:

> We often do not focus on social media trending topics because, in every editorial meeting in our newsroom, we discuss and debate about content planning following Republika's vision and mission. We still monitor the public aspirations or events that are being discussed by many netizens and use them to choose various alternative issues. However, we put forward Republika's mission as a national newspaper that wants to continue to bring a change towards a better direction with a new spirit.

Data Deepening and Enrichment

The data deepening phase in data journalism is essential because it is at this stage that a balance is made between the work of computer machines and the narratives interpreted by humans, namely journalists. After a computer assists the work of a journalist with the results in the form of visual statistical data, illustrated images, and charts, then news craft and quality improvements are the lives of every journalistic work. All media in Indonesia operate with or without help visual statistical illustrations in the written news series. However, every journalist at a time or periodically must combine the visual artifacts and verbal narratives of the news.

In certain conditions, journalism data presentation often does not reveal much for a type of investigative reporting. Therefore, the journalist has the function to dig deeper into what happens behind the visual presentation of quantitative statistical data. Journalists must believe that the quantification system has shortcomings that must be complemented by quality.

In-depth interviews and confirmations in the check and re-check series are needed to avoid publication and broadcast errors. Journalists know who is eligible to be re-interviewed and confirmed for the interim results obtained. The snowball interview method, for example, is significant to be adopted to deepen the news side. Irna Gustiawati, editor in chief of *Liputan6.com* online news explained:

> We need to study and then determine the exciting side of the news to be discussed from journalism data published by various institutions, consultants, or researchers. We

Table 3. Data Deepening and Enrichment at Media Institutions in Indonesia

Media	News craft and improvement	In-depth interview and confirmation	Performance optimization
Koran Tempo	✓	✓	✓
Kompas	✓	✓	✓
Media Indonesia	✓	✓	✓
Republika	✓	✓	✓
Jawa Pos	✓	✓	✓
Bali Post	✓	✓	✓
Sriwijaya Pos	✓	✓	✓
Harian Fajar	✓	✓	✓
TV One	✓	✓	✓
Metro TV	✓	✓	✓
i-News	✓	✓	✓
Radio Elshinta	✓	✓	✓
Radio Sindo Trijaya	✓	✓	✓
Detik.com	✓	✓	✓
Kompas.com	✓	✓	✓
Liputan6.com	✓	✓	✓
Kumparan.com	✓	✓	✓

Note: ✓ : available

> consider all published data as a trending topic because we must pay attention to many aspects to create a booming issue for netizens. We consider the depth of data to be processed and published gradually and its continuity. This performance depends on the public and viral response obtained from sharing links through social media. The involvement of netizens is significant to us.

All media samples in this research have a reference to achieve performance optimization. This achievement indicates that the media is growing with qualitative as well as quantitative measures. Journalists work with orders that are internally and externally outlined in the association of print press, television, and radio journalists.

On the one hand, journalism data writing practices are often considered narrative dry or lacking in life. Therefore, the data model makes it possible to juxtapose knowledge with writing narratives that are driven by events. Caswell &Dörr (2018) found several technical and editorial challenges. Two components, such as a structured database and narrative, are needed to provide journalistic knowledge to the writing platform from simple descriptions to real stories. So, the integration of quantitative artifact data and qualitative narratives is a way to achieve performance optimization. Lewis, Zamith&Hermida (2013) also emphasized that analyzing big-data content requires an approach to computational and manual methods because an extensive collection of communication data challenges the traditional, human-driven approach to content analysis.

Model Development of Data-driven Journalism

The following development model of data-driven journalism process is a summary of all the steps taken to prepare data journalism. The experience is not only among media institutions in Indonesia but also throughout the world, and therefore this model is expected to be an essential practical guide for developing data-driven journalism in various places and times. The stages presented begin with the process of big data analytics and continue with the process of data journalism for the sake of reporting, transparency, and democratic growth.

The six stages in this model are infrastructure data building, data structuring, data deepening and enrichment, data visualization, classification, clustering and composing, and finally, presentation and publishing. At each stage, newsroom must perform tasks for both journalist and researcher, or specific as big data research team. This model can still be developed according to the conditions of each media, but overall it has been built based on experience stakeholders in Indonesia to practice and develop data-driven journalism.

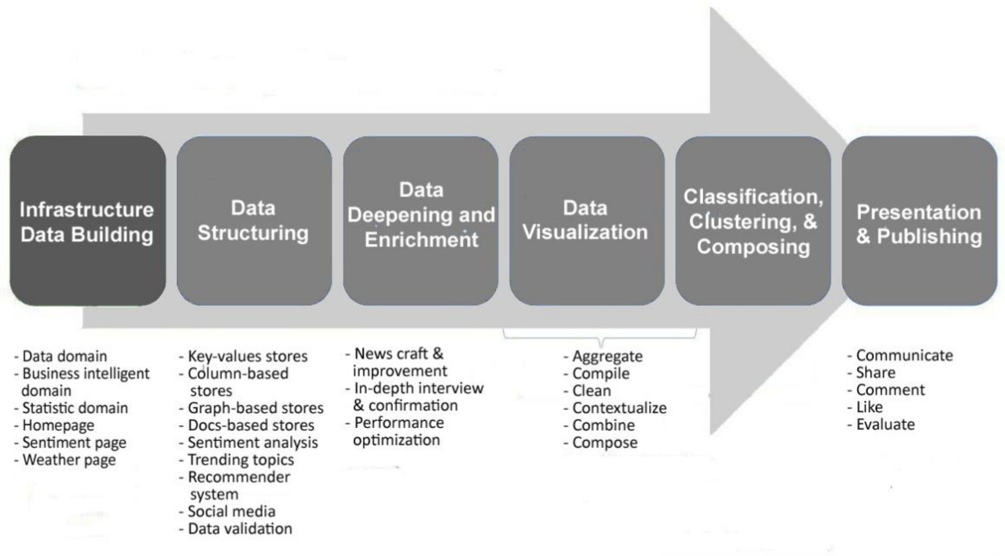

Figure 1. Model development ofdata-driven journalism process
(Adapted model of Rinsdorf& Boers, 2016)

Resource Policy and Management

Data journalism is a new way that places the ability and accuracy of computers to collect data and information to be processed, enriched, and presented on several media platforms. The length of the process makes it impossible for a journalist to do everything on his/her own. Therefore, we need organizations that pay attention to the new direction of journalism data. Editors-in-chief must learn quickly, identify technical and policy issues for medium to long term development for media institutions.In terms of technical issues, Wu, Tandoc Jr. & Salmon (2019) saw the importance of technology companies that support media institutions to transform from traditional conceptions to data journalism. Furthermore, social media is now the foundation of citizens to participate in building democracy. Interaction of communication and reportage as citizen journalism enables citizens to transform the society, and according to Pain & Chen (2019) from the results of their research in India, this is a form of participatory monitoring and evaluation.

One aspect that needs attention is the policy and management of resources, including human capital in the field of media institutions. Parasie (2015) argues that the efforts of news organization resources are needed to generate valid trust because data processing artifacts constitute a significant component of the big new data editorial space environment. According to Parasie (2015), even the use of this artifact, for journalists, must follow two opposite paths to produce reliable news, namely the "hypothesis-driven" path and the "data-driven" pathway. Along with that, Heravi (2019) also paid attention to the human capital of data journalism, which was considered weak in interdisciplinary insight.

Experience in forging data journalism allows each journalist to become proficient and in-depth in knowledge quickly. The quality of works that continues to improve is a good benchmark. In journalism data, the quality of the work and presentation is understood as the result of better, faster, and more open data access. According to Hammond (2017), in the context of big data, human subjectivity tends to be downgraded, and that is an important issue. However, the increase in 'datafication' is not what drives change in the profession but is a continuation of the preexisting, shaped by the broader context of contemporary conditions.

Media institutions must also continue to innovate, have influence, and solve the constraints as stated by Hewett (2017, the technical capabilities and knowledge of human resources in the world of journalism must adopt data journalism. The complexity associated with the demands of data journalism is very urgent and must be able to identify critical problems and play a role in information technology. Usman Kansong, Media Group News Director in charge of *MetroTV* and *Media Indonesia*, said:

> At Media Group, we pride ourselves on being national and regional media with diverse cultures that are brought to the life of our organizations. We pay close attention to human capital policy and management as the main aspects of the operational and strategic media institutions. Many Metro TV and Media Indonesia alumni were successful, and they were promoted in various similar companies. We are proud to be very concerned about the continuous improvement of the ability of journalists, especially in data journalism.

As a comparison, one of the researches conducted in the United States was conducted by Fink & Anderson (2015) on beyond the "usual suspects" with the finding that there was a great variety of educational backgrounds, skills, tools, and goals among data journalists. However, many of them faced similar struggles, such as trying to define their roles in their organizations and manage scarce resources. Borges-Rey (2016) discussed data journalism practices in the UK with semi-structured interviews with data journalists, data editors, and news managers working for the UK mainstream media. Innovation is needed to be synergistic with data journalism to storytelling, news, and news dissemination. Journalist resources are significant, and some of the large groups of journalists must focus as data-journalists as Wright & Doyle (2019) concern, who investigated how and why data journalism had developed in Australia.

Research, through semi-structured interviews with journalists, led them to suggest that there should be a core group of data journalists in media institutions. Previously, from research in the UK, Knight (2015) found that the skills of journalists following computer technology were still considered low. The findings of Borges-Rey (2016) showed that most professional journalists demonstrated a degree of doubt about numbers and computational literacy. There are demands of an industry that is growing with technology, which must also be followed by human competencies.

Appelgren, Lindén& Van Dalen (2019) also paid attention to the future of cross-continent data journalism resources. By comparing data journalism in Africa, Arabic, Italy, England, and Argentina, they concluded that three important contextual factors shape data journalism throughout the world, namely journalistic culture, media markets, and the political environment. In the future, the wave of post-cellular technology referred to as the progress of the vector of virtual reality (VR) by Hassan (2020) creates an 'empathy machine' that will form the basis of new journalism as used by the New York Times and the United Nations.

Finally, the collaboration between media institutions and citizens takes place, especially when news organizations struggle in difficult economic times. Konieczna (2020) calls a community collaboration with the term Stepladder Collaboration, namely "simple sharing, collaboration on stories, collaborating on methods, organizing events, allocating money, and working to solve a problem in the community."

CONCLUSION

Big data as a basis for compiling news and articles is an inevitable source in the online digital era. Data is continuously growing in various cloud computing centers from all walks of life. Journalists in the media and even citizen journalists must be able to analyze big data to be presented in data-driven journalism mode. Several steps must be taken to process large amounts of unstructured data into structured data to be validated, combined with qualitative aspects. The crafting steps of credible news or articles are trusted and used as a reference by the public, government, or related communities.

The results of this research showed that big data analytics was conducted for data-driven journalism at national and local media in Indonesia. The data-driven journalism was routinely used in the production process and presentation. Data journalism is applied to online and conventional media, both in national and local media scopes in various regions. However, the knowledge and understanding of big data analytics for data-driven journalism were still inadequate in the newsroom and research supporter division. Several media in Indonesia apply data journalism by taking data from outside media institutions and are still lacking in qualitative enrichment. Journalists need understanding, knowledge, and skills to produce visual quantification so that journalism data has a future in an increasingly competitive market. Ordinary people as new media participants also have not apprehended journalism data but only practice doing it to share information and entertainment.

This study suggests the model development of the data-driven journalism process from Indonesia's experience, which can be a guide for journalists. The managerial implication is that the newsrooms must empower the data-driven journalists' team and research division at media institutions.

Due to the observation and content analysis that was limited on media series document samples, future research on this topic could be performed with ethnographic methods in various media institutions, including in the process and interaction in the newsroom.

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TWITTER AS A CUSTOMER SERVICE MANAGEMENT PLATFORM: A STUDY ON INDIAN BANKS

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ABSTRACT

In this study customer behavior on Twitter for the five private commercial Banks in India has been explored through the analysis of historical user Tweets. Lexicon-based sentiment analysis has been done to explore frequently used terms on the Tweets and Time-series plots have been generated to determine the flow of user sentiments. T-Test for Two-Sample Assuming Unequal Variance has been used to identify the significance of the sentiment type for each Bank. Results have indicated unique insights about the customer behavior like "Significance of Sentiments on Engagement", "Pattern of Tweeting and Timings", "Impact of Bank's activities on sentiments". This study suggests ways to handle negative Tweets and emphasizes on the need for media monitoring tools for the timely discovery of Tweets. The study also fills multiple gaps by exploring the behavior of customer's negative sentiments, the impact of grievances in creating and sharing eWOM, and Twitter use behavior.

Keywords: Customer Service, India, Banks, Twitter, Social Media.

INTRODUCTION

Customer Service Management (CSM) is a business process that primarily deals with the servicing of existing customers. With an increase in market competition, CSM has emerged as an important part of the organization's overall strategy. Christopher et al. (1991) have called customer service, a part of marketing strategy while Meltzer (2001) has claimed that organizations can boost profits by up to 100% just by retaining 5% of their most valuable customers which can be achieved through excellent customer service management. Efficient customer service leads to enhanced customer satisfaction which in turn can generate higher revenue for the organizations. Researchers like (Ahmad and Kamal, 2002), (Cronin and Taylor, 1992), in their respective studies, have emphasized that service quality is the antecedent to satisfaction. Satisfied customers turn loyal customers for an organization and positively impact others Hoyer et al. (2001).

A study done by Nwulu and Nwokah (2018) has revealed that customer service management directly impacts sales growth, market share, and profitability of an organization. Businesses are now more customer-centric than product-centric hence prioritizing relations with customers can boost profits and revenue for the organizations (Soltani et al., 2018). Innovations and new technologies have brought new capabilities to the service organizations (Breidbach et al., 2018). Service provider's "Behavior" and "Attitude" are vital for the long term retention of the customers (Afshar et al., 2019).

Social media holds great potential for brands to come closer to the customers and further increase revenue, reduce cost, and improve efficiencies (Baird and Parasnis, 2011). Gavval and Ravi (2020) have mentioned that social media has become consumer preference to express thoughts and complaints with regards to their product and service experiences while Tripathi (2019) has emphasized that social media help the brands to reach to the new customers. Users are rapidly turning to social media to request and receive customer service (Xu et al., 2017). Social media helps in generating pro-consumer experiences (Dwivedi et al., 2019) and works as a forum for companies to manage their social relationships with customers (Hidayanti et al., 2018). Unlike traditional media channels, social media equips, enables, empowers & engages its user (Bhattacharyya and Roy, 2016). The growth of digital platforms like Facebook, Twitter, Instagram, and others has attracted many brands and marketers to include them as part of their marketing mix. These channels help marketers to connect with buyers/ consumers and to interact with them. In an organization service requests made by customers, who adopted online medium to raise their concerns, have outnumbered customers, who use offline mode (Maecker et al., 2016). According to Wakefield and Wakefield (2018) poor brand experience leads to negative eWOM.

Like other social networking platforms, Twitter has witnessed multi-fold growth. The large set of data on Twitter is a vital source of information that carries user sentiment and opinions on various topics (Hu et al., 2013).Retweets are considered to be the highest indicator of engagement (Leek et al., 2019).

Launched in 2006, Twitter enables its users to post/send brief messages called “Tweets”. character limitation for a single Tweet was previously 140 but in the year 2017, it was doubled to 280 characters (Rosen and Ihara, 2017). Here users follow other users’ “Handles” (or profiles), “Retweet” (Share the Tweets of other users), “Like” a Tweet, and can “Comment / Reply” on a Tweet. Tweets and retweets are considered to be the online equivalent of word-of-mouth (WOM) communications (Gruen et al., 2006)

In a span of around 13 years Twitter has seen some great adaptations in terms of the number of users, usability, and growth (Bary, 2020) and as a result, had drawn attention from the research community to explore more insights about this platform. A few years back researchers have even studied the nature of this platform i.e. whether it’s a Social Network or a News Media (Kwak et al., 2010). Today, Twitter is not just used by individuals but also by Governments, Policy Makers, Influencers, Celebrities, Artists, Sportspersons, Businesses, Social Organizations, Think Tanks, Armed Forces, and many other institutional level users. Owing to the profile of its users, Twitter is considered more serious compared to other networking platforms hence lands authenticity and validity if Tweet originates from reliable Handles. In 2013, a fake Tweet from the official Handle of US-based News Agency Associated Press (AP) that claimed injuries to President Obama in an alleged explosion in the White House had caused the dropping of Dow Jones Industrial Average by 143.5 points and Standard and Poor's 500 Index lost more than $136 billion.

Twitter has registered 11.7 million mobile app downloads on the App Store in the first quarter of 2019 with 330 million monthly active users. Around 500 million Tweets are sent each day and users spent 3.39 minutes on an average each day. The majority of B2B businesses (approximately 67%) are already using Twitter as a digital marketing tool while 75% of B2B businesses market on Twitter (Lin, 2020). 85% of Small and Medium Business (SMB) Twitter users say providing customer service on the platform is important.

Despite Twitter possessing great potential for active customer service management, several organizations in India including Banks are still employing traditional methods to handle customer grievances /concerns. These traditional methods sometimes result in customer dissatisfaction as their concerns are overlooked by the Banks thus forcing them to post negative comments on social media platforms. Hence, it was observed to figure out the kind of information customers share about the Banks and their reaction on social media w.r.t. grievances/concerns. This will portray their behavior on any of the social networking sites.

Considering the dearth of literature on customer service management by Banks through Twitter the following research questions need attention.

RQ1: What is the numbers and sentiments of Tweets that have been posted for each Bank and which sentiment type has drawn more user engagement ?

RQ2: What is the flow of positive and negative Tweets daily and the top three positive and negative terms used for each Bank?
RQ3: What is the user behavior for negative Tweets for the Banks and timings for overall Tweets and negative Tweets?

To address the said research questions, the following objectives have been framed which then have been tested empirically. The process has been explained in the latter part of the study.

RO1: To identify the volume of Tweets for each bank and their sentiment type.

RO2: To identify the significance of sentiment type on the user engagement

RO3: To identify the spill of positive and negative Tweets daily.

RO4: To identify three positive and negative terms mostly used for each Bank.on user Tweets

RO5: To identify the pattern of users' negative Tweets for the Banks.

RO6: To identify patten of Tweet Timings

The remaining study is structured as follows. In Section 2, an extensive review of the literature has been discussed. Section 3 focuses on the methodology adopted for the study. Section 4 portrays the findings and provides a detailed interpretation of the same. The last section concludes the study by discussing the theoretical contribution, managerial implications, and limitations of the study followed by highlighting the directions for future research.

LITERATURE REVIEW

Customer Service

Goofin and Price (1996) have urged that customer service is significant because it helps in boosting product quality, gaining competitive advantage and profits thus increasing overall sales and income. A study by Mishra (2007) has underlined that customer satisfaction is an asset for organizations that can further help in building a sustainable long-term relationship with the customers. In a study related to the hospitality Industry, Parasuraman et al., (1991) have talked about customer expectations of service and highlighted that customer desires for more personalized and closer relationships with the service providers. Service responsiveness is an important quality indicator of customer satisfaction (Felix, 2017).

Customer Service Management in Banks

Service quality is related to higher revenues and customer retention (Bennett and Higgins, 1988), and Banks should use service quality to beat the market competition. Chaoprasert and Elsey (2004) have argued that Banks should use service quality to beat the market competition. Another study has highlighted that Bank marketers should aim for customer satisfaction. Uppal (2010) has studied the nature, extent, and mitigation of customer complaints in Banks where the emphasis was given on the need for dedicated customer care departments along with new methods and strategies to address customer complaints. Bhaskar (2004) in his study has concluded that customer service is the foundation for business expansion and the survival of Banking business is dependent on customer service. Customer service should not be a proactive exercise and Bank marketers should focus on answering customer questions proactively to ensure pleasant banking experience (Paul et al., 2016). Efficient customer service management positively impacts customer choice for Bank (Kochukalam et al., 2018).

Twitter as a Social Networking Platform

Growth in adoption and usage of Twitter by different segments of users has attracted eyeballs from many Researchers and Academicians. Many scholarly works have been done in the past to uncover the use of Twitter in a different scenario. A few prominent studies are mentioned below.

By analyzing users' sentiments on Twitter for a service, areas of customer satisfaction/ dissatisfaction can be identified (Misopoulos et al., 2014). The dual nature of Twitter as a one-to-one and one-to-many communication channel can be leveraged efficiently to promote the business as well as to address customer complaints where the main business or corporate account can be used for brand promotion / strategic announcements while a secondary account can be used to address customer grievances (Burton and Soboleva, 2011). A study titled "Twitter Power: Tweets as Electronic Word of Mouth" (Jansen et al., 2009) has revealed that Twitter can be used to build a brand relationship with the customers and as a competitive intelligence platform. The real-time character of Twitter differentiates it from other social networking platforms and hence can be used for the on-time tracking of natural hazards like an earthquake (Sakaki et al., 2010). Kwak et al (2010) in their study has called Twitter an information-sharing platform instead of a social networking platform. Organizations can improve customer relationships by listening to and addressing specific customer complaints on Twitter (Ma et al/, 2015). The User Generated Content (UGC) on Twitter holds immense business value (Liu et al., 2017). Alwagait and Shahzad (2014) in their study experimented and concluded that timings play an important role in the impact of the Tweets. Ahsan et al. (2019) have argued that due to fast and broad delivery of Tweets as well as the absence of any content pre-check mechanism, Twitter has also been used to spread false information as well as rumors to create favorable sentiments, hence it is essential to devise methods to timely detect the tweets.

Sentiment Analysis on Twitter

According to a research study done by Thelwall et al., (2011), the objective of sentiment analysis/opinion mining is to predict the behavior of the users, to evaluate the impact of big events, to discover a trend/pattern and to track public opinion on various issues. Twitter can be considered an ideal platform for sentiment analysis as it provides information on users' behavior w.r.t their opinions and experiences hence reveals a lot of insights about users' sentiments (positive, neutral, or negative) for a topic. According to Pak and Paroubek (2010), microblogging sites like Twitter is a rich source of data for sentiment analysis/opinion mining due to their diversified user base. Savage (2011) has observed that Tweets at the individual level might not provide deep insights but collectively they can mirror the opinion of a larger group. Stock market mood prediction (Bollen et al., 2011), Predicting Elections through Twitter (Tumasjan et al., 2010) are notable work done in Twitter sentiment analysis amongst others.

Twitter as a Customer Service Management Platform

To register complaints, social media channels are quite relevant as they allow wide exposure to it and rapid escalation (Stauss and Seidel, 2019). The outcome of a survey done by Twitter in the UK has revealed that 61% of people admitted that the public nature of the platform makes it an ideal place to talk about service queries with the brands (Picazo, 2016). Businesses can draw benefits through Twitter by interacting with their audiences (Taecharungroj, 2017).

The popularity of Twitter among businesses is just not restricted to the promotion of products and services but also as a service platform to address customer issues by interacting with them on a real-time basis. In 2009, American Consumer Electronic Retailer BestBuy Co instituted Twelpforce (@twelpforce) a team of 3,000 employees to respond to customer queries and to address complaints on Twitter (Wauters, 2009) which was later transformed into a dedicated online community. Huang (2015) has highlighted that every month millions of interactions related to customer service are happening on Twitter. Several Twitter advertisers have mentioned that around 80% of total customer service requests come through Twitter.

Cairns (2016) in his blog post on Twitter has mentioned that when airline customers register complaints on Twitter and customers receives timely response; they're willing to pay on an average $9 more for their next purchase from that airline". Twitter as a platform also empowers businesses to manage their customer service using a series of customer service-based features like Displaying support hours so the complainants know when they can expect a response, Direct Messaging or DM, this feature is to handle complex issues or exchange of sensitive information privately, Call to Action (CTA) button on Tweets which allows the customer to send a direct message to the business, Welcome Message to initiate a friendly conversation (Alton, n.d.)

Companies that invest in customer service on Twitter have managed to resolve issues on one-sixth cost as compared to that of the call centers with a 95% resolution rate and 90% customer satisfaction rate (Masri et al., 2015). Several organizations have embraced Twitter as one of the efficient channels to communicate with customers and other stakeholders (Malhotra and Malhotra, 2016).

From a Bank marketing perspective, customer behavior analysis on Twitter can provide information on customer grievances, concerns, and other issues which can help Bank marketers to improve the service quality. This study is based on Five Indian Private Commercial Banks (Foreign Private Banks operating in India has been excluded). These Banks are, HDFC Bank ("HDFC") which was incorporated in August 1994. Forbes magazine has ranked HDFC at the top of its first-ever list of India's Best Banks 2019 on customer service and technological advancement. ICICI Bank ("ICICI") has formally started its Banking operations in 1998. ICICI was the 1st Bank in India and amongst few global Banks to launch a service allowing cross-border remittances over social media. On the customer service front, ICICI Bank was the 1st Indian Bank to launch a dedicated customer service Twitter Handle in 2009 (@ICICI_Care). In the year 2015, ICICI became the first Bank in Asia to introduce money transfer services on Twitter. It has also launched India's 1st "Social Customer Care" service in an exclusive tie-up with Twitter to offer advanced care to its customers (Chaturvedi, 2016). Third Bank in our list is Axis Bank ("AXIS") which was incorporated in the year 1993 and is one of the largest private Banks in the country in terms of total assets. Next Bank on the list is YES Bank ("YES") which began its commercial Banking operations in May 2004. In 2017, the Bank was awarded the "Bank of the Year - India" award from The Banker magazine. Last Bank in the list is Kotak Mahindra Bank ("KMB"). KMB was launched in February 2003. In a study by Brand Finance Banking 500, published in February 2014 by Banker magazine, KMB was ranked 245th among the world's top 500 Banks with a brand valuation of around half a billion dollars ($481 million) and a brand rating of AA+.

Theoretical Underpinning

There are multiple theories on customer behavior and the majority of them talk about "dissatisfaction" and its determinants. But, "complaint" is the consequence of "dissatisfaction" hence the theory of Consumer Complaining Behaviour (CCB) is found to be the most relevant and is used in this study as a theoretical framework. This theory has been resorted to explaining the behavior of consumers through their Tweets. As stated by Halstead (2002) feeling of dissatisfaction triggers consumer complaint behavior, so consumer complaining behavior is one of the prominently studied phenomena.

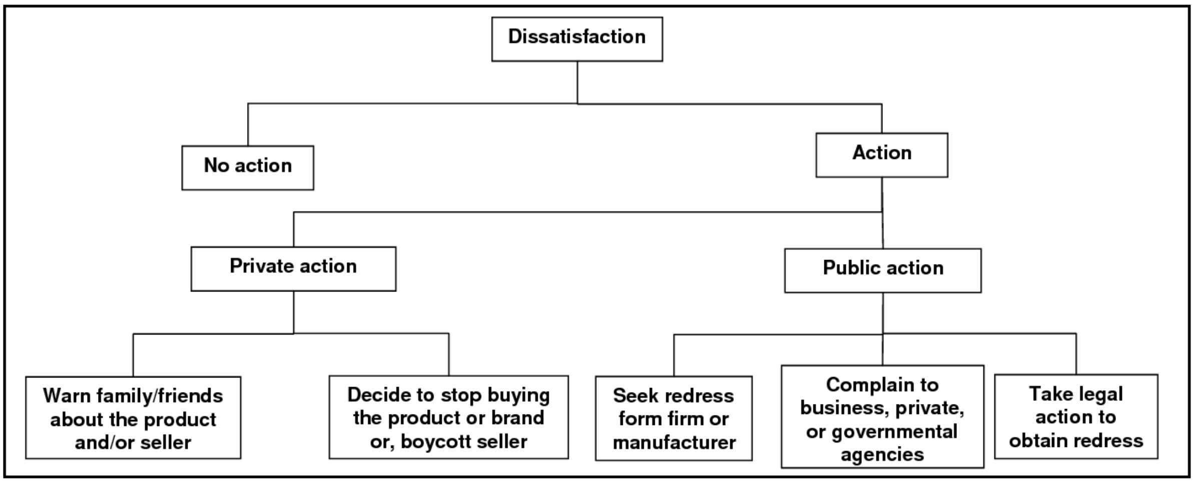

Figure 1: A Taxonomy of Consumer Complaint (Day and Landon)

Day and Landon (1977) taxonomy of consumer complaint behavior has been widely accepted theory and has been mentioned by several authors in their respective studies. In this taxonomy, consumers have been divided into two broad categories, one, those who will "take some action" and others, those who will "take no action" (refer Figure 1). Action taken can be either public (complaint to provider, third-party or legal complaint) or private (negative word of mouth, a personal boycott of provider) while "no action" is about neglecting or ignoring. The "action taking" consumer set whether public or private, constitutes the base for our study. From the perspective of this study, customer dissatisfaction occurs when service commitments are not fulfilled and customer initiates actions in the form of complaints.

Selection of Banks

The Five Banksthat have been considered for the study are shortlisted based on the number of followers (refer Table 1) on the Bank's official corporate Twitter Handles.Interestingly, total asset wise same set of Five Banks top the list (data assessed by business portal Moneycontrol.com through Bombay Stock Exchange as shown in Table 2).

Table 1: Number of followers for each Bank

S. No	Bank Name	Following	Followers
1	State Bank of India (@TheOfficialSBI)	18	3959830
2	YES BANK (@YESBANK)	92	1728161
3	ICICI Bank (@ICICIBank)	3759	531883
4	ReserveBankOfIndia (@RBI)	0	517564
5	HDFC Bank (@HDFC_Bank)	248	355977
6	Axis Bank (@AxisBank)	380	303701
7	HDFC Bank Cares (@HDFCBank_Cares)	2027	264443
8	ICICI Bank Cares (@ICICIBank_Care)	15873	247990
9	Kotak Mahindra Bank (@KotakBankLtd)	1340	238947

Table 2: Top Private Banks in terms of Total Asset valuation

Bank - Private	
Total Assets as per the latest Balance Sheet available	
Company Name	Total Assets (Rs.cr)
HDFC Bank	10,58,910.81
ICICI Bank	7,64,459.23
Axis Bank	6,40,730.77
Yes Bank	3,13,950.96
Kotak Mahindra	2,67,393.46
Indusind Bank	2,38,425.26

Post literature review it has been concluded that no specific study has been done to explore the customer behavior on Twitter for Private Banks in India though researchers through multiple studies and findings have emphasized that for service organizations Twitter can provide vital information on customer behavior, priorities, and concerns

RESEARCH METHODOLOGY

Research Design

This study adopted a mixed-method approach. Initially using qualitative data analysis, Tweets were identified then quantitative methods have been used to analyze the Tweets. Systematic sampling techniques have been used to extract the data from Twitter. The sampling element of the study includes the top five commercial private Banks and the Tweets for these banks were considered as a sampling unit.

Study Duration

The study is based on the public Twitter data of the Banks for 06 months' **duration(21 December 2018 – 21 June 2019).**

Data Collection

The historical Tweets were acquired through a Twitter application programming interface (API) in the batch size of a maximum of 20,000 Tweets per report using individual Boolean search query for each Bank. The logic behind each query was to retrieve data that is relevant to each Bank while avoiding the Tweets which are meant for sister/group companies of the Banks or meant for products not directly offered by the Banks or Tweets that are authored by the Banks themselves. Table 3 shows the Bank name and number of Tweets for each of the Bank considered for the study.

Table 3: Number of Public Tweets for each Bank. Source: Authors' Calculations

ICICI	240504
HDFC	229913
AXIS	103901
YES	47404
KMB	40728

The used queries have also covered Tweets where Banks name, hashtag, or official Twitter Handles were mentioned/tagged. Basis the Boolean queries used for each of the Bank; the number of Bank's public Tweets data with multiple columns (shown in Table 4) has been assessed in the volume.

Table 4: Columns on the report and their explanation

S. No	Column Name	Explanation / Value on the Report
1	Date and Time	Date and Time of Tweet
2	Headline	Blank
3	URL	Tweet Public URL
4	Opening Text	Blank
5	Hit Sentence	Tweet (Content)
6	Source	Platform (Twitter)
7	Influencer	Tweet Author Handle
8	Country	Country of Origin of the Tweet
9	Sub-region	Blank
10	Language	Language used in Tweet
11	Reach	Number of Followers of the Tweet Author on Twitter. This value is dynamic in nature
12	Twitter Social Echo	Blank
13	Facebook Social Echo	Blank
14	National Viewership	O (Zero)
15	Engagement	A dynamic numeric value representing summation of Replies, Retweets and Likes; received on a particularTweet
16	AVE	Advertising Value Equivalent, a PR term representing the monetary value of the Tweet (in US$) in terms of its reach and engagement (compared with paid promotion for similar results within similar audience set)
17	Sentiment	Tome of the Tweet – Positive, Neutral or Negative
18	Key Phrases	Terms mentioned on the Tweet
19	Input Name	Report Name
20	Keywords	Search Terms mentioned on the Tweet as per Boolean query used
21	Document Tags	Blank

Data Relevancy

For relevancy, only Tweets posted in the English Language from India have been considered. Also, some of the irrelevant columns were deleted from the report and columns (as shown below in Table 5) have been considered for further analysis.

Table 5: Columns considered for analysis

S. No	Column
1	Date
2	Time
3	URL
4	Hit Sentence
5	Reach
6	Engagement
7	Sentiment
8	Keywords

Data Cleaning

As part of the data cleaning process, Tweets with "BLANK" engagement were also omitted Final data number post relevancy checksand cleaning for each Bank is shown below in Table 6.

Table 6: Number of Tweets for each Bank after data cleaning.Source: Authors' Calculations

ICICI	197088
HDFC	179425
AXIS	62258
YES	39400
KMB	32649

To use sentiment analysis as a tool for research to gauge the sentiments contained in the Tweet, certain data processing is to be carried out after the first step of data cleaning been already done as mentioned above. First, the stopwords (such as in, an, is the, of, etc.), the words that are not relevant in conducting lexicon-based sentiment analysis were removed from the text data of the Tweets. Next, the top words, in terms of the frequency, were generated for each of the Banks over the entire duration of the data timeline used in this research. Further, it was also found out that what are the words that contributed most to the negative sentiment, and the words that contributed most to the positive sentiment. A time series plot was also generated for the negative sentiments and positive sentiments, for all the Banks for the entire data timeline. T-Test for Two-Sample Assuming Unequal Variance was used to find if any significant difference was done for all the Banks combined to get a holistic view followed by each Bank individually. The value of alpha has been considered as 0.05 and the null hypothesis was set as 0 (two-tailed test) i.e. there is no significant difference between the mean of two data series.

RESULTS AND DISCUSSION

Numbers and sentiments of Tweets posted for each Bank and sentiment type with higher user engagement

Based on the analysis, the following results have been obtained (refer Table 7) with shows the number of Tweets and their sentiment type for the five banks that have been considered.

The above data shows that overall, the Five Banks have received more Tweets with "Neutral" tone or sentiment followed by negative and positive Tweets respectively. At the Bank level, ICICI has received the highest number of overall Tweets while KMB is at the lowest end but at the same time, KMB has received the highest % of Tweets with negative tone among all the 05 Banks. YES is the recipient of the highest % of positive Tweets.

To identify sentiment type that draws more user engagement,T-Test for Two-Sample Assuming Unequal Variance is used considering Tweets with positive and negative sentiments. First, the test is done for all the Banks combined to get a holistic view followed by each Bank individually. The value of alpha is considered as 0.05 and null hypothesis as 0 i.e. there is no significant difference between the mean of two data series.

For all the Banks combined, the output P-value is minutely smaller i.e. 0.049 than stated mentioned P-value of 0.05 which rejects the null hypothesis that there is no significant difference between the mean of positive and negative Tweets (as shown on above Table 8). Further mean value of the engagement of negative Tweets is 1.722 while for positive Tweets it is 1.443. This shows that negative Tweets carry more user engagement than positive ones.

AXIS

0.009 than the mentioned P-value of 0.05 which

Table 7: Number of Tweets and their sentiment type for each Bank. Source: Authors' Calculations

Bank	Total Tweets	Positive Tweets	% Share of Positive Tweets on Total Tweets	Neutral Tweets	% Share of Neutral Tweets on Total Tweets	Negative Tweets	% Share of Negative Tweets on Total Tweets
ICICI	197088	44065	22.35	88498	44.90	64525	32.73
HDFC	179425	35775	19.93	86064	47.96	57585	32.09
AXIS	62258	13265	21.30	27290	43.83	21703	34.85
KMB	32649	7602	23.28	12798	39.19	12249	37.51
YES	39400	10069	25.55	19239	48.82	10092	25.61
Total	510820	110776	21.68	233889	45.78	166154	32.52

Table 8: t-test Result- All Banks Combined.

t-Test: Two-Sample Assuming Unequal Variances		
All Banks		
	Positive Sentiment	*Negative Sentiment*
Mean	1.443863688	1.722588683
Variance	1096.418805	1689.551271
Observations	110775	166154
Hypothesized Mean Difference	0	
Df	267247	
t Stat	-1.967624898	
P(T<=t) one-tail	0.024556123	
t Critical one-tail	1.644859329	
P(T<=t) two-tail	0.049112245	
t Critical two-tail	1.959972861	

Source: Authors' Calculations

rejects the null hypothesis. For AXIS, the mean of the Tweets with positive sentiments is 2.220 while 1.459 for negative Tweets which indicates higher user engagement for positive Tweets (refer Table 9).

HDFC

As shown in Table 10, the value of output P-value is higher than the mentioned P-value of 0.05 which does not reject the null hypothesis that is no significant difference between the mean of two sentiments.

ICICI

The value of output P-value is smaller i.e. 0.007 than the mentioned P-value of 0.05 which rejects the null hypothesis (shown in Table 11). For ICICI, Tweets with negative sentiments have a mean value of 2.004 and 1.200 for positive Tweets which highlights higher engagement for negative Tweets.

Table 9: t-test Result: AXIS. Source: Authors' Calculations

(t-Test: Two-Sample Assuming Unequal Variances)

AXIS		
	Positive Sentiment	*Negative Sentiment*
Mean	2.220429702	1.459521725
Variance	958.1290307	318.201004
Observations	13265	21703
Hypothesized Mean Difference	0	
Df	18724	
t Stat	2.581330228	
P(T<=t) one-tail	0.004924785	
t Critical one-tail	1.644935012	
P(T<=t) two-tail	0.00984957	
t Critical two-tail	1.960090689	

Table 10: t-test Result: HDFC. Source: Authors' Calculations

HDFC		
	Positive Sentiment	*Negative Sentiment*
Mean	1.453737351	1.495528349
Variance	1196.958291	525.0756651
Observations	35774	57585
Hypothesized Mean Difference	0	
Df	55373	
t Stat	-0.202532348	
P(T<=t) one-tail	0.419750658	
t Critical one-tail	1.644881146	
P(T<=t) two-tail	0.839501316	
t Critical two-tail	1.960006827	

Table 11: t-test Result: ICICI. Source: Authors' Calculations

ICICI		
	Positive Sentiment	*Negative Sentiment*
Mean	1.200186093	2.004478954
Variance	1417.714299	3720.623618
Observations	44064	64524
Hypothesized Mean Difference	0	
Df	107573	
t Stat	-2.683413069	
P(T<=t) one-tail	0.003644303	
t Critical one-tail	1.644867792	
P(T<=t) two-tail	0.007288606	
t Critical two-tail	1.959986037	

KMB

Table 12 shows that the value of output P-value is higher than the mentioned P-value of 0.05 which does not reject the null hypothesis that is no significant difference between the mean of two sentiments of Tweets (1.141 for positive and 1.123 for negative).

YES

The value of output P-value is smaller i.e 0.0001 than the mentioned P-value of 0.05 which rejects the null hypothesis (as shown in Table 13). For YES, the mean of Tweets with negative sentiments is 2.508 which is much higher than that of the mean of positive Tweets i.e. 1.680. Hence, for this bank negative Tweets possess larger engagement value than Tweets having positive sentiments.

Flow of positive and negative Tweets on a day basis and top 10 terms used for each Bank along with the popular positive and negative terms

To see the trend of positive and negative time series graph for Tweets with negative (refer figure 2) and positive sentiments (refer figure

Table 12: t-test Result: KMB. Source: Authors' Calculations
(t-Test: Two-Sample Assuming Unequal Variances)

KMB		
	Positive Sentiment	*Negative Sentiment*
Mean	1.141034074	1.123856956
Variance	182.2003699	56.70295656
Observations	7601	12248
Hypothesized Mean Difference	0	
Df	10574	
t Stat	0.101570167	
P(T<=t) one-tail	0.459549893	
t Critical one-tail	1.644997745	
P(T<=t) two-tail	0.919099786	
t Critical two-tail	1.960188359	

Table 13: t-test Result: YES. Source: Authors' Calculations

YES		
	Positive Sentiment	*Negative Sentiment*
Mean	1.680870083	2.508571995
Variance	204.8208638	277.6999017
Observations	10068	10091
Hypothesized Mean Difference	0	
Df	19720	
t Stat	-3.783315754	
P(T<=t) one-tail	7.76051E-05	
t Critical one-tail	1.644930901	
P(T<=t) two-tail	0.00015521	
t Critical two-tail	1.96008429	

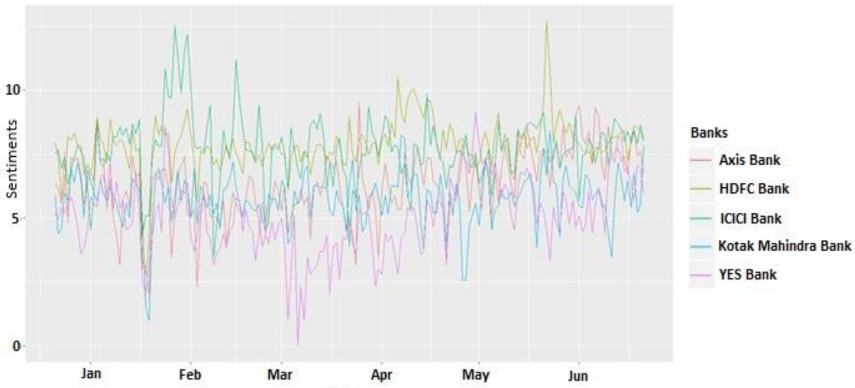

Figure 2: Flow of Negative Tweets

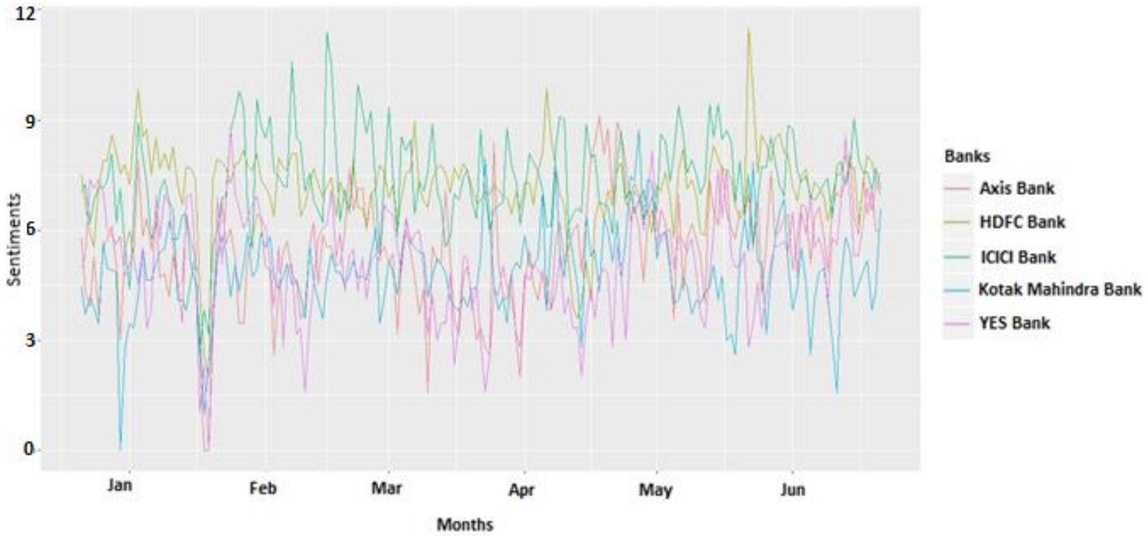

Figure 3: Flow of Positive Tweets

3) has been generated respectively.

This shows that a large number of negative Tweets for ICICI at the end of January 2019 came amid termination of its CEO (Mukherjee, 2019) while another spike was seen around mid-February when users started complaining against one of its employees (Telanganatoday, 2019). Rise in negative Tweets for HDFC in June 2019 is probably since HDFC Mutual Fund declared investing in the Non-Convertible Debentures (NCDs) of cash strapped Essel Group (Borate, 2019). Figure 5 shows the flow of positive Tweets for the Banks. The trend of the tweets shows the spike on positive Tweets for ICICI in February which came after a celebrity featured product ad got high user engagement.For HDFC, rise in positive Tweets came after the news about the Banks'decision to support the restoration of 20 cyclone-affected schools in the state of Odisha (Pande, 2019)

Identification of the Top 03 positive and negative terms used for each Bank

AXIS

The analysis of the Tweet has revealed that for AXIS the top three negative terms are "atrocity", "conspiracy" and "problem" while "support", "refund" and "work" are the top three positive terms used frequently for the Bank.

A similar analysis for the other four banks has also been done. For HDFC "harassment", 'issue' and "compliant" are the frequently used negative terms whereas "good",

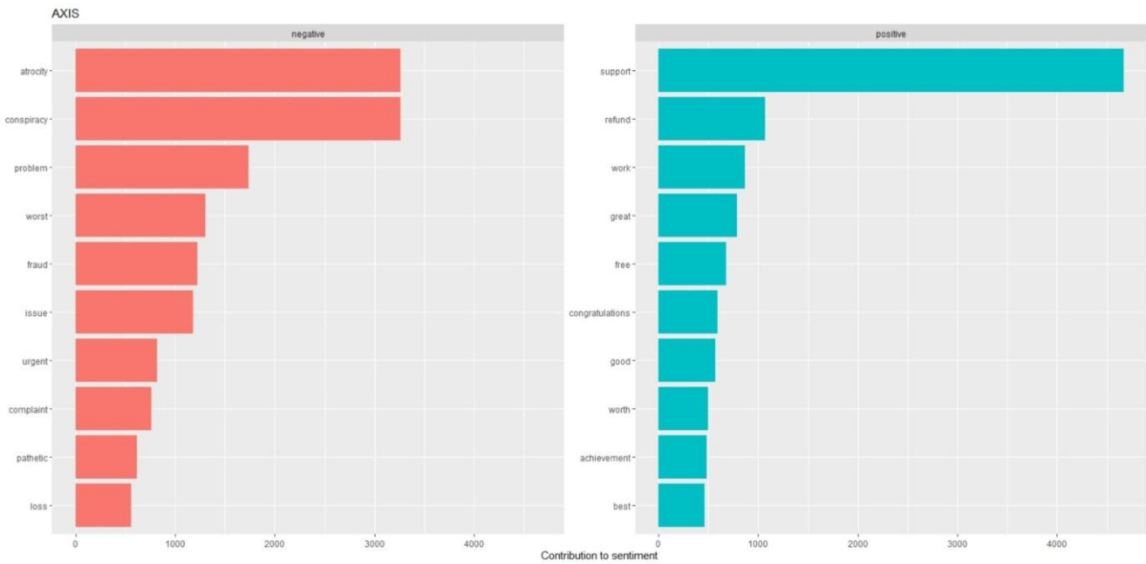

Figure 4: Popular positive and negative terms for AXIS

"cashback" and "support" are the top negative terms used. In the case of ICICI, frequently negative terms used are "fraud", "cheating" and "scam" while positive terms "free", "benefits" and "support" are mostly used terms "worst", "issue" and "fraud" are mostly used for KMB on negative Tweets while on the positive graph "successful", "prosperous" and "contribution" are the top terms mentioned by its users. Lastly, for YES, top three negative terms used on the Tweets are "loss", "bad" and "issue" while "great", "good" and "support" are the top positive terms.

4.3. Description of user behaviour for negative Tweets for the Banks and timings for overall and negative Tweets

Tweets with negative sentiments have been analyzed to evaluate the Tweeting pattern (refer below Table 14).

Based on the analysis as shown in Table 14, it has been concluded that, On KMB Tweets, 5391 Tweets have been marked to Bank Chairman Uday Kotak along with other Handles while in 3168 Tweets (25.86% of total negative Tweets) only the Chairman has been marked. YES doesn't have dedicated Handle for customer support and encourage its customers to register complaints via emails. HDFC has dedicated official Handles for Home Loan New Customers, Home Loan Current Customer support, Education Loan customers, and Bank News. 2597 Tweets contain the mention of Home Loan New Customers and Home Loan Current Customer support Handles, 1454 have also mentioned Bank News Handle and 78 Tweets contain Education loan Handle mention. For YES 65% Tweets while for ICICI 51.84% Tweets haven't been marked to any of the Bank Twitter Handle (contains the name of the respective Bank only).

Table 14: Pattern of Grievance Tweeting. Source: Authors' Calculations

		Number of Tweets marked as below			
Bank	Total number of Negative Tweets	Only to Support Handle and its % contribution on total negative Tweets	To Support Handle + Corporate Handle + other Handles and its % contribution on total negative Tweets	Only to Corporate Handle and its % contribution on total negative Tweets	No Handle is Tagged (either Bank Name or Hashtag is mentioned) and its % contribution on total negative Tweets
ICICI	64525	9056 – 14.03%	9162 – 14.19%	12855 – 19.92%	33452 – 51.84%
HDFC	57585	30317 – 52.64%	4277 – 7.42%	197 – 0.34%	22794 – 39.58%
AXIS	21703	5378 – 24.77%	7984 – 36.78%	4174 – 19.23%	4167 – 19.20%
KMB	12249	995 – 8.12%	6363 – 51.94%	4568 – 37.29%	323 – 2.63%
YES	10092	----------	---------	3532 – 34.99%	6560 – 65%

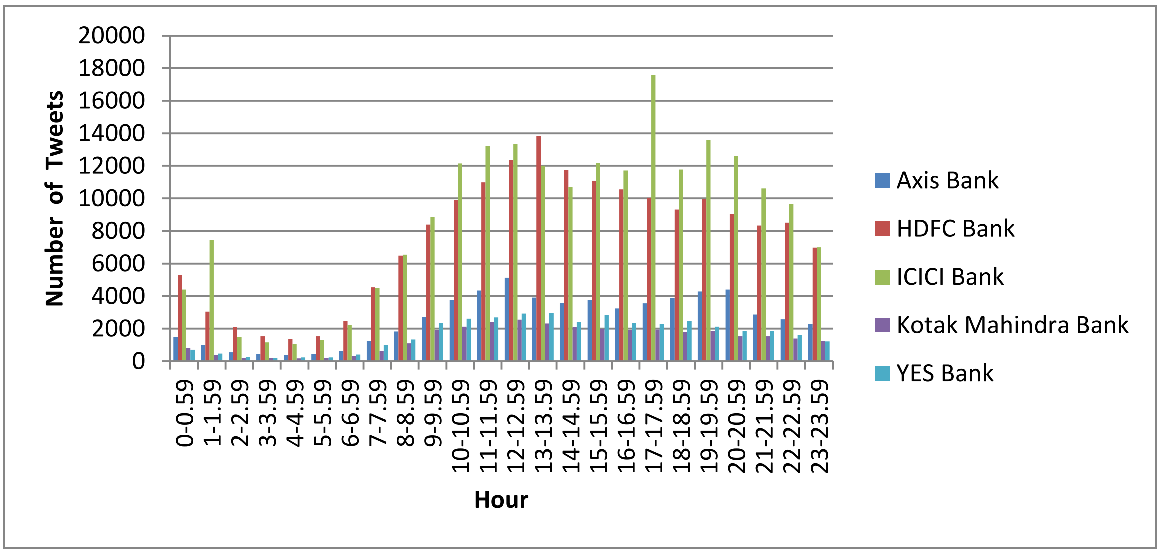

Figure 5: Hour wise overall Tweets for all the Banks combined

Further graphical representation of the number of overall Tweets and negative Tweets per hour, has been done for all the Banks combined and then for the individual Banks to find out the pattern of Tweets timings.

Figure 5 reveals that ICICI has received the highest number of overall Tweets between 17.00 – 17.59 hours while the period 11.00-11.59 is the peak negative hour for the Bank (Figure 6). For HDFC 13.00 – 13.59 is the peak hour in terms of overall as well as negative Tweets

It has been observed (Figure 7 and Figure 8) that 12.00-12.59 is the peak hour for AXIS for overall as well as negative Tweets while 20.00-20.59 and 19.00-19.59 are at 2nd and 3rd positions in terms of receiving the highest number of overall Tweets. Hour 11.00-11.59 is in the 2nd position for receiving the highest number of negative Tweets.

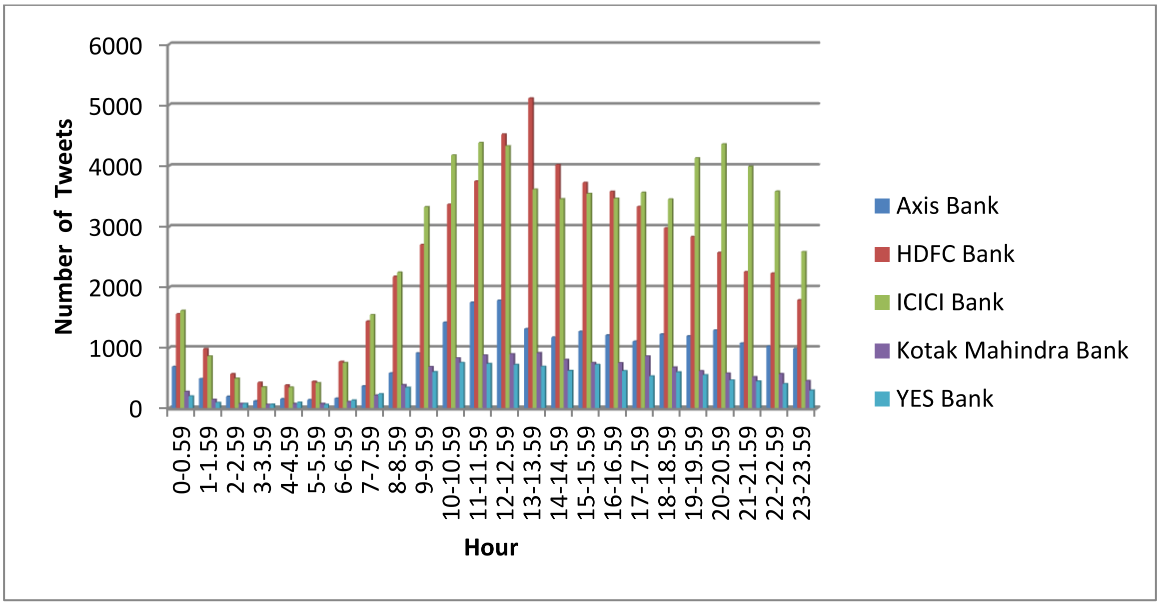

Figure 6: Hour wise negative Tweets for all the Banks combined

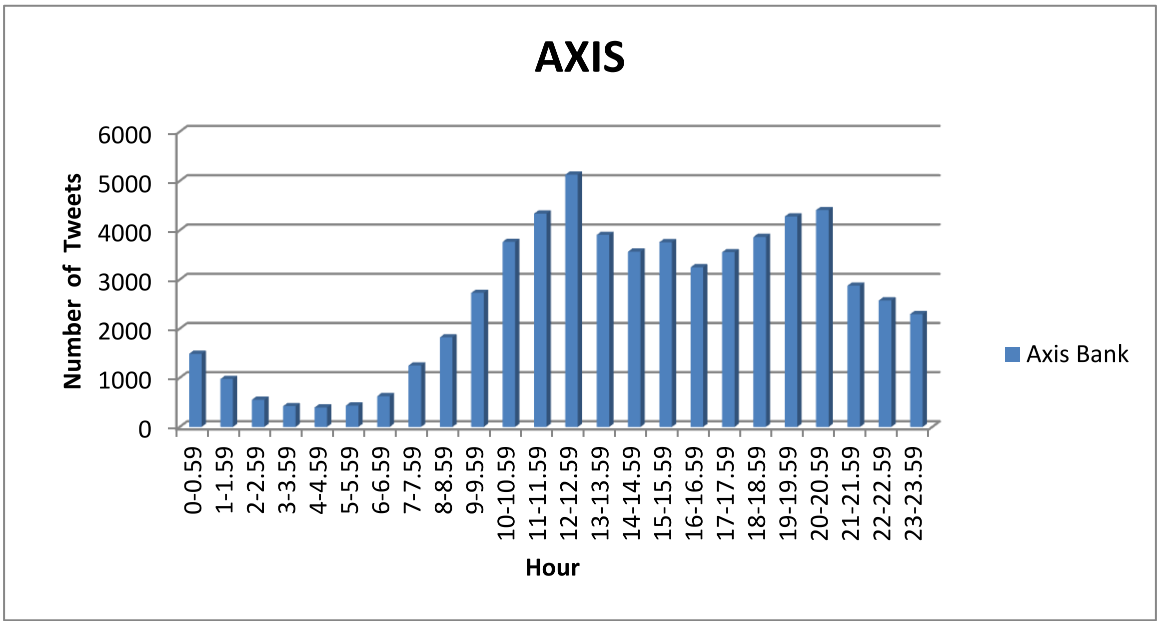

Figure 7: Hour wise overallTweets for AXIS

Figures 9 & 10 show that for HDFC maximum Tweets (overall and negative) have been tweeted between 13.00-13.59 while 4.00-4.59 has registered the lowest number of Tweets.

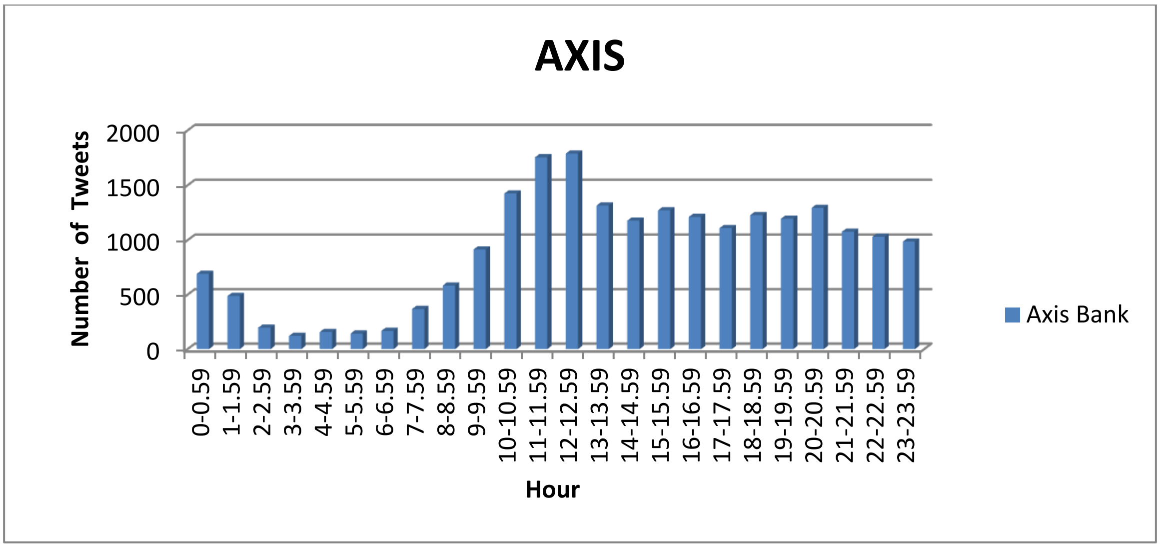

Figure 8: Hour wise negative Tweets for AXIS

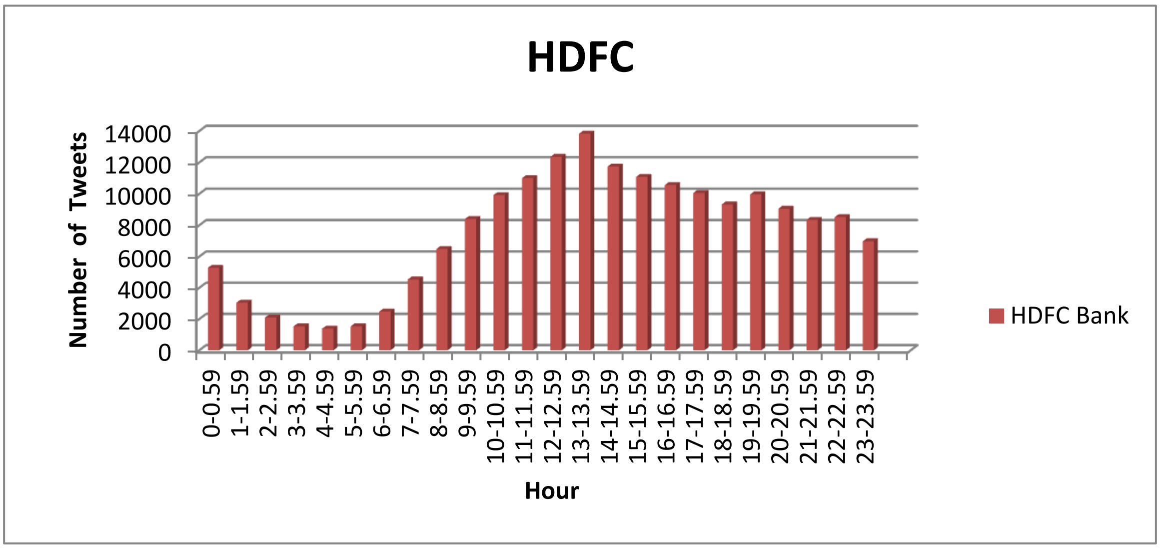

Figure 9: Hour wise overall Tweets for HDFC

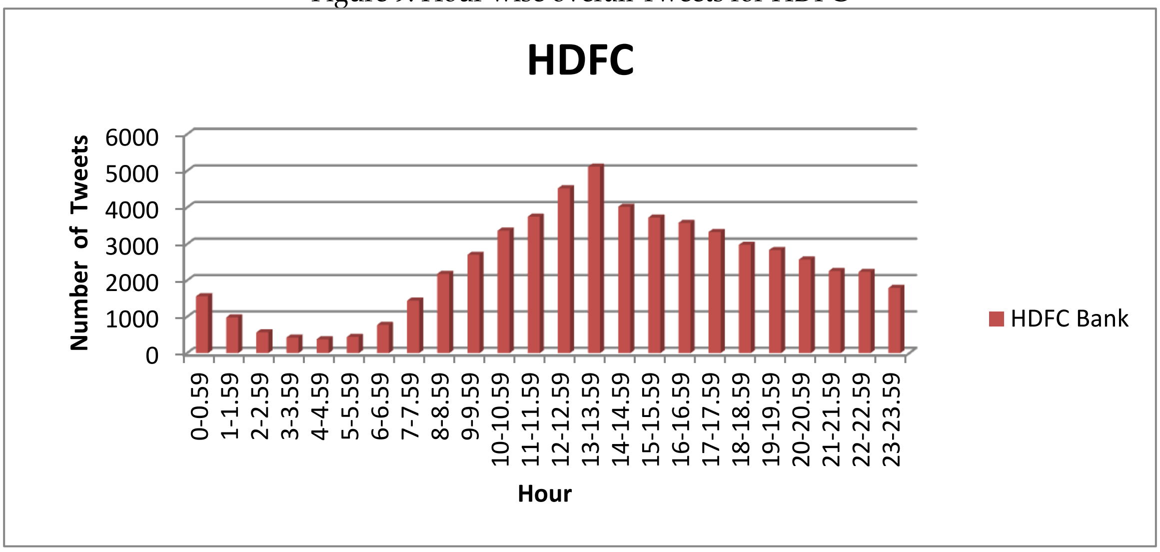

Figure 10: Hour wise negative Tweets for HDFC

For ICICI , 17.00-17.59 is the peak hour for overall Tweets (Figure 11) whereas Figure 12 indicates that the Bank has received the maximum number of negative Tweets during 11.00-11.59 followed by 20.00-20.59 hours

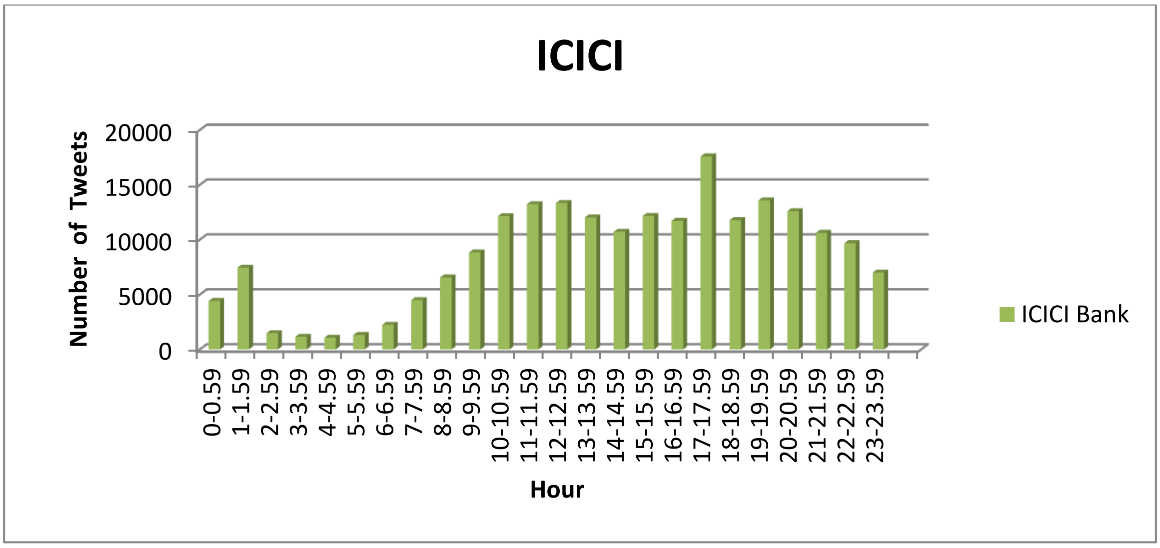

Figure 11: Hour wise overall Tweets for ICICI

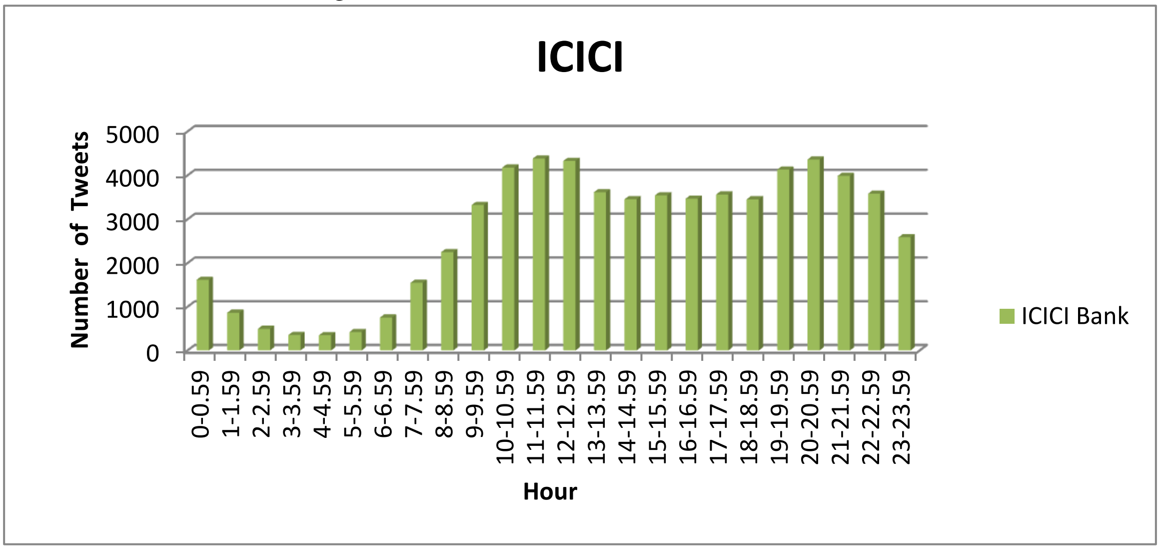

Figure 12: Hour wise negaive Tweets for ICICI

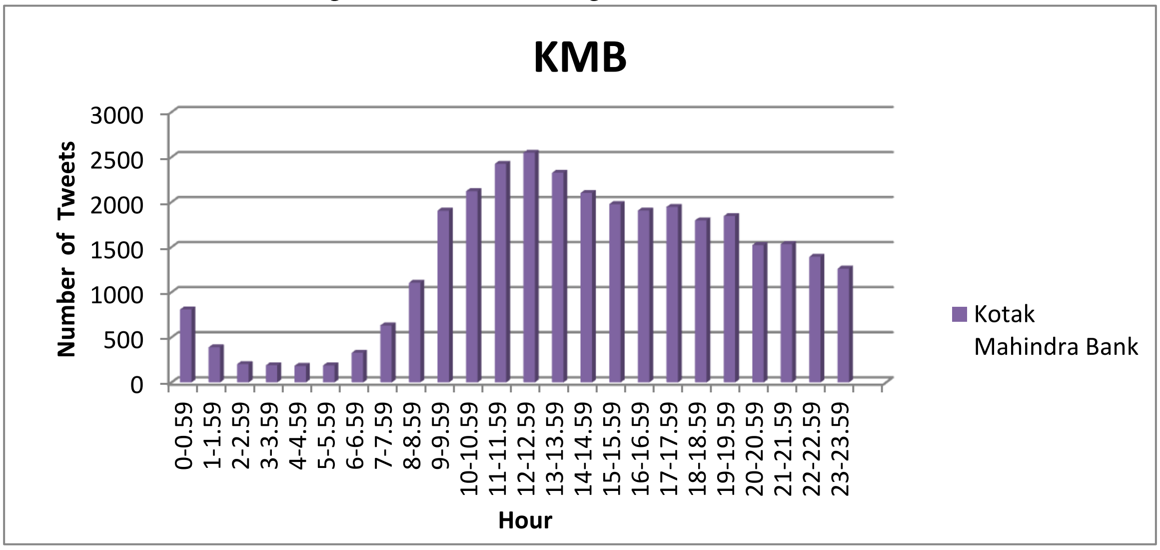

Figure 13: Hour wise overall Tweets for KMB

KMB has received maximum overall Tweets between 12.00-12.59 and lowest during 4.00-4.59 hours (Figure 13).Duration 13.00-13.59 is the peak negative hour for the Bank followed by 12.00-12.59 hour (Figure 14)

Period 3.00-3.59 is the off-peak hour for YES (Figure 15) whereas 13.00-13.59 is the peak hour for overall Tweets. Figure 16 reveals that 10.00-10.59 is the peak negative hour for the Bank closely followed by 11.00-11.59 hours.

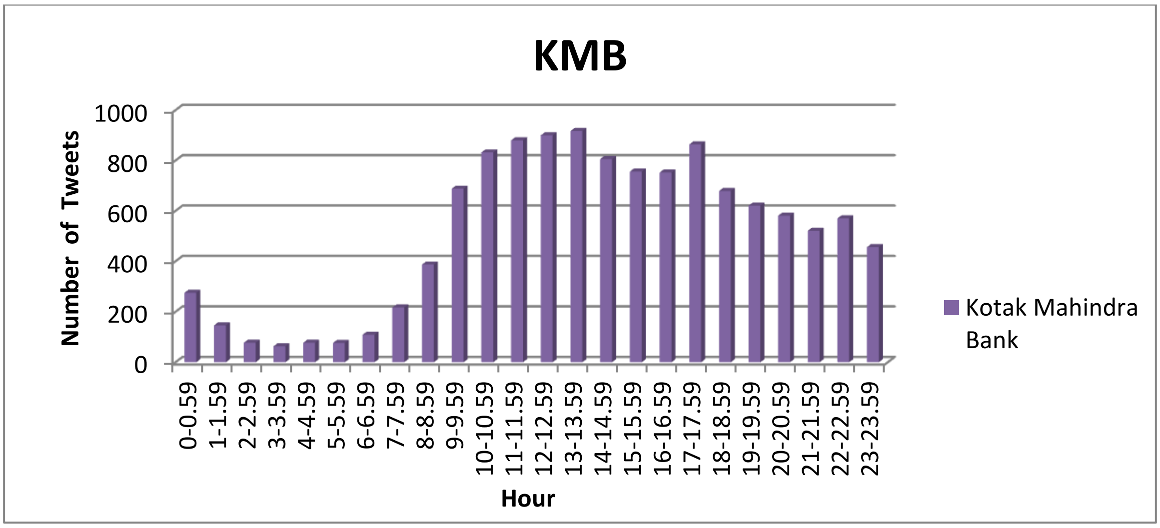

Figure 14: Hour wise negative Tweets for KMB

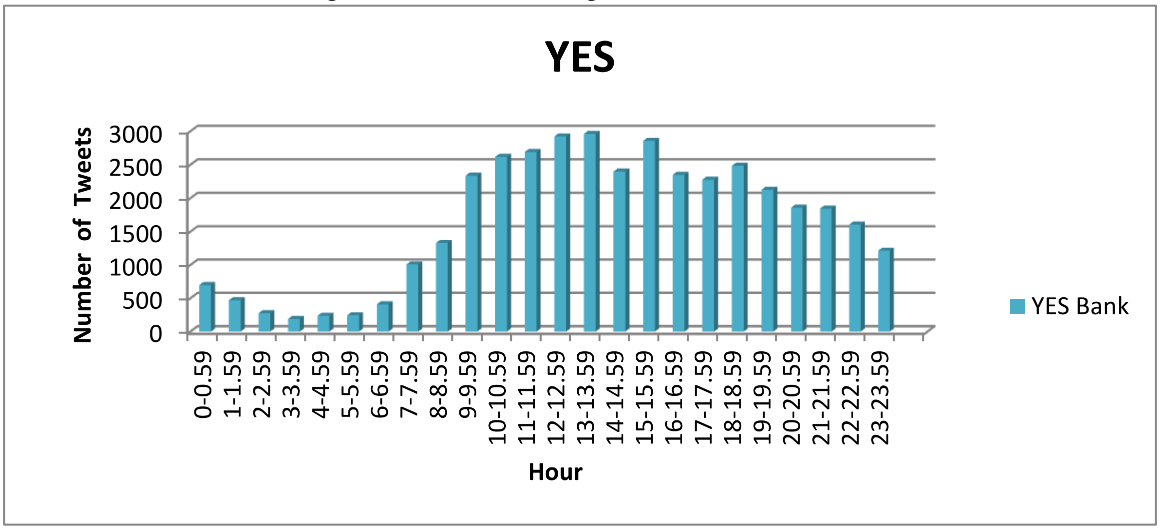

Figure 15: Hour wise overall Tweets for YES

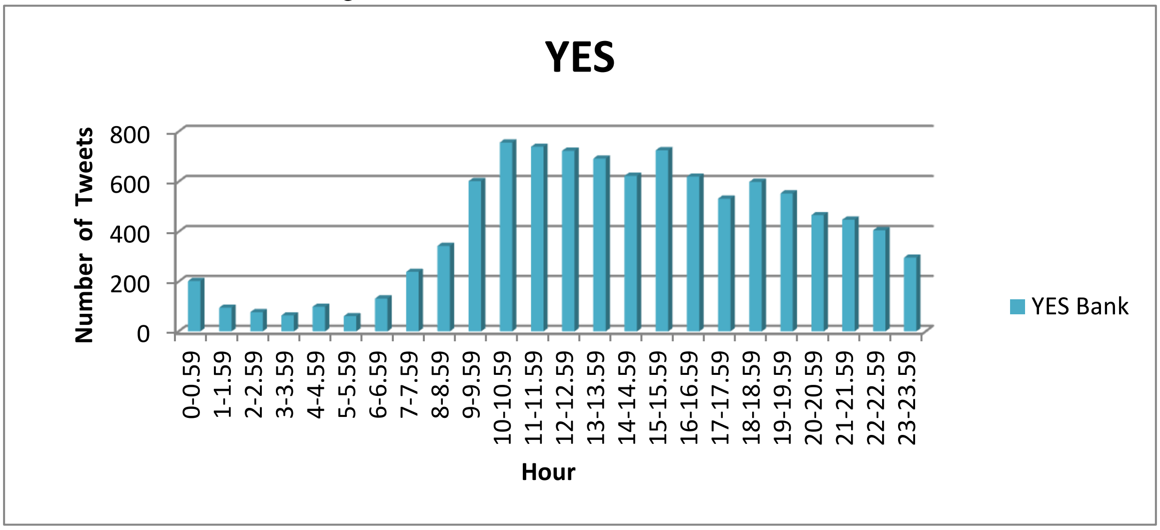

Figure 16: Hour wise negative Tweets for YES

Theoretical Implications

The study is the first attempt in its kind to analyze customer behavior on Twitter for private sector Banks in India. Contrary to similar studies done in the past for other scenarios where analysis has been done on the limited number of Tweets or data obtained through surveys, findings of this study are based on a large number of Tweets (for a time duration of 06 months). Hence, study results reflect a broader perspective.

In past, few studies have analyzed how user sentiments on Twitter can be used to predict the activities on real-world like mood of\ stock market, political opinion, etc. but on the contrary, this study has given a sense on how real-world business activities can also impact customer sentiments on Twitter which may lead to a larger online discussion around the brand.

Managerial Implications

The findings of this study hold great significance for the Banks' marketers about the use of Twitter as an effective medium for customer service management. Study results confirm that Bank customers are actively using Twitter to connect with their respective Banks and to share their grievances with other Twitter users. Results have revealed that it is extremely important to address negative Tweets as negative sentiments dominate over positive sentiments thus represent bias for negativity on Twitter (Nisar et al., 2018). Quick personalized responses, taking the conversation offline with the customers or conversations via Direct Messaging (DM) on Twitter to keep them "non-public", requesting customers to either delete the negative Tweet/s or Tweet positive acknowledgment, once the grievances are satisfactorily addressed / issue is resolved; are some of the ways to address them.

The study has also presented insights about timings of Tweets for each of the Banks which can further be used to strategize manpower planning and crucial support hours which supports the findings that the timely resolution of customer complaints makes them loyal customers (Tajuddin et al., 2020)

Word cloud drawn for positive and negative Tweets for the Banks can be used to identify customer satisfaction and service improvement area Considering the behavior of the Tweets, Banks can plan grievance tracking tools to discover unmarked Tweets. Also, a large number of Tweets have been only marked to Bank's primary/corporate Handles and to the top management (to Chairman only in the case of KMB) which represents multiple scenarios viz Customer's unawareness for the presence of dedicated support Handle, Lack of confidence on support Handle's resolutions, Longer turn around time on the resolution by support Handle, customer's behavior of issue escalation to the Bank's top management. Bank marketers can plan customer surveys/feedback to determine the reasons for such behavior to take corrective measures.

LIMITATIONS AND FUTURE SCOPE OF WORK

This study has not examined the relationship between the number of Tweets "impressions" vis a vis Tweet sentiments which is an important factor from customer service management and marketing perspective. Also, researchers can investigate if real-world activities can scientifically predict users'sentiments on Twitter

CONCLUSION

For Banks, Twitter is primarily a customer service management platform than an information-sharing platform. Sentiment analysis of Tweets is a vital source of information related to customer behavior which can be used to make business-related decisions. Timely detection of Tweets is also extremely important to control the spread of negative discussion around the brand. The study has also highlighted that business activity in the real world impact user sentiments on Twitter hence in the event of a crisis or unpopular business developments , Bank marketers can expect the enhanced flow of negative sentiments on Twitter.

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INFLUENCER SIZE EFFECTING CLIMATE CHANGE DISCOURSE: A STUDY ON INDONESIAN TWITTER

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ABSTRACT

This study seeks to understand the climate change discourse on Indonesian Twitter. Searching Twitter with the key word "perubahaniklim" returned 4542 individual tweets in the six-month period from March to October 2019. This study took a quantitative approach to observe Twitter users contributing to the climate change discourse. By analyzing the frequency distribution of tweets, we analyze Indonesian Twitter accounts based on the number of followers, the number of tweets, and the distribution of tweets. We categorize contributors to the Indonesian climate change discourse onbyinfluencer size (mega, macro, micro, and nano-influencer). The study found that influencer size effectsin climate change discourse on Twitter. The effect is more strongly correlated to the distribution of tweets than the number of tweets.This study provides new insights for future climate change communicationthat combines interpersonal communication, mass communication, journalism development, and new communication media, especially social media.

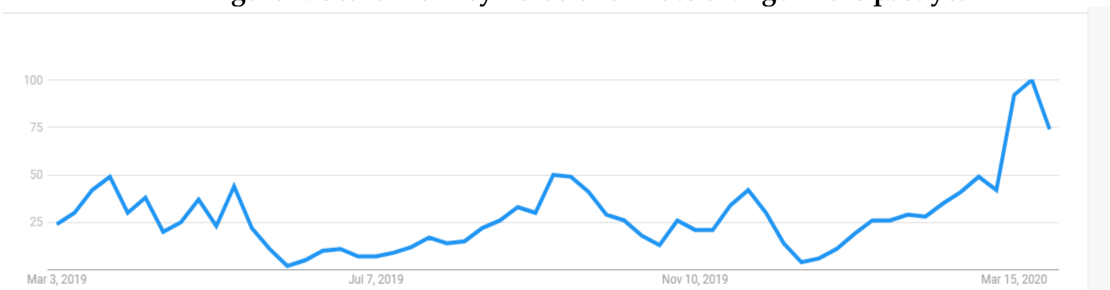
Keywords: Climate Change, Social Media, Influencer, Twitter, Discourse

Introduction

A Paradigm shift in communication has occurred in the new millennium era. The digital revolution is creating information and communication renaissance, which is more vibrant than ever, offering faster and cheaper communication access, fewer barriers to entry and more information to consume (Chatterjee, 2016). Meanwhile, climate change has now also become an attention in Indonesia. Public trend within the past year by finding information based on "*perubahaniklim*" (climate change in English) keyword, people who accessed and searched information about climate change in Indonesia increased from March 2019 to March 2020 (see Figure 1).

According to (Cody et al., 2015), 'many to many' communication changes the way of journalists or environmental scientists in discourses in climate change have also spread in the digital ecosystem in Indonesia. According to the search index using Google informing the climate change. Instead of a single journalist or scientist telling the public what happens, social media offers a

Figure 1. Search for keywords of climate change in the past year



mechanism for many people from various backgrounds to communicate and form their own opinions about climate change so that public discourse can be productive. Exposure to social media can potentially turn climate change problems into public discourse (Boykoff, 2011; Cody et al., 2015; Dearing, James W, 1996). Social media utilization to obtain information about public discourse has increased, especially in modern research nowadays (Lineman et al., 2015).

According to Kemp (2019), Twitter is the sixth most accessed social media (52 percent) in Indonesia. As a microblogging platform, Twitter provides a platform for verbal expressions and emotional responses (Lineman et al., 2015; Signorini et al., 2011). In Sharma &Goyal (2018), Twitter is mentioned as a powerful communication tool because of its utilization as a social networking platform. Twitter is used to circulate fact, information, idea, or thought that is known as a tweet. In contrast, Fuchs (2014) has mentioned that Twitter is not categorized as a communication tool instead of mostly information media as it is very limited to public discourse. Nowadays, a tweet is restricted to 280 characters in most languages (Sharma &Goyal, 2018). Cody et al. (2015) argued that the limited length of tweets means that tweets represent the thinking-doing-feeling of the community in the digital ecosystem.

In social media, as well as Twitter, we also know about an influencer who is trustworthy spokespeople. Mediated communication model through a trustworthy spokesperson will also be a vital component in climate change communication shortly (Priest, 2016). Social media influencers represent the third party forming specific behavior of the audience through their blog, tweet, and other social media channels (Freberg et al., 2011). The concept of influencer on Twitter more or less refers to opinion leaders in the Two-Step Flow Theory within the scope of social media (Wu et al., 2011; Baran, 2013).
Many researchers have tried to measure influence on Twitter. Cha et al., (2010) described indegree influence which was the number of followers of a user, directly indicating the size of the audience for that user; retweet influence, which was the number of retweets containing one's name, indicating the ability of that user to generate content with pass-along value; and mention influence, which was the number of mentions containing one's name, indicating the ability of that user to engage others in a conversation. Kwak et al. (2010) compared the number of followers, PageRank, and the number of retweets. Meanwhile, Weng et al. (2010) compared the number of followers and PageRank with a modified PageRank measure, which accounted for a topic.

There is a literature gap in observing influencers on Twitter in terms of the number of followers. Some researchers believe that a fundamental principle emphasizes on social media user with a large number of followers representing a higher level of influence on social media platforms (Li, 2018). Other researchers stated that the number of followers was not necessarily related to his/her influence (Cha et al., 2010; Kwak et al., 2010; and Weng., 2010). This premise mostly relates to the number of followers not directly generating retweet or mention. This paper will highlight the gap by focusing on the number of followers' influence on Indonesian Twitter in climate change discourse contributed by influencers in various sizes (mega, macro, micro, and nano), who mostly rely on the number of followers. This study will answer the question if the influencer size on Twitter has an influence on climate change discourse.

Importance of the study

Twitter plays an essential role in public discourse about politics. Twitter has gained its global popularity because it is used in the American election campaign in 2016 to provoke political campaign support (Sharma &Goyal, 2018). Twitter message examines information that stimulates audiences to follow, retweet, and recite narrative descriptions. Political personalities cause command considerable authority because of the repeated devolution of Twitter narratives (Cook et al., 2014).

According to Evans et al. (2018) in Leal Filho et al., (2018), Social media, like Twitter, is the right vehicle for sharing and exchanging information in communicating climate change in order to stimulate global, regional, national and local-scale change. Through social media, climate change communication can cope with geographic obstacles and actualize interaction convergence between communities, both physically and virtually. Unfortunately, research in climate change discourse in social media, especially Twitter, is scarce in Indonesia.

Jang & Hart (2015) said that climate change communication research focusing on framing issues in some literature was very limited to analyze the natural framing of issues in people's daily interpersonal conversations, which can be conducted through social media research, like Twitter. In modern research, new media provides an alternative way to transcend limitations in existing research by analyzing social media content. By using an analysis machine, modern research can analyze online conversation that is generated and shared by the audience (Brossard &Scheufele, 2013; Jang & Hart, 2015). This research variation enables the flexibility of the approach and helps scholar notice what occurs in public on Twitter about climate change so that the result can be utilized to formulate responses of public discourse in climate change and be useful for practitioners in creating powerful climate change communication.

Theoretical Framework

Twitter and Climate Change Communication

According to Evans et al. (2018), effective communication about climate change must include the participation of the audience to promote inclusivity and fairness in discussion and decision making. Trends in climate change communication research have focused on the role of media, and journalists include scientists and science experts, business elites, politicians, and civil society representatives as sources when they create stories and news coverage about climate change. In this context, the general public becomes the passive recipients of the news. This leads to a climate change communication process is dominated by journalists, scientists, politicians, and other organizations whose views are already framed in the context of global climate change. As a result, framed perception and understanding occurred in public, especially those who had limited and low levels of knowledge. They caused less deliberate action towards the emerging issue of climate change in their area (Evans, 2015). Therefore, according to Evans et al. (2018), communicating climate change needs a hybrid model that can build a bottom-up and bottom-down communication process. A hybrid model might be developed through social media in the wider climate change communication process.

Information and Communication Technology (ICT) plays an essential role in supporting the development and social change. Although social media is not a large-scale impact on making social change, the small impact resulted in digital initiatives in social media can create greener lifestyle preferences (Evans et al., 2018). Twitter, for instance, affects online public discourse positively. Society has freedom in accessing information, discussing, and throwing opinions with each other. Social media and computer networks also provide secure and decentralized communication systems in which people can argue about many things. Therefore, individuals are challenged and triggered to express their thoughts and opinion about an issue (Cogburn & Espinoza-Vasquez, 2011; Ye et al., 2017).

Social media grows content from non-elite media or users outside the media organization that can influence public views. The impact of the rise of the user's content is forming the role of an opinion leader. As an opinion leader grows, the media no longer monopolizes information related to climate change. Opinion leaders are the agents of community polarization in climate change issues (Anderson et al., 2014; Lee, 2012; Metzger et al., 2010; Walther & Jang, 2012). Nevertheless, the media still has a significant influence on the consumptive elements of social media. Newman's research (2016) proves that 35 percent of the '100 domain names that appear most often' in American user tweets after the IPCC 2013 report came from major media outlets such as CNN, The Atlantic, and The Washington Post. The media remains a dominant player in the consumptive element of social media and as an essential role in shaping public views in climate change issues (Gladston & Wing, 2019; Newman, 2017).

Research in climate change discourse is mostly related to global climate change issues or framing issues and their effect in media. The research purpose is to explore the awareness, perception, and opinion of an individual or the public about climate change. The limitations of the studies are the results that do not reflect everyday conversation in the public sphere, for instance, in social media.

Twitter offers a new research opportunity to capture conversations in the network that naturally occur in everyday life (Jang & Hart, 2015; Kwak et al., 2010).

In previous studies, Twitter became the research object. Jang & Hart (2015) utilized Twitter data to observe social media user trends in America, especially in states where Republican was the dominant party. They used 'global warming' terminology to mention climate change. Lineman et al. (2015) revealed the differences in the sentiment within the population between those who used 'climate change' and 'global warming' terminology. Meanwhile, Cody et al. (2015) explored much information from Twitter about climate change. There are many ways to express their concern about climate change, starting from book launching, idea contestation, to public figures who discuss climate change. The use of specific terms or information and 'who' delivers the information on Twitter can raise the sentiment in the climate change issue. By using the analysis machine, we can search for data on Twitter through a particular keyword. This machine will look for suitable data that are relevant to the keyword. The machine will also determine the frequency, but it does not reveal popularity. The relation between frequency and popularity lies in the search volume during a specific duration. By identifying a particular number of searches in a certain period, we can get direct comprehension regarding what are the popular terms within the population (Lineman et al., 2015).

Measuring Influencer Size Effect on Twitter

Interpersonal communication overgrows through the social network that not only one person can talk to another, but also much information is revealed and becomes more influential in the internet era like today. In general, influencers in social media are often associated as someone, mostly celebrities, who have power and influence. Unfortunately, this definition contains an ambiguous meaning. Everyone is an influencer. They could be some experts, some ordinary people, journalists, or even semi-public figure like media representative, and government officials who communicated the same way, through a tweet and to their followers (Bakshy et al., 2011). This study does not discuss whether an influencer is an individual or a group of people. Influencers in this study are social media influencers that could be anyone, any media outlet, organization, or celebrities (as known as celeb tweet), depend on the number of followers.

The industry offers more clarity about influencer classification, whilst academic literature lacks consistent about specific definitions of what constitutes a large number of followers of an influencer. In Kay et al. (2020), there are several influencers classifications, such as two-level influencers (micro and macro) and three-level influencers (micro, macro, and celebrity). Thomas (2017) in Kay et al. (2020) argues that determining social media influencers by their number of followers is easily adapted to focus on the number of likes influencers receive as well as through the percentage of followers that like posts.

Twitter influencers in this study are in the context of marketing practice, which can be categorized based on the number of followers. The first category is mega-influencers, which are the influencers whose followers are more than 1 million. The second category is macro-influencers, whose followers are between 100,000 to 1 million. The third category is micro-influencers, whose followers are between 1,000 to 100,000. The fourth category is nano-influencers, whose followers are less than 1,000 (Firmansyah, 2019).

To discuss the influencer size effect, we must refer to previous research conducted by Cha et al. (2010). One of the Twitter influences is in degree, the number of followers of users who directly shows influencer size. Indegree only represents user popularity. However, it is not related to other essential things, such as influence and audience views. This conclusion is based on Twitter users who have a high indegree (the number of followers) are not necessarily influential in terms of spawning retweet or mention.

In contrast, Baskhy et al. (2011) said that although the content was not found to improve predictive performance, it remains the case that individual-level attributes in particular past local influence and number of followers can be used to predict the average future influence. A new class of semi-public individuals like bloggers, authors, journalists, and subject matter experts has come to occupy an important niche on Twitter, in some cases becoming more prominent (at least in terms of the number of followers) than traditional public figures such as entertainers and elected officials (Wu et al., 2011). Another research highlights that micro and macro-influencers impact differently on purchasing intention while disclosing or not disclosing sponsorship (Kay et al., 2020). It means that the number of followers does affect audience engagement. From the previous studies, the hypothesis of this study is given below:

H0. There is no influencer size effect in climate change discourse on Twitter.
H1. There is an influencer size effect in climate change discourse on Twitter.

Methods

This study combines collecting tweets and quantitative research methods. Tweets from influencers consist of the number of tweets and the distribution of tweets. In this study, we call them tweet frequency distribution. Neuman (2010) defines frequency distribution as a table that shows the distribution of variables in a category of some instances/information. The variables can be nominal, ordinal, interval, or ratio level data.
There were 4542 tweets from Indonesian users by searching keyword "*perubahaniklim*" through an analysis machine called Socialert from March to October 2019. Socialert provides the details, including reach, mentions, and replies of each tweet. By collecting tweets frequency distribution, we have data variables about influencers based on the number of followers, the number of tweets, and the distribution of tweets.

Meanwhile, the most important thing in quantitative research is dealing with data. Quantitative research can use generated data from surveys, content analysis, or experiments (Neuman, 2011). In this study, we use collected tweets from Socialert as a data source to do quantitative analysis. However, the challenge is to combine, to analyze, and to conclude them. One of the essential steps is tweet coding.

Referring to Neuman (2011), the coding procedure is a set of rules created by the researcher for assigning numbers in specific variable attributes, usually in preparation for statistical analysis. The coding procedure explains how we convert non-numerical information into numbers to be a codebook. In this case, the codebook is the document that explains the coding variable derived from collected tweets. After that, we continue the coding process by entering data in which one of their methods is a code sheet. We collect the information, then transferred it from the source onto a grid format (code sheet).

TweetsCoding

There were only 1540 tweets, and 818 Twitter accounts from 4542 tweets can be a data source. We excluded tweets from Malaysian and Singaporean accounts even though they are in the Malay language. For the next step, we coded the data manually. In doing so, the content contained in the tweets was categorized by the climate change mitigation sectors in Indonesia. Mitigation is an attempt to reduce greenhouse gasses (GHG) and carbon emissions that contribute to climate change (Zhao et al., 2018). According to the Knowledge Center of Climate Change Indonesia (2019), the Indonesian government divides the mitigation actions into five sectors, such as forestry, agriculture, waste management, industry, and energy. In addition, this study adds a general category for tweets that cannot fit into the category.

Furthermore, we categorized influencers size by grouping them based on the number of followers as mega-influencers (more than 1 million followers), macro-influencers (followers are between 100,000 to 1 million), micro-influencers (followers are between 1,000 to 100,000), and nano-influencers (followers are less than 1,000). After that, we classified the frequency distribution of 1540 tweets coming from influencers into six climate change topics (general, forestry, agriculture, waste management, industry, and energy).

Statistical Test

The next stage of this study is to test statistics using SPSS software. The statistical test looks at the relationship between influencer size and tweets about climate change in six predefined topics. As the assumption of data normality is not fulfilled, this study uses a non-parametric Kruskall Wallis test. Through the statistical test, this study looks at whether there is a difference in climate change discourse in terms

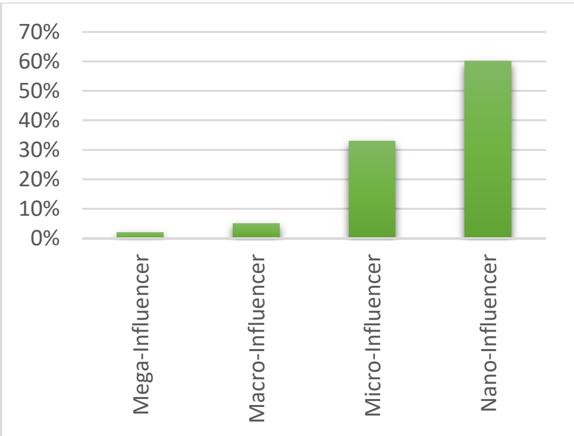
of influencer size with the following statistical hypotheses:
H0: there is no difference in climate change discourse in terms of influencer size
H1: there is a difference in climate change discourse in terms of influencer size

We decide to accept H0 if p-value> 0.05, which means there is no influencer size effect because climate change discourse is not different in terms of mega, macro, micro, and nano-influencer and reject H0 if p-value <0.05, which means there is influencer size effect because climate change discourse is different in terms of mega, macro, micro, and nano.

Results

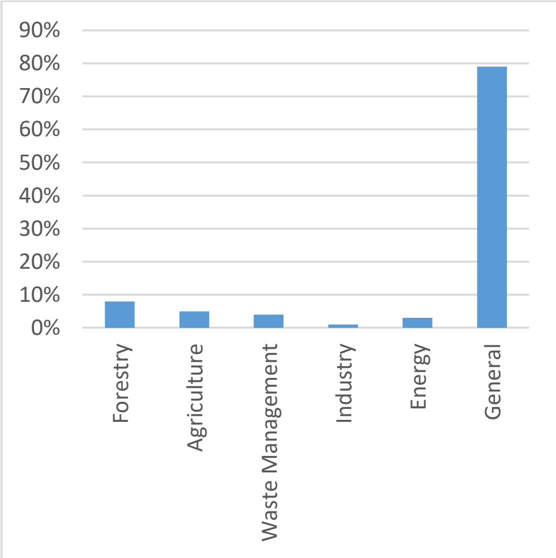
According to Lineman et al. (2015), data search on Twitter can be done using specific keywords. The result of these keywords produces relevant data from the keywords. From the tweet coding based on the search results of Socialert, we can figure out the influencer size in climate change discourse on Twitter, as shown in Figure 2 below:

Figure 2. Influencer size in climate change discourse on Twitter



Climate change discourse on Twitter was dominated by nano-influencer from March – October 2019 (see Figure 2). The highest number of influencers in sequence werenano-influencers 490 accounts, micro-influencers 270 accounts, macro-influencers 43 accounts, and mega-influencers 15 accounts. Based on the data, we can define that discourses occurred centered on a general level that only discussed definition or phenomenon, less about mitigation action in Indonesia (see Figure 3).

Figure 3. Climate change discourse in mitigation topics on Twitter



The Kruskal Wallis test revealsa difference between mega-influencer, macro-influencer, and nano-influencer in climate change discourse. The difference in overallis statistically significant (*p value*< 0.05) (see Table 1). As a result, the hypothetic decision rejects H0, which means a significant difference in climate change discourse in terms of influencer size.

From the result, we confirm that there is an influencer size effect in climate change discourse. This result criticizes the previous studies, which stated the number of followers is not necessarily influential (Cha et al., 2010). The result may not be able to directly state that influencer size effects audience engagement to generate retweet and mention; however, the influencer size does affect climate change

Table 1: The mean difference between influencers based on the number of followers

		N	Mean Rank	**Test Statistics[a,b]**	
Climate Change Discourse	Nano-Influencer	490	352,04	Chi-Square	133.955
	Micro-Influencer	270	470,85	df	3
	Macro-Influencer	43	618,48	Asymp. Sig.	.000
	Mega-Influencer	15	583,23	a. Kruskal Wallis Test	
	Total	818		b. Grouping Variable: Influencer Size	

discourse on Twitter. We can see the argument of this hypothesis in the next section.

Discussion

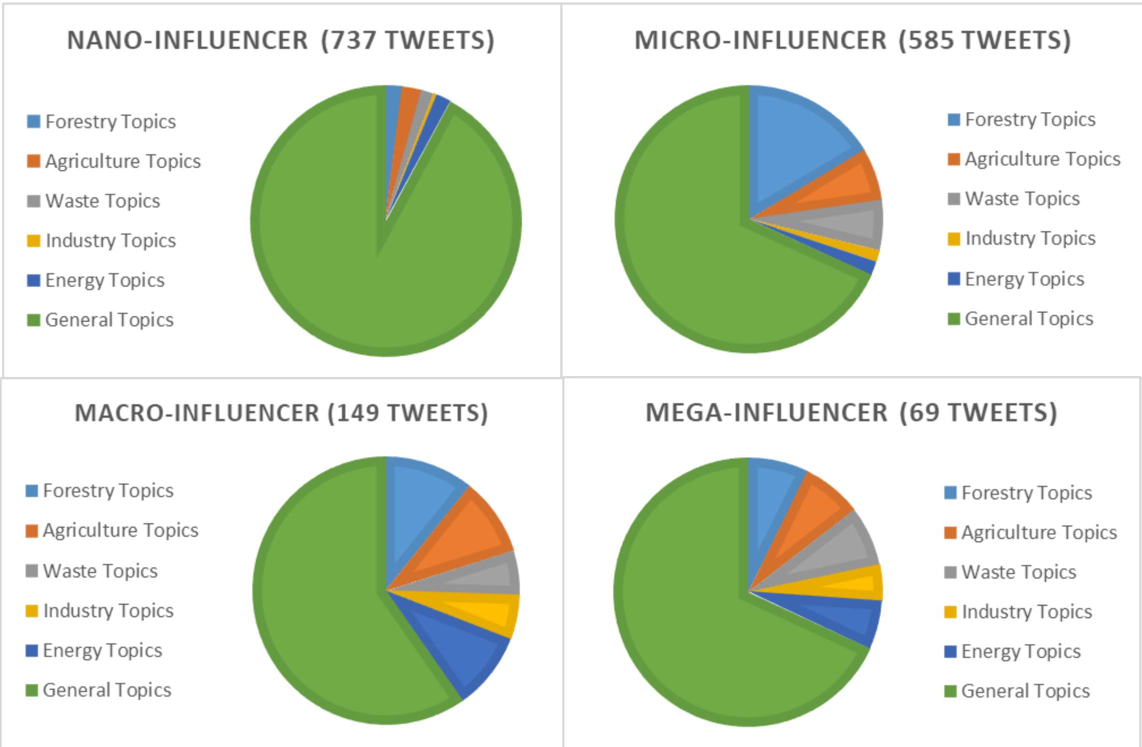
How influencer size effects on climate change discourse is when influencers (from nano to mega-influencer) contribute different tweets frequency distribution about climate change topics, such as the number of tweets and the distribution of tweets. Mega and macro-influencer results in the highest mean rank in climate change tweets amongst other influencers. Micro-influencer result in lower mean rank than macro and mega. Meanwhile, nano-influencer results in the lowest mean rank (see Table 1).

Table 2. The mean rankof influencers size in climate change mitigation topics

Influencer	Mean Rank					
	Climate Change Discourse					
	Forestry Topics	Agriculture Topics	Waste Topics	Industry Topics	Energy Topics	General Topics
Mega	499,67	492,47	413,77	455,00	451,40	537,70
Macro	473,35	470,24	442,27	457,16	463,59	511,40
Micro	451,31	421,98	430,34	412,09	407,08	421,50
Nano	378,10	394,75	394,14	402,50	404,80	390,02

(N: 818, chi-square=133,955,df 3, p-value < 0.05)

Figure 4. Frequency distribution in climate change tweets by influencers



For further detail, we describe the mean rank based on the topics of climate change mitigation, as shown in Table 2, as follows:

As shown in Table 2 above, some interesting facts can be mentioned. Mega-influencer is the influencer who has the highest mean rankabout forestry topics, agriculture topics, and general topics. Meanwhile, macro-influencer is the influencer who has the highest mean rank about waste topics, industry topics, and energy topics. On the other hand, nano-influencer is the one who has the lowestmean rankcompared with the other influencer size in any topic.

Furthermore, we can find that mega-influencer has 69 tweets of 15 accounts, macro-influencer has 149 tweets of 43 accounts, micro-influencer has 585 tweets of 270 accounts, and micro-influencer has 737 tweets of 490 accounts. These numbers are interesting research findings. Nano and micro-influencer have a large number of tweets and accounts, but lower mean rank than mega and macro-influencer whilst the distribution of tweets of mega and macro-influencer more spread out in various topics of climate change than nano and micro-influencer (See Figure 4).

To concludewhich one is more correlated with the effect of influencer sizein climate change discourse, we conducteda correlation test. The Kendall Tau b test shows that influencer size has a significant, positive correlation, and fair agreement with the number of tweets (τb = 0.364, *p-value*< 0.01) andthe distribution of tweets (τb = 0.400, *p-value*< 0.01). However, influencer size is more strongly correlated to the distribution of tweets than the number of tweets. It means the distribution of tweets gives more effect of influencer size in climate change discourse.

In social media, such as Twitter, content from users about climate change can grow. The impact of this proliferation of user content is the emergence of opinion leaders formingnano, micro, macro, and mega-influencers (Anderson et al., 2014; Lee, 2012; Metzger et al., 2010; Walther and Jang, 2012). However, who are the influencers in mega and macro size? Mega and macro-influencers in this study consist of three dominant parties, namely the media, non-profit / community, and celebrity (see Figure 5).

As shown in Figure 5, media remains a dominant player in the consumptive element of social media and as an important factor in shaping public views about climate change (Gladston& Wing, 2019). With the presence of media in social media, the role of media is multiplied.Not only does media act as an informant about climate change, but it alsoplays a role as social media influencersthat has a significant impact on climate change discourse. In the future, gatekeepingroles regarding climate change issues possiblyweakened, while media role as influencers strengthens up becauseof shifted audience tendency from passive to active information-seekers through new media (Priest, 2016, h 95-117).

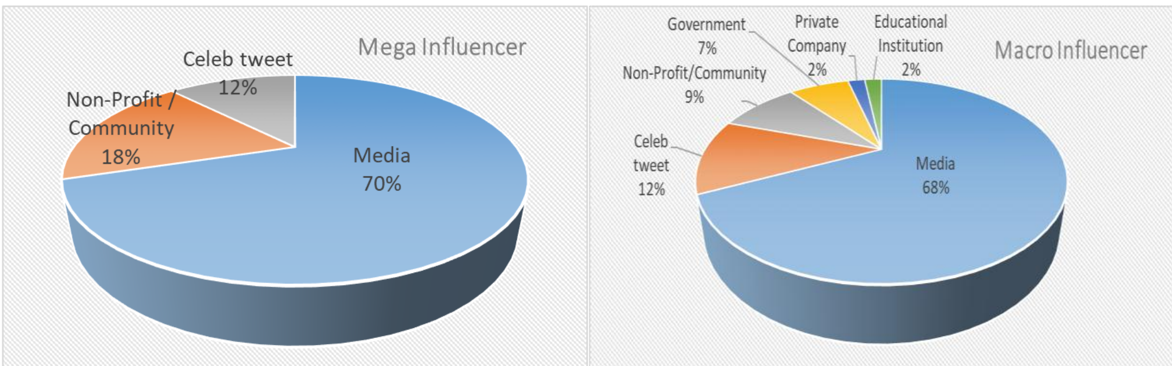
Besides the media, non-profit organization/ community and celeb tweet are also part of macro or mega-influencer in climate change discourse(see Table 3). The top ten most-followed users onTwitter are not corporations or media organizations, butindividual people, mostly celebrities. Ordinary users onTwitter are receiving their information from many thousands of distinct sources, most of which are not traditionalmedia organizations. Only about 15% of tweetsreceived by ordinary users are received directly from the media (Wu et al., 2011).

Table 3: Macro and Mega Influencers on Indonesian Twitter

Rank	**Top Influencer in Climate Change Discourse**
1	Media
2	Non-Profit/Community
3	Celeb tweet
4	Government
5	Private company
6	Educational institution

In this case, non-elite media or users outside the media organization grow their content that

Figure 5: Influencers in mega and macro size



can influence public views. As an opinion leader on Twitter grows, the media no longer monopolizes information related to climate change(Anderson et al., 2014; Lee, 2012; Metzger et al., 2010; Walther & Jang, 2012).

According to Evans et al. (2018), in the future, communication for climate change needs to have an integrated approach that combines communication and interpersonal, mass communication, journalism development, and new communication media, especially social media. The purpose of integration between these different models of communication is to create participative communication for continuous social changes. The direction of scientific communications, as climate change communications are shifting from previously sees individuals as information distribution of climate change into communication that emphasizes on public discussion and pushes social changes (Priest, 2016).

The implication of the Study

This study result will be useful for academic and practice purposes. The existence of non-elite media or users outside the media organization who grow their content in social media will impact to climate change communication. Media is not the only source to get climate change information. The future climate change communication combines interpersonal communication and mass communication in social media. As the climate change issue will be widespread through social media, environmentalists have to consider two-step flow information in communicating climate change, which involves influencers in social media. In Indonesia, climate change communication could be influential through macro and mega influencers such as media, non-profit organizations/communities, government, a private company, and educational institutions.

Conclusions

In this study, we observed influencers in climate change discourse on Indonesian Twitter. From the study, we know that nano-influencers dominate Twitter with a general topic in climate change discourse. In particular, from the research finding, we can also conclude that there is an influencer size effect in climate change discourse. How influencer size effects climate change discourse is when influencers contribute their tweet frequency distribution about climate change. From the statistical test result, mega and macro-influencer are the highest mean rank because of their tweets about climate change. The mega and macro-influencers in climate change discourse on Indonesian Twitter are media, non-profit organizations/communities, government, a private company, and educational institutions.

Media no longer monopolizes the distribution of information since non-elite media or users outside the media organization grow their content that can influence public views through social media. However, media remains a dominant player, an important factor in shaping public views about climate change. With the presence of media in social media, the role of media is now multiplied. Media acts as information gatekeeper about climate change; on the other hand, it also plays a role as social media influencers that has a significant impact on climate change discourse.

Limitation of the Study

Though we have resulted in finding in the research, this study still has some limitations. We know that the influencer size effects on climate change discourse on Indonesian Twitter. However, this study is lack of observing what effect coming from influencer size. The research finding may not be able to state that influencer size effects on audience engagement to generate retweet and mention. Moreover, all generated data from Socialert were only a tweet frequency distribution that correlates to only one keyword based on search volume for six months. As a result, not every tweet population is reliable to be analyzed, so that we need to reduce the data. The statistical test was also conducted as a non-parametric test because the distribution of data was not normal. Another limitation is the data coding based on climate change mitigation, yet including climate change adaptation.

These limitations can be a recommendation for future research about climate change communication utilizing big data as their sources. The research can set longer time range data as well as using a parametric statistical test. Beyond all the research limitations, this study can be an input to a communication professional to create their strategy when communicating climate change in the future, especially in utilizing influencers based on their size effectively. New media can be the backbone of climate change communication research ahead.

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VISUALISING GLOBAL PANDEMIC: A CONTENT ANALYSIS OF INFOGRAPHICS ON COVID – 19

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ABSTRACT

Visuals and words always create a narrative impact on the minds of the readers. Visual data or infographics enable readers to understand and comprehend complex information effortlessly. In an era of technological development, consumption of information is faster and quicker, and so the storytelling potential of data visualisation narratives is productive. During a global endemic like coronavirus, the mounting fear motivates people to seek accurate and credible information swifter and also change health behaviour accordingly. This paper tries to explore the representation of visualisation of data during the outbreak of global pandemic – COVID-19 for three months – from 1 January to 21 March 2020 in two leading national newspapers – The Hindu and The Times of India. The study identified the percentage of coverage, different levels and types of infographics and message characteristics of infographics. The study found that response and self-efficacy related infographics were primarily less in number compared to severity and vulnerability. Media needs to adorn a robe of '*social responsibility*' especially during a global pandemic like coronavirus, which is sweeping across the globe – as visual message tend to have more impact than the text.

Keywords: Content Analysis, Coronavirus, COVID-19, EPPM, Infographic

INTRODUCTION

Infographics – Readers' delight! Skimming through daily newspapers and magazines, or scrolling social networking sites, we come across 'pictorials filled with information' – the new age transmission of information – Infographics, which tries to inform, simplify, delight and motivate a reader. Today, individuals live in a faster and complex world, and they prefer to see and receive information in a more précis and intelligent manner. Data visualisation attempt to communicate multipart information in a manner that can be consumed and understood easily. (Smiciklas, 2012).

Infographics are widely used because "*they can rapidly grab attention, simplify complex concepts and connect components of complex concepts*". (Damman, Vonk, van den Haak, van Hooijdonk, & Timmermans, 2018) They obtain the power because they tap into the very powerful (but at times eccentric) human visual information-processing system. (Kosslyn, 1985) As cited in (Otten, Cheng, & Drewnowski, 2015), a human brain process visuals faster than text, i.e. nearly 50% of the brain is into processing visuals - human brain can sense visually in less than one-tenth of a second.

Infographics bring out the hidden stories in numbers and figures, and also a broad-spectrum of information is communicated efficiently and effectively. Further, it processes multiple and enormous information through variations, thus delivering risk-bound information quicker in a limited space. (Dur, et al., 2014); (Dur, 2012)

Today, an infographic is an additional tool to elaborate on the information present in the news story (Salas, 2018) and provide a pictorial representation of 'big' events (Castaneda, 2018). The study found that there is a steady rise in the use of infographics in newspapers or interactive infographics by using set templates (Gazizov & Fatykhova, 2019). Infographics coupled with health-related information can bring in a change in behaviour. Health communication aims to bring positive behaviour in an individual for combating health concerns. (Bhattacharyya & Roy, 2016)

This paper explored the storytelling potential of an infographic from health concern (a risk communication perspective) – levels, types and the proportion of infographic coverage given, and understanding the message characteristics of infographics.

REVIEW OF LITERATURE

A Panorama of Infographics

Infographic's chronological viewpoint provides a peek into infographic as an effective tool in various sectors. As early as the 1600s, infographics began with the use of maps. Christopher Scheiner, in 1626, using his pantograph published sunspots, is considered as the first infographics. In the later years, in 1789, William Playfair published "*Commercial and Political Atlas*", which contained bar and pie charts. By 1800s, visualisation was widely used in government offices for statistical information representations, which included bubbles and 3D charts, and contour plots. In 1858, Florence Nightingale's infographic on causes of mortality in the British army facilitated in convincing the Queen to provide better health care facilities.

Similarly, in 1859, John Snow published an infographic, which portrayed the outbreak of cholera and convinced many on the spread of cholera. In 1869, Charles Minard's cartographical representation of Napolean's Russian campaign in 1812 paved the way for the extensive usage of infographics. Furthermore, by the beginning of the 19th century, we have seen a rapid growth of infographics. By 1900s, infographics were widely used in scientific and niche groups and later, by 1930s, media outlets slowly and gradually adopted it.

Infographics and Journalism

Since the 1980s, graphics were used to support the works of journalism. Usage of graphics crept into the newsroom during the 1970s and 1990s, when Peter Sullivan used graphics or visual reporting in the Sunday Times and subsequently, the USA Today newspaper, in 1982 launched – 'SnapShots', a column specifically for graphical representation of statistics. Edward Tufte often referred to as Leonard DaVinci of infographics, raced the newsrooms with infographics. By 2000s, infographic witnessed a boom in the newsrooms. Since 2009, there has been a rise in the use of the term 'infographic' to describe visualisations that use various graphics to display data and other ideas. (Ferreira, 2014)

The newspaper provides an avenue for enhancing the coverage by adding graphic along with the text, which brings in perspectives and depth to the news story. Further, graphics have become part of the news package, wherein statistics coupled with artistic design provide a story to its readers. (Giardina & Medina, 2013)It was found that 42.4% of the newspapers run more than six infographics on an average weekday, while 43.7% of the newspapers publish more than six infographics on an average Sunday. (Utt & Pasternak, 2000).

Infographic is found to satisfy both the needs of the editorial department of the organisation and also aids in a better understanding of the content for the readers. In today's newspaper, infographics rule the rooster – in terms of design and content. Infographics are often seen as a replacement of photographs, thus adding colour and attraction to the page. Studies suggest that infographics attract the readers to the particular article while in the case of a dominant infographic; a little more than half of the readers used it to springboard into the article (Pasternak & Utt, 1990)

Readers tend to read and examine graphics before reading the text, and bigger graphic draw the readers to the story and also enables to highlight fewer important details. (Pasternak & Utt, 1990); (Hollander, 1994); (Dur, et al., 2014); (Siricharoen, 2013)

Some research suggests that graphic devices allow readers to easily grasp a description of an event by making some details more prominent. (Miller & Barnett, 2010) found that graphics with text enhance the attention as well as be beneficial to the readers.

The role of a newspaper graphic designer is known to create a graphic based on what is known and how to communicate it. (Cairo, 2006) Most graphic designs pertain to using bars and lines, initially. However, in the recent times, illustrations, iconic representations and drawings have taken precedence. (Meyer, 2009); (Cairo, 2006) Information related to sales growth and fall, the incidence of illness, do's, and don'ts, travel itinerary, medal tally are represented visually for easy understandability. (Few, 2017)

In the field of medicine, data visualisations were being used as early as the 1850s to create visual arguments based on data. In 1858, Florence Nightingale used medical data to create a coxcomb chart, which revealed the significant difference between the numbers of soldiers dying due to sanitary conditions versus battlefield wounds during the Crimean War (Brigham, 2016);(McCrorie, Donnelly, & McGlade, 2016). These infographics are intended to translate complex health-care information into simplified graphical snapshots that will leave the readers with a better understanding of how a disease can occur, be treated, and possibly even be prevented. (Balkac & Ergun, 2018)

For risk communication in a crisis like coronavirus pandemic, it is essential to communicate clearly, precisely as well as accurately to the target audience. Visual designers place the risk in 'context and perspective' to provide an understanding of the risks involved. In times of crisis, people hover with many questions – What, Who, Why, How? It is during this time, data coupled with the right tool will enable readers to see patterns and trends, which is sometimes invisible. During health outbreaks, it is crucial to disseminate the credible and reliable message, as false information creates an environment of 'infodemic'.

Types of infographics

Infographics may take various shapes and contours, but the three main categories are: *data graphics, maps, and diagrams* whichcan be either static (for print or screen use), animated or interactive (for screen use) (Otten, Cheng, & Drewnowski, 2015), while some studies categorise infographics as data visualisation or statistical (tables, lists, lines and bar charts), informational design or *timeline or chronology* (timelines, chronology, flowcharts, comparisons, hierarchical and anatomical illustrations), *process infographics* (a linear process of a topic) and *editorial* (icons and symbols) (Siricharoen, 2013). Albers (2015) in his study highlights four-types of infographics: simple information graphic – bullet list, and snapshot with graphic needs, and complex information graphic- flat information with graphic needs, and information flow/process.

In the field of healthcare, according to (McCrorie, Donnelly, & McGlade, 2016) there are four infographics: *isotype array* which uses similar icons or symbols; *polar area diagram* or *coxcomb graph*, a representation of pie and bar charts; *word cloud*, (hub and spokes) a cluster of words (spokes) arranged hierarchically according to prominence, size, colour around a hub (a central word); and *charticle* uses attractive colours, texts, graphs and charts to break out complex information and make it more understandable for a common man.

Infographics and Communicating Risks

Communicating vital information, especially during an outbreak of pandemic disease, is always a challenge. During such a situation media adorns in shaping public opinion and perception of risks. (Welhausen, 2015) In the field of health, visual representation of emergent public outbreaks aid in 'improving attitudes and risk perception' (LaCour, Beyer, Finck, Miller, & Davis, 2019). A common stratagem for risk dissemination to common people (non-experts), is through maps, bar and line graphs. Further, effective usage of colours plays a significant role in "communicating risk, improving comprehension, and increasing confidence in interpretation". (Turchioe, et al., 2019)

Researches indicate that layman understand risks better when presented in visuals (Ancker, Senathirajah, Kukafka, & Starren, 2006); (Lipkus & Hollands, 1999), as they fear that they have limited control over the threat as well as fear being hazardous to them and their loved ones (Welhausen, 2015). Consequently, taking cues from the various fields of psychology, usability, graphic design, and statistics, infographic aims to reduce barriers such as limited time and information overload to understand necessary information, (Otten, Cheng, & Drewnowski, 2015) also, it persuades people for an attitude and behavioural change. (Bice, 2019) However, "less attention has focused on how these visuals shape risk perception, particularly in crisis and emergency risk communication scenarios, which frequently involve culturally divergent audiences." (Welhausen, 2015)

THEORETICAL FRAMEWORK

The risk communication primarily focuses on 'fear' – which trigger individual to engage in health behavioural change. The extended parallel process model (EPPM), a culmination of other risk and fear appeal theories and models highlights on perceived threat (involving perceived severity and susceptibility- appraisal of the threat), which motivates self-efficacy (appraisal of efficacy) among individuals. In other words, as risk increases individuals are motivated to engage in self-efficacy and response efficacy. (Lapinski, Neuberger, Grayson-Sneed, & Gore, 2019); (Witte, 1992); (Li, 2018);(Chen & Yang, 2019). The model provides a structure for understanding communicative health-related or risk messages effectively. (Maloney, Lapinski, & Witte, 2011) Using EPPM constructs, the study explores how the effective usage of infographic is disseminating health-related information.

METHOD

Using a content analysis technique, the study collected infographics published in The Hindu and The Times of India from 1 January to 21 March 2020, till the day of announcement of 'Janata curfew', which was the initial period of the virus outbreak. The study identified n=42 in The Hindu (TH) and n=143 in The Times of India (TOI) newspaper using a consecutive sampling method. After employing inclusion and exclusion criteria, i.e. only infographics on COVID-19 health-based, n=36 and n=97 were identified in TH and TOI.

The selected infographic was categorised based on date, size of the infographic, headline, the level and type of infographic. The study modified the parameters of (Ghode, 2013), (Shin, 2016), and (Welhausen, 2015) into *Level 1*, which includes tables or bullet points, bar, pie or poll graph, line or fever-line, organisational or procedural flow chart; *Level 2* includes themes or graphics or drawings such as conceptual diagrams, maps, typography, and symbolic interpretations and *Level 3*, is a combination of level 1 and 2 coupled with illustrations, stylistic representation of information. Further, the usage of colour and collectivism (group) and individualism (individuals). Additionally, to understand the message characteristics – using Extended Parallel Process Model (EPPM) parameters – severity (the level of potential threats), vulnerability (negative consequences by the risk), self-efficacy and response-efficacy (to avoid and prevent threat) was analysed. The objectives of the study include:

RQ1: To analyse the percentage of coverage for infographics

RQ2: To identify the type and level of infographics

RQ3: To categorize the message characteristics of the infographics

ANALYSIS

The coverage of infographics in The Hindu and The Times of India found that The Times of India published more infographics in comparison to The Hindu.

Percentage of Coverage

In The Hindu, the study had taken n=36 infographics for the analysis, which predominately focussed on COVID-19. The average editorial space of The Hindu during the selected dates is 67.79%, and out of this 1.31% is devoted to infographics. The Hindu had two individual infographics, seven infographics published in the column '*data point*' in opposite to editorial page (OpEd) and 27 infographics as part of the article (in-text infographics). (*Table 1*)

Table 1: Percentage of coverage

The Hindu	**Number of Infographic**	**Infographic Space (in cms)**	**Percentage %**
Data Point	7	1607.25	
Infographic [a]	2	288	
In-text Infographic [b]	27	4286.25	
	36	6182.5	1.31
The Times of India			
Infographic [a]	72	7159	
In-text Infographic [b]	25	9564.25	
	97	16751.25	1.97

a. Independent Infographic

b. Infographics with articles

In The Times of India, the study had taken n=97 infographics. The average editorial space of TOI during the selected dates is 64.41%, out of which 1.97% is devoted to infographics. The Times of India had 72 individual infographics and 25 infographics as part of the article (in-text infographics). (*Table 1*)

Level and Type of Infographics

The Hindu had used predominantly used *level 1* infographic (n=21), i.e. table and bullet points infographic, followed by *level 2* (n=12), i.e. theme-based and *level 3* (n=3), i.e. usage of illustrations to convey the message. The colours used in the infographics – are mostly red, followed by grey, yellow, orange, teal, blue and violet. Most of the infographics were text-centred (n=29) rather than graphic-centred (n=7) (*Table 2*). Similarly, TOI had also used *level 1* infographic (n=49), followed by *level 2* and *3* (n=25; 23). The colours used in the infographics – are mostly red, black and blue. Most of the infographics were text-centred (n=64) rather than graphic-centred (n=32) (*Table 2*). The Times of India had utilised more infographics to convey 'risk' or 'threat' to public effectually.

Table 2:Level, Type and message characteristics of infographic

	The Hindu	TOI		The Hindu	TOI
Category	**Count**		**Category**	**Count**	
Level 1	21	49	Severity	22	69
Level 2	12	25	Vulnerability	19	69
Level 3	3	23	Response-Efficacy	13	51
			Self-Efficacy	11	46
Collectivism	17	59	Statistical Evidence	22	60
Individualism	19	39	Exemplar Evidence	17	55
Text-centred	29	64			
Graphic-centred	7	32			

Frames

The news stories were analysed from a public health model of reporting approach, which takes its roots from framing and agenda-setting theory. (Coleman & Perlmutter, 2005); (Coleman & Thorson, 2002)

According to Entman (1993 and 2004), the frame looks into the specific problem, establishes the cause of the problem, arrives at a judgement and suggests remedies for the issues. Public health model also tries to define risk, develop and evaluate methods to prevent problems in order to alter the public health conditions in the society. Keeping this approach, news stories with infographics on COVID-19 were analysed from the perspective of the cause of the disease, risk factors and preventive strategies. (Kang, Gearhart, & Bae, 2010).

The study found that in The Hindu, only one news story focussed on the cause of the disease – "*A window into novel coronavirus transmission*", while the rest of the stories covered the risk factors, which primarily focussed on the number of deaths, high alert and lockdown areas, and mapping of contact and the preventive strategies that highlighted on "*Tackling COVID-19 at ground level,*" "*COVID-19: PM calls for social distancing, people's curfew*", and "*Quarantine facilities near airports soon, 24-hr helplines set up*". Most of the news stories were thematic as it focussed on the larger group of people than individuals.

Meanwhile, in The Times of India, more news stories with infographics focussed on the risk factors and preventive measures rather than on the cause of the disease. The Times of India carried stories such as "*WHO says China virus now global emergency*", "*Coronavirus slows in China, but gallops across the globe*", "*Avoiding ice-creams may not save you from coronavirus, but washing hands will*", "*Washing Hands is essential, but where is the soap for it?*" and "*Save lives with social distancing*".

Message Characteristics

In terms of message characteristics, The Hindu focussed highly on the severity (n=22) of the coronavirus by providing numbers of COVID-19 cases reported in India and globally, followed by vulnerability (n=19), response-efficacy (n=13) and self-efficacy (n=11). The newspaper focussed exceedingly on severity rather than on response-efficacy and self-efficacy. During a time of crisis, it is essential to provide information on self-care management as well as community care, which will enable citizens to prevent the spread of the disease. (*Table 2)*

In severity and vulnerability, The Hindu principally focussed on the number of deaths, vulnerable population, namely people with hypertension, diabetes and other comorbidity and also referring to previous disease outbreaks such as SARS. The keywords used in the infographic headlines carried were "*closely related to SARS*", "*case count*", "*quick progression*", and "*rising cases*".

While, for response-efficacy and self-efficacy focussed on letting people know of traveling to affected areas such as "*fear of flying*" and "*No-fly zone*" and preventive measures such as washing hands frequently, wearing masks, measures to be followed while sneezing and coughing and maintaining social distancing and home quarantining.

Additionally, infographics headlines, which were carried along with the articles, tend to create fear and panic. The headlines such as "*In the grip of fear*", "*the spread of a deadly virus*", "*the global spread*", "*the virus that shook the world*", and "*viral count*" incline to generate fright in the reader's mind.

The newspaper had an infographic column – '*Data Point*', in the OpEd page, to provide statistical information, which also carried headlines such as "*Spread of a deadly virus*", "*Anatomy of an outbreak*", "*Global emergency*", "*Testing Times*", *Going viral in Europe*", "*No-fly zone*", and "*Victim Profile*". These headlines depicted severity and vulnerability of the regions affected by coronavirus as well as created panic and uncertainty.

However, "*Preventive measures*", and "*Good old soap*" in the FAQ page of The Hindu newspaper highlight the precautionary measures and how soap can be used instead of sanitizers.

Relatively, The Times of India also focussed on severity and vulnerability (n=69) followed by response efficacy (n=51) and self-efficacy (n=46). Nonetheless, it should be noted that TOI focussed on preventive measures comparatively more than The Hindu. (*Table 2*) The severity and vulnerability infographics focussed on "*mass evacuation*", "*1053 under scanner in State*", "*Major virus infection, fatality rises*", "*How worried should you be about coronavirus*", "*Elders, kids advised to stay home*", "*When age is a factor?*"and "*Heart Patients, Diabetes at Most Risk: WHO study*". While, response-efficacy and self-efficacy focussed on "*How to reduce risk*", "*How and when to wash hands*", "*What we know and what we don't know*", and "*What if there is an infected person in city?*"

Further, TOI had carried "*TN Covid Tracker*", "*Corona Tracker*", "*Mapping outbreak*", and "*Tracking outbreak*", on a daily-basis for informing about the number of deaths region-wise. However, the infographic was placed in a non-significant position in the newspaper.Most of TOI infographics predominately focused on risk factors – "*Battling Virus Spread*", followed by preventive measures (n=34) - "*Be Safe, Not Sorry*", "*To-do list*", "*Don't shake hands, Do Namaste*", "*How and When to wash hands*", and "*Shore up your defence*" and cause of the disease (n=6) – "*Rallying to battle virus threat*", and "*How coronavirus hijacks your cells*".

Further, unlike The Hindu, the word – 'COVID-19', which was represented in capital letters, The Times of India used the lower-upper case to represent the word. The headlines in the infographics generated a fighting chi – "*Fight so far*", "*Battling Covid-19*", "*Safety Net*", "*Testing times*".The Hindu and The Times of India infographics focussed on providing statistical evidence comparatively more than an exemplar shred of evidence. Infographics were keen on representing the number of deaths and people infected, and countries affected rather than on response-efficacy and self-efficacy, which is the sole factor of 'social or physical distancing' during the spread of coronavirus.

DISCUSSION

The infographics in The Hindu and The Times of India noticeably shape the perception of risk. Though both newspapers, focused on severity and vulnerability, comparatively The Times of India, focused more on response and self-efficacy. Similarly, graphic-representation of data was predominantly high in TOI than in The Hindu. Graphics representation with the use of colour – red, metaphorically created anxiety and alarm. However, analysing interactive and animated infographic would have provided a perception of people's understanding of risk-based information.

To summarise, as a common axiom says, "A picture is worth a thousand words", a good infographic aid in processing information quickly by lowering barriers of complexity and also tell a story to its readers. They transform abstract data into appealing visuals for better understanding for a common man, and the power lies in the hands of a graphic designer. Though readers find infographics attractive but failed to promote message properly. (Hollander, 1994); (Few, 2017);

(Siricharoen, 2013); (Albers, 2015); (Bresciani & Eppler, 2015); (Welhausen, 2015); (Andrade & Spinillo, 2016).

Further, as pointed out in the meta-analysis of fear appeals, fear stimuli have a direct or indirect effect on health behavioural changes.(Witte & Allen, 2000)Infographics can radically change our perception of risk. The framing of the language, colour, headlines communicate a different message to the readers and at the same time, graphics could easily persuade readers to disregard the article. Nevertheless, as Albert Cairo, journalist and information designer stated visual or graphics can lie and mislead people. It is essential to understand this pitfall and read and understand the graphics and move toward '*evidence-driven visual communicator*' and also be a responsible data journalist in the time of a disease outbreak.

CONCLUSION

Risk communication is reiterated in EPPM and public health models, which stress on the fact that coverage of health-related information affects individual's risk perception i.e. threat, which proportionally motivates for health behaviour depending on the health concern. Therefore, it is essential that media outlets emphasis more on self-efficacy of citizens through pictorial representation of data especially during global contagion for bringing in positive health-related behavioural change.

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IMPACT OF PRICE PROMOTION ON BRAND EQUITY MODEL: A STUDY OF ONLINE RETAIL STORE BRANDS

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ABSTRACT

The study evaluates the effect of Price Promotion strategy (PPs), extensively used by online stores to promote sales and improve market share, on Brand Equity (BE) elements of these stores. The study focuses on the mediating role played by the two prominent elements of BE, perceived quality (PQ) and brand awareness(BA) in forming the relationship between the PPs on brand association (BAsso) and brand loyalty (BL) in case of online stores (Amazon, Flip Kart, Snap Deal). The data for the study was collected from the students of graduate and post graduate programs at Gwalior, Madhya Pradesh (India) selected on the basis of random sampling method. The causal relationships between PPs and the elements of BE along with moderating effects of PQ and BA on the relationships of PPs on BAsso. and BL were evaluated using SEM methodology. PPs contribute positively to all the four elements of BE (PQ, BA, BAsso. and BL). The study has thus, made significant contribution to the existing literature that unlike physical stores, in case of online stores, PPs contribute in improving all the elements of BE instead of having adverse effect. The study has made another very important contribution to existing literature in evaluating the mediating role played by PQ and BA. The results indicate that PQ fully mediates the relationships of PPs with BAsso. and BL. Similarly, BA fully mediates the relationships of PPs with BAsso. and BL.

Keywords: Price Promotion, Brand Equity, Brand Awareness, Perceived Quality, Brand Association, Brand Loyalty

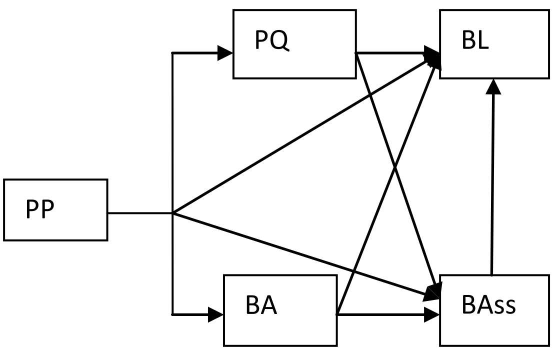
INTRODUCTION

Brand equity is the overall value that the customers attach to a brand. Major contributors to research on branding have conceptualized brand equity on the basis of consumer perspective (Aaker, 1991, Keller, 1993 and Christodoulides et al. (2010) or on financial perspective (Sullivan, 1993 and Haigh, 1999). Proponents of Customer based brand equity have also differed in identifying the components of brand equity and the factors affecting brand equity. Majority customer based perspective identified *BL, BA, BAsso and PQ (Aaker, 1991;* Yoo and Donthu, 2001;Konecnik and Gartner, 2007; Gill and Dawra, 2010). Some other researchers used additional constructs such as customer satisfaction (Kim et al. 2008), brand image (Keller, 1999), organizational associations (Sinha et al. 2008) brand trust and brand commitment (Marquardt, 2013) as components of BE. Research on factors affecting customer based brand equity have identified PP (Vidal and Ballester, 2005), brand attitude (Faircloth et al. 2001), brand ambassador credibility (Dwivedi and Johnson, 2012), Event Marketing (Zarantonello and Schmitt, 2012) as predictors of BE. Therefore, many business organizations invest a lot of money on marketing communication, such as price promotion (PP) with a hope of attaining high brand equity (BE). PPs are most commonly used as to attract consumers and increase sales. Companies usually use PP's to stimulate sales, increase trials, attract budget conscious buyers, retain loyal customers, or provide increased value perception (Huff & Alden, 2000). However, the question is whether PP methods increase BE of a product. Raghubir & Corfman (1999) confirmed that PP's provide an economic incentive to customers in order to purchase a brand.

The studies evaluating effect of PPs on consumer brand evaluations can be placed in three groups. First group includes studies that have depicted positive effects of PP's on BE elements (Kuehn & Rohloff, 1967; Cotton &Babb, 1978; Bawa & Shoemaker, 1987; Rothschild & Gaidis, 1981 and Lattin & Bucklin, 1989). Studies in the second group have shown negative effects of PP's on BE elements (Davis *et al.*, 1992; Ehrenberg *et al.*, 1994; Morais et al., 2006; Mullin & Cummins, 2008; Campo & Yague, 2008) whereas the studies in the third group have identified insignificant or no effect of PPs on BE elements (Neslin and Shoemaker, 1989;Davis, Inman, and McAlister, 1992; Bravo, Andres & Salinas, 2007; Sriram et al., 2007).

Online retail stores use price promotions in a big way to increase sales and market share. In physical stores case, price promotions used extensively, may adversely affect their perceived quality and in turn brand loyalty. Does PP strategy affect PQ and BL in case of online stores also in the same way as it does in case of physical stores. Therefore, evaluating the effect of PP strategies on components of BE in case of online stores is vital. Thus, there is a need of an in depth study to evaluate the effect of PP on overall equity of a brand and its elements, BA, BL, PQ and Basso in online stores case. Current study evaluates the effect of PP strategies used by online stores (Flipkart, Amazon and Snapdeal) on their BA, PQ, BL and BAsso. Promotion efforts of companies lead to higher degree of knowledge of the brand (awareness and PQ) (Villarejo et. al., 2005) but the ultimate objective of these promotions is to increase their customer base and improve BE. Accordingly, the current paper models the impact of PP on BL mediated by PQ and BA also the impact of PP on BAsso mediated by PQ and BA in case of online stores. The study will evaluate the following conceptual model:

Conceptual Model



LITERATURE REVIEW

PP - BE

The impact of PP on BE has been studied by various researcher but results are contradictory. Some researchers have confirmed negative impact (Jedidi et al., 1999; Yoo et al., 2000; Mullin & Cummins, 2008; Buil et. al., 2010; Selvakumar & Vikkraman, 2011). Ramos & Franco (2005) studied the relationship in washing machine product category. They found that price incentives used for uplifting sales affect the established reference price levels and have negative impact on BE. The authors demonstrated a negative relationship between price deals and BE. From strategic perspective also price deals show negative effect as it diminishes BE (Yoo et al., 2000). If a product is over-promoted, consumers will buy less of the product at the regular price and wait for PPs. In other words, PPs can reduce the consumer's reference price, which in turn results in lowered BE (Lattin & Bucklin, 1989; Mayhew & Winer, 1992). A stream of literature also shows that PPs can persuade consumers to postpone their purchase decision and wait for a lower price in the future (Assunção& Meyer, 1993; Kalyanaram & Winer (1995); Mela et al. (1998) which will have negative effect on BE.

PP is found to have positive effect on BE (Vidal & Ballester, 2005; Chu and Keh, 2006; Melina and Evelyn, 2011). In tobacco industry information delivered to customers (related to a particular brand), through promotional methods is considered as an important variable that affect the equity of these brands positively (Marcel, 2009). In Indonesian beverage industry (Nurcahya, 2014) found positive effect of PP programs on three elements of BE i.e. PQ, BL and BAsso. To have this positive effect on brand equity marketers must design creative promotional campaigns. It is not necessary that while using price promotion technique organizations need to give 'one on one', 50 % off, or pay less get more. Rather than providing on the spot financial benefit it is recommended that organizations should try out methods of price promotions which help in building long term relationships with the customers such as coupon discount on next purchase, price discount to other customer recommended by the first one or a chance of winning a trip, etc. These types of PP techniques will keep the customers close to the brand for longer time which in turn will increase BA, if satisfied, increasing BL and up lifting brand equity.

Some investigators found that the effect is statistically insignificant (Ehrenberg, Hammond & Goodhardt, 1994; Sriram et al., 2007; Gil et al., 2007). Kuntner (2017) studied the effect PP on different BE level brands. He distinguished brands on the basis of initial equity levels (like high, moderate and low initial equity brands). He concluded that for low-equity brands, PP strategies have close to zero effect, but for higher initial equity level brands the effect is highly negative. He also demonstrated that the negative influence of PPs on the brand's equity is proportionate to the increase in initial BE level. Thus, higher initial equity brands should avoid using PPs and low equity brands can use PP deals to attract new customers, non-users, or competitor brand customers(Ardestani, et al., 2014).

Review of literature explains that PP can affect BE positively as well as negatively, depending on product category, level of initial equity, brand positioning, target segment, etc. Thus, marketers must analyze all these factors before deciding to go for PP strategy.

PP - PQ

PP strategy is used by organizations to attract non buyers, increase sales, increase market share and to attract customers of competitor brands. Buil et al., (2013) have explained that if PP strategy is introduced in the market in such a way that it is perceived as value for money by the customers then it could bring about a positive effect on brand evaluation. In contrast it is also possible that customers perceive that products of inferior quality are promoted through PP thus price discounts may negatively affect consumers' quality perceptions (Rao & Monroe, 1989; Madan & Suri, 2001; Agarwal & Tea, 2002).

Various models developed by researchers indicate that price-quality based strategies are a double edged sword. It can have both positive as well as negative effect on brands (Milgrom & Roberts, 1986; Jedidi et al., 1999; Ramos & Franco, 2005). The prevailing theory, which says that price can serve as a quality indicator, hinges on the consumers' belief that if something costs more, then it must be better. If organizations want to take advantage of this belief than they should set "quality-assuring" price which should be a protection price for both organization and a value for money for the customers (Klein & Leftler, 1981). As if customers feel that a firm is trying to sell a product for less than the quality-assuring price, then it will lead to a low quality impression about the product (Bagwell & Riordan, 1991; Kirmani & Rao, 2000).

Given that informed consumers purchase from high-quality sellers and uninformed consumers purchase from both high- and low-quality sellers, the literature shows that uninformed consumers can get a price-quality reference point from the informed consumers (Chan & Leland, 1982; Cooper & Ross, 1984). In addition, previous studies have also provided evidence of a strong contribution of price in developing PQ (Dodds et al., 1991; Erdem et al., 2002; Ramos & Franco, 2005).

Huang et al., (2014) studied the effect of PPs on customer's PQ and repeat purchase intentions. They predicted a positive impact of PPs on PQ and customers' repeat-purchase intentions. They also identified that gender and consumption frequency does not demonstrate a moderating effect.

Vecchio et al., (2007) evaluated the long term effect of PPs on brands PQ. They found that in long run frequent use of PPs can have negative influence on brands PQ. This effect might not be significant after one PP but if repeated several times it could change the consumer's reference point because products with lower price are considered to have poorer quality (Ophuis & Trijp, 1995; Alba et al., 1999). Villarejo & Sanchez, (2005) posited that PPs are perceived as short-term benefits by the consumer; they contribute to lower quality perceptions in the long-term.

In contrary Waanders (2013) evaluated the effect of deep PP's on store brand and high end brand of wheat bears and found out that deep PP's could also have a positive effect on brand name and PQ. But to get that positive effect BA needs to be high. This research also explained that deep PP's positively influenced the taste experience of the high end brand but negatively influenced the taste experience of store brands. Therefore, in the long run PPs could influence the PQ of the store brand negatively (Ophuis & Trijp, 1995). Based on the above evidence from the literature hypothesis 1 has been set up.

Hypothesis 1:PP contributes significantly to PQ

PP - BA

Researchers and organizations have continuously worked on to understand the effect of different promotional techniques on BA level of their brands in various industries so as to identify the most appropriate promotion package in order to achieve maximum BA of their respective brands. Villarejo, et. al. (2005) evaluated the direct and indirect effect of the marketing strategies on BA. They indicated that the marketing efforts of the companies significantly increase brand awareness, and thus enhance the probability of brand recall at the time of actual purchase. Piratheepan & Pushpanatha (2013) evaluated the effect of different promotional techniques (advertising, sales promotion, direct marketing, etc) on BA in milk powder industries. They found that all forms of marketing efforts have positive effects on BA, but in comparison to advertising and sales promotion the impact is less significant in case of personal selling and direct marketing. Thus, in milk powder industry sales promotion (PPs, coupons, etc) will help in increasing BA.

Gilbert & Jackaria (2002) evaluated specifically the effect of 'get one free unit on purchase of one unit' promotion techniques on BA. They concluded that this type of promotional technique may not affect BA before first time purchase, but once the customer evaluates the product and finds the deal fair enough, it will enhance the chances of better brand recall for future purchases. Nurcahya (2014) also did not find any significant impact of PP on BA. Shelvakumar and Joshna found positive effect of PP on BA in case of Banking and no effect of PP on BA in case of fast food restaurants. Based on the above discussion of literature hypothesis 2 is framed.

Hypothesis 2:PP contributes significantly to BA

PP - BL

Earlier models depicted that consumers want to establish loyalty towards a specific brand, but recent studies concluded that due to rise in literacy rates and easy access of information, customers have become choosier and evaluative in terms of value for money (Jing & Wen, 2008; Koçaş & Bohlmann, 2008). Thus, organizations can use promotional tactics including PPs to attract these evaluative customers and retain them through timely rewards (Raju et al. 1990; Rao 1991). Eisman, (1990)has also concluded that use of promotions helped organizations in stimulating the purchase intention of customers and retaining customers through various incentives. Pressey & Matthews, (1998) have stated that the probability of a shopper to switch from normal brand to competitor brand increases by fifty percent if it is on promotion. Price deals may motivate consumers to make purchase and if satisfied, then repeat purchases (Marcel, 2009), but here the loyalty is Pseudo-Loyalty because when the campaign is over, consumers interest in the brand decreases gradually. Nevertheless, PP encourages customers to try new products and if they are satisfied, it may lead to repurchase and a positive outlook towards the brand.

Anderson & Kumar (2007) identified that if organization is targeting price sensitive market then they should promote more often and deeper, as the price-sensitive segment gets positively affected by the level and repetition of the discount. While studying online books selling data Koçaş & Bohlmann (2008) revealed that the frequency of promoting weaker brands is low with high discounts whereas for stronger brands this strategy doesn't work. For stronger brands frequent but smaller PP's result in higher degree of BL. In manufacturing industry also, weaker brands use promotions to retain their loyal customers, as a defensive strategy whereas on the other hand stronger brands use promotions to attract loyal customers of the weaker brands (Raju et al., 1990).

It is widely accepted that PPs can enhance sales immediately, by stimulating consumer trials, some of whom might become repeat buyers (Ehrenberg et al., 1994). Selvakumar and Joshna (2011) found significant effect of PPs on BL for Banking and fast food restaurant brands. Hendra and Budi (2017) and Chi Yeh and Yand (2019) also reported positive effect of PPs on BL. Based on the evaluation of the above literature hypothesis 3 is formulated.

Hypothesis 3: PP contributes significantly to BL

PP - BAsso

A brand's price is not only a financial tag associated with it. It is as much important as brand name, logo, packaging or endorser of the brand. Price of a product in comparison to competing products, moderate the Brand Image a customer has in mind. Thus, before introducing a PP strategy, marketers must analyze the influence PPs will have on their brand image and other Brand Associations and how strong this influence will be? Selvakumar and Joshna (2011) reported that PPs contribute significantly in enhancing BAsso in case of established strong brands such as banks where as PPs have no effect on BAsso in case of fast food restaurants.

Winer (1986) concluded that PP has a negative significant effect on BAsso because PP's conveys an image of low and unstable quality. So if PP's are used, then it should be kept in mind that they are in line with the desired positioning strategy. If a value positioning is chosen, that promises high quality at low price then marketing team must ensure that in order to minimize the price quality is not compromised. But if organization wants to establish its brand as a high end brand then they need to be cautious while using PP strategy because many a times it has turned sour and affected the other Brand Associations negatively (Stibel, 2008). Based on the above evaluation of literature hypothesis 4 is formulated.

Hypothesis 4:PP contributes significantly to BAsso

Basso - PQ and BL

Literature survey on the relationship between BAsso and BL has indicated mixed results. Some studies have found significant positive effect of Basso on BL (Falahat et al. 2018) based on a study carried out on hardware retail stores in Malasia and Alhaddad, (2015) based on a study done on sports wear retail stores. Erfan and Choon (2013), Severi and Ling (2013) also found strong positive relationship between BAsso and BL. On the other hand Kieu (2016), Chinomona and Maziriri (2017) did not find any effect of BAsso on BL based on a study completed on shopping malls in Vietnam. Based on the above review of literature following hypothesis 5 and 6 are framed:

Hypothesis 5: BAsso significantly contributes to BL

Hypothesis 6:BAsso contributes significantly to PQ

BA – BL and PQ

The findings of previous studies have indicated mixed results on the relationship between BA and BL. Conceptually BL is not possible without the awareness of the customers about the brand. Oh (2000) reported insignificant positive relationship between BA and PQ. Chinomona and Maziriri (2017) found insignificant relationship bitween BA and BL where as Malik, Gafoor and Iqbal (2013), Jing, Pitsaphol and Shabbir (2014), Dhurup, Mafini and Dumasi (2014), Xu, Li and Zhou (2015), Hendra and Budi (2017) found positive relationship between BA and BL in their studies. Hussain et al. (2017) found significant positive effect of BA on BL and BAsso for users and non users both in a study conducted on mobile phone brands. Chi, Yeh and Yang (2009) reported positive significant positive effect of BA on BL and PQ. Therefore, looking at the empirical evidence hypotheses 7 and 8 are framed:

Hypothesis 7: BA contributes significantly to BL

Hypothesis 8: BA significantly contributes to PQ

BA and BAsso as Mediators

Shintaputri, and Wuisan (2017) did not find BA as mediator of relationship between PP and BL in a study carried out on a well known mobile brand. However, Beneke, Flynn, Greig, & Mukaiwa (2013), Buditama & Aksari (2017) reported that the PP-BL relationship is partially mediated by BA. The authors did not find any research work that evaluated PQ as mediator of PP-BAsso relationship.

Hypothesis 9: BAsso significantly mediates the relationship between PP and BL

Hypothesis 10: BAsso significantly mediates the relationship between PP and PQ

Hypothesis 11: BA significantly mediates the relationship between PP and BL

Hypothesis 12: BA significantly mediates the relationship between PP and PQ

RESEARCH METHODOLOGY

We evaluated the causal effect of PP on BL and BA with PQ and BA acting as mediating variables on online stores (Flip Kart, Amazon, Snap Deal). Survey method was used for collecting the data for the research. The study was done to evaluate the effect of price promotions on the elements of brand equity and to evaluate the mediating role of PQ and BA.

The research was conducted using UG and PG students studying in various Institutions located at Gwalior region in the state of Madhya Pradesh (India) as respondents. The students who attended the Institutions during the data collection phase formed the sample frame for the study (Lim & Ting, 2012). Since the Institutions were not ready to provide the complete list of students and their contact details, the students were selected for the study based on non probability quota sampling method. Equal number of male and female students was selected for providing responses. The data was collected after meeting the respondents face-to-face. In all 350 questionnaires were distributed to the students for collecting responses. All the 350 questionnaires were collected and 325 questionnaires were found with responses on all the statements. Thus, the final sample size was 325 (Klenke, 2008).

StandardizedQuestionnaires of PQ, BL, BA, BAsso, as well as PP, proposed by Nurcahya (2014) were used for data collection. 7-point Liker type scale was used for data collection.
Cronbach's alpha is a prominent tool for evaluating internal consistency reliability for the measures (Perry, 2001; Rogelberg, 2002). Cronbach's Alpha coefficient of reliability was computed to establish the reliability of all the measures used in the study.

EFA was used to identify the factors underlying the measures. Principle Axis Factoring (PAF) (Conway & Huffcutt, 2003) was applied to identify factors of the measures (Fabrigar et al. 1999; Beavers et al. 2013).

PLS-SEM is preferred over CB-SEM in evaluating predictive causal relationships in a complex model (Rigdon, 2012, 2014). Also PLS-SEM uses better algorithm for evaluating descriminent validity (Franke and Sarstedt, 2019). Therefore, PLS-SEM was used to test the structural model as the model comprising of five variables and 19 indicators was complex and causal relationships were evaluated.

RESULT AND DISCUSSION

Nunally's (1978); Lance, Butts & Michels (2006) Identified necessary conditions for considering a measure as reliable and stated that reliability coefficient values above 0.7 indicate that the measure is Reliable. Table 1 displays the Cronbach's Alpha values for all the measures. It is evident that all the coefficients are higher than 0.7; therefore, all the measures are reliable.

KMO values need to be higher than 0.5 for the data to be from a sample that is large enough for factor analysis. Table 2 shows the KMO values for all the measures. It is evident that all the KMO values are higher than 0.5 indicating that the sample was adequate for Exploratory Factor Analysis (EFA). The Bartlett's test compares the computed item-to-item correlation values with the correlations in identity matrix. The two matrices must be different for the data to be suitable for EFA. Table 2 also indicates that the Chi Square test values are significant at 0.0 level of significance indicating, that the item-to-item correlation matrices for all the measures are not identity matrices. Therefore, the data obtained through all the variables are suitable for EFA.

Exploratory Factor Analysis (EFA)

EFA was conducted using Principle Axis Factoring for convergence and Varimax for rotation on PQ, BL, BA, BAsso and PP to identify the underlying factors of the measures. All the measures of the study converged on single factors only; therefore, the names of the variables were used for representing the factors.

Structural Equation Modeling Results

The Structural model consisting of variables; Price Promotion (PP), Brand Awareness (BA), Service Quality (SQ), Brand Association (BAss), Brand Loyalty (BL) was tested using Smart PLS (Fig.1). These variables were measured using a number of items (indicators). Since EFA converged on single factors for all the variables, structural model was constructed using five variables with their sixteen indicators.

Although computing goodness of fit indices is not essential for SEM models tested using Smart PLS. Some of the selected goodness of indices are used to demonstrate that the model had high goodness of fit (Table 3).

1. **SRMR (Standardized Root Mean Square Residual)-** The value of SRMR need to be below 0.08 for the model to have high fit with data (Hu and Bentler, 1999). The computed value for SRMR is 0.058; showing that the model has high goodness of fit.

2. **NFI (Normed Fit Index) -** The value of NFI should be greater than 0.9 for the model to have goodness of fit (Lohmöller, 1989). The computed value of NFI is 0.917. Thus, the model has high goodness of fit.

Convergent Validity

Convergent validity indicates the relationship between indicators of a variable (Carmines and Zeller, 1979). Three parameters of the model indicate whether the variables have convergent validity. The parameters are: Factor Loadings (Outer Loadings), Construct Reliability (CR) and Average Variance Explained (AVE).

Outer Loadings

The model consists of five variables interrelated as indicated in the model diagram (Fig. 1) along with their indicators. The outer loadings indicate the factor loads of all the indicators on their variables. The loadings must be higher than 0.7 or very close to them. All the indicators in the current model have are higher than 0.7 other than one indicator of Brand Awareness, which has a loading of a 0.683 that is very close to 0.7 (Table 4). Thus, the first criterion for convergent validity is satisfied.

Composite Validity (CV)

The second criteria for establishing CV is construct reliability (CR). The CR of all the variables must be higher than 0.7 for demonstrating CV. However, the value higher than 0.6 are acceptable if the research is exploratory in nature (Bagozzi and Yi, 1988). Table 5 displays CRs for all the variables. Since all the CR values are greater than 0.8, the second criterion for convergent validity is also fulfilled.

AVE

The third and final criterion for establishing convergent validity is the AVE. According to Fornell and Larcker, 1981, AVE evaluates the average variance that a construct extracts from its indicators in comparison to measurement error calculated for each variable. According to Bagozzi & Yi (1988) and Chin (1998) the values of AVE should exceed 0.5; that means the variables are able to extract at least 50% of the total variance. Therefore, AVE values above 0.5 fulfill the third criteria for high convergent validity. As displayed in the table-5, all the AVE values are higher than 0.5. Thus, the third criterion for the convergent validity of all the variables of the study is also fulfilled. In other words, the variables included in the model have high convergent validity.

Discriminant Validity

As the convergent validity indicates homogeneity of variables of a construct the discriminant validity demonstrates the separation/differentiation of each constructs from the other constructs of the model (Carmines and Zeller, 1979). The discriminant validity is demonstrated by AVE values that are higher than 0.5. All the AVEs should be higher than all the inter-construct correlations (Chin, 1998). Square Root of AVEs are placed on the diagonal and the inter-construct correlations are placed on off diagonal cells in the matrix. If the diagonal elements are higher than the off diagonal values in the corresponding rows and columns the discriminant validity is established. Therefore, discriminant validity is established for this model as all the diagonal values are higher than off diagonal values in the corresponding rows and columns (Table 6).

Hypothesis Testing

In structural models the hypotheses are tested by computing path coefficients (β). The path coefficients in SEM indicate causal relationship between the constructs (Wixom and Watson, 2001). Table 7 shows hypothesized path coefficients (β).

Bootstrapping

Although the coefficient β values indicate causal relationship they are not sufficient to indicate whether this relationship is significant. Bootstrapping procedure evaluates whether these relationships are significant (Chin's, 1998). Bootstrapping with 500 sub-samples was performed to evaluate whether the relationships between constructs were significant. Boot strapping computed t-statistic for each path coefficient (β). If the t - statistic value was 1.96 or greater, the hypothesis was considered supported, otherwise the hypothesis was not supported. Table-7 shows t statistics values for all the inter-construct relationships.

SEM diagram with t-values computed using Bootstrapping procedure is displayed at fig-2.

Hypothesis 1:PP contributes significantly to BAsso

The hypothesis was tested through computation of path coefficient beta (β). The computed β value between PP and BA was 0.614. The standardized β was tested through computation of't' statistic. The value of't' was 10.920 significant at .000 level of significance. Thus, the null hypothesis is supported. Tebebe and Singh (2016) found significant effect of PP on BAsso in a study on Brewery Industry.

Hypothesis 2:PP contributes significantly to BA
The hypothesis was tested through computation of path coefficient beta (β). The computed β value between PP and BA was 0.641. The standardized β was tested through computation of 't' statistic. The value of 't' was 10.872 significant at .000 level of significance. Thus, the null hypothesis is supported. Tebebe and Singh (2016) found significant effect of Monetary (Price) Promotion on BA in a study on Brewery Industry. Rungtrakulchai (2015) also found strong causal relationship between PP and BA in a study on luxury Brands.

Hypothesis 3:PP contributes significantly to BL
The hypothesis was tested through computation of path coefficient beta (β). The computed β value between PP and BL was 0.115. The standardized β was tested through computation of 't' statistic. The value of 't' was 1.732 significant at .084 level of significance. Thus, the null hypothesis is not supported. Results are in line with the findings of Rungtrakulchai and Nichi (2015) where they did not find any causal relationship between PP and BL in a study on luxury Brands.

Hypothesis 4:PP contributes significantly to PQ
The hypothesis was tested through computation of path coefficient beta (β). The computed β value between PP and PQ was 0.251. The standardized β was tested through computation of 't' statistic. The value of 't' was 3.728 significant at .000 level of significance. Thus, the null hypothesis is supported.

Hypothesis 5:PQ significantly contributes to BL
The hypothesis was tested through computation of path coefficient beta (β). The computed β value between PQ and BA was 0.398. The standardized β was tested through computation of 't' statistic. The value of 't' was 5.152 significant at .000 level of significance. Thus, the null hypothesis is supported. Loureiro (2013) also found similar results while evaluating the effect of PQ on BL in a study on Internet Banking. Alhaddad (2015) found significant effect of PQ on BL in a sports wear study. Chinomona and Maziriri (2017) also reported positive contribution of PQ on BL.

Hypothesis 6: BAsso contributes significantly to PQ
The hypothesis was tested through computation of path coefficient beta (β). The computed β value between BAsso and PQ was 0.214. The standardized β was tested through computation of 't' statistic. The value of 't' was 2.859 significant at .004 level of significance. Thus, the null hypothesis is supported. Alexandris et al. (2008) reported similar findings based on a study on fitness clubs.

Hypothesis 7: BAsso significantly contributes to BL
BAsso does not contribute significantly to BL as indicated by the path coefficients value (β) = 0.117. The relationship is tested using t-statistic; the value of t is 1.737, significant at 8.3% level of significance. Result is in contrast with the findings of Homburg et al. (2010), Chen, Yeh and Jheng (2013) and Hussain et al. (2017) where in the authors found significant effect of BAsso on BL in their study on personal computer industry.

Hypothesis 8: BA contributes significantly to BL

BA contributes significantly to BL as indicated by the path coefficient (β) = 0.233. The path coefficient is tested for significance using t-test. The value of t-test statistic is 2.831, significant at 0.5% level of significance. Thus, the hypothesis is supported. Similar results were obtained by Abbas (2019) where the authors found significant effect of BA of higher Education Institutions on their BL. Dhurup, et. al. (2014) also found significant causal relationship of BA on BL in a study on Retail outlets. The results of Malik et al. (2013) also found strong positive relationship of BA on BL in a service sector study providing support to the finding of this study.

Hypothesis 9: BA contributes significantly to PQ

BA has significant affect on PQ. The relationship was tested through the path coefficient β. The value of β was 0.316; tested through computation of 't'= 4.842 significant at 0% level of significance. Therefore the hypothesis is supported.

Mediation Effect

Hypothesis 10: PQ significantly mediates the relationship between PP and BL

Mediation effect of PQ on the relationship between PP and BL was evaluated through computation of indirect effect of Price Promotion on Brand Loyalty. The total indirect effect of PP on BL is evaluated through computation of standardized β; the value of β was 0.104. The standardized β was tested through computation of 't' statistic; the value of 't' was 2.520, significant at 0.012. Thus, the null hypothesis if supported. The PQ significantly mediates the relationship between PP and BL. Saif et al. (2019) also found that PQ fully mediated the relationship between PP and BL in a study on Apparel Industry, thus supporting the results of this study.

Hypothesis 11: PQ significantly mediates the relationship between PP and BAssso

Mediation effect of PQ on the relationship between PP and BAsso was evaluated through computation of indirect effect of PP on BAsso. The total indirect effect of PP on BAsso was evaluated through computation of standardized β; the value of β was 0.244. The standardized β was tested through computation of 't' statistic; the value of 't' was 5.095, significant at 0.000. Thus, the null hypothesis if supported. The PQ significantly mediates the relationship between PP and BAsso.

Hypothesis 12: BA significantly mediates the relationship between PP and BL

Mediation effect of BA on the relationship between PP and BL was evaluated through computation of indirect effect of PP on BL. The total indirect effect of PP on BL is evaluated through computation of standardized β; the value of β was 0.287. The standardized β was tested through computation of 't'; the value of 't' was 5.793, significant at 0.000. Thus, the null hypothesis if supported. The BA significantly mediates the relationship between PP and BL.

Hypothesis 13: BA significantly mediates the relationship between PP and BAsso

Mediation effect of BA on the relationship between PP and BAsso was evaluated through computation of indirect effect of PP on BAsso. The total indirect effect of PP on BAsso is evaluated through computation of standardized β; the value of β was 0.183. The standardized β was tested through computation of 't' statistic; the value of 't' was 3.461, significant at 0.001. Thus, the null hypothesis if supported. The BA significantly mediates the relationship between PP and BAsso.

We could not locate any study that evaluated the mediating role played by PQ on the relationship between PPs and BAsso. Similarly, we did not find any study that evaluated the mediating role played by BA on the relationship between PPs with BAsso. and BL.

IMPLICATIONS & CONCLUSION

The study has found significant causal relationship between PP and all the elements of BE of the online stores. In physical stores case a large number of studies have indicated that repeated or long term use of PPs have adverse effect on some of the elements of BE (Winer, 1986 and Rahmani, Mojavery & Allahbakhsh, 2012).

However, the current study has provided a new insight that PP in case of online stores positively and significantly effects all the elements of BE. The results of the study support the view that the Online Stores may continue using repeated PP bursts to improve their sales and simultaneously improving their BE.

The study has made very important contribution in evaluating the mediating role played by PQ and BA on the contribution of PP on BL and BAsso. The study has clearly identified the significant role played by the two mediating variables, PQ and BA. Thus, the organizations that have high PQ will be able to improve BL and BAsso, while increasing its sales through price promotion. Similarly, higher BA also provides opportunity to the organization to utilize PP for sales improvement and simultaneously improve BL and BAsso.

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Tables

Table 1: Showing Reliability Analysis

S. No.	Variable Name	Cronbach's Alpha	No. of items
1	Perceived Quality	0.841	3
2	Brand Loyalty	0.792	4
3	Brand Awareness	0.813	5
4	Brand Association	0.813	3
5	Price Promotion	0.809	4

Table 2: Showing KMO and Bartlett's Test results

S. No.	Variable Name	KMO Value	Bartlett's Test	
			Chi Square Value	Sig.
1	Perceived Quality	0.726	393.374	.000
2	Brand Loyalty	0.780	368.084	.000
3	Brand Awareness	0.828	520.710	.000
4	Brand Association	0.714	327.410	.000
5	Price Promotion	0.794	407.833	.000

Table 3: Showing Indices for Model Fit

	Saturated Model	Estimated Model
SRMR	0.059	0.085
d_ULS	0.672	1.367
d_G	0.287	0.329
Chi-Square	540.640	563.976
NFI	0.917	0.909
RMS Theta		0.158

Table 4: The Outer Loadings for the Conceptual Model

	Brand Association	Brand Awareness	Brand Loyalty	Perceived Quality	Price Promotion
BA1		**0.793**			
BA2		**0.813**			
BA3		**0.775**			
BA4		**0.733**			
BA5		**0.683**			
BAA1	**0.870**				
BAA2	**0.843**				
BAA3	**0.846**				
BL1			**0.813**		
BL2			**0.812**		
BL3			**0.752**		
BL4			**0.759**		
PP1					**0.817**
PP2					**0.800**
PP3					**0.777**
PP4					**0.800**
PQ1				**0.891**	
PQ2				**0.856**	
PQ3				**0.867**	

Table 5: Showing the Composite Reliabilities

	Cronbach's Alpha	rho_A	Composite Reliability	Average Variance Extracted (AVE)
Brand Association	**0.813**	**0.814**	**0.889**	**0.728**
Brand Awareness	**0.817**	**0.818**	**0.873**	**0.579**
Brand Loyalty	**0.791**	**0.793**	**0.865**	**0.616**
Perceived Quality	**0.842**	**0.846**	**0.904**	**0.759**
Price Promotion	**0.810**	**0.811**	**0.876**	**0.638**

Table 6: Showing the Discriminant Validity (Farnell – Larker Criterion) for first Conceptual Model

	Brand Association	Brand Awareness	Brand Loyalty	Perceived Quality	Price Promotion
Brand Association	**0.853**				
Brand Awareness	0.701	**0.761**			
Brand Loyalty	0.586	0.638	**0.785**		
Perceived Quality	0.590	0.627	0.680	**0.871**	
Price Promotion	0.614	0.641	0.569	0.585	**0.799**

Table 7: Showing the t-test values for testing the strength of relationship between variables

Hypotheses	Relationship	Path Coefficients	Sample Mean	Standard Deviation	T Statistics	P Values	Remarks
H_1	**PP -> BAsso**	0.614	0.622	0.056	10.920	**0.000**	**Supported**
H_2	**PP -> BA**	0.641	0.645	0.059	10.872	**0.000**	**Supported**
H_3	**PP -> BL**	0.115	0.115	0.066	1.732	**0.084**	**Not Supported**
H_4	**PP -> PQ**	0.251	0.253	0.067	3.728	**0.000**	**Supported**
H_5	**PQ -> BL**	0.398	0.390	0.077	5.152	**0.000**	**Supported**
H_6	**BAsso -> PQ**	0.214	0.221	0.075	2.859	**0.004**	**Supported**
H_7	**BAsso -> BL**	0.117	0.123	0.067	1.737	**0.083**	**Not Supported**
H_8	**BA -> BL**	0.233	0.233	0.082	2.831	**0.005**	**Supported**
H_9	**BA -> PQ**	0.316	0.311	0.065	4.842	**0.000**	**Supported**

Fig. 1: Showing the SEM dia with PLS computations

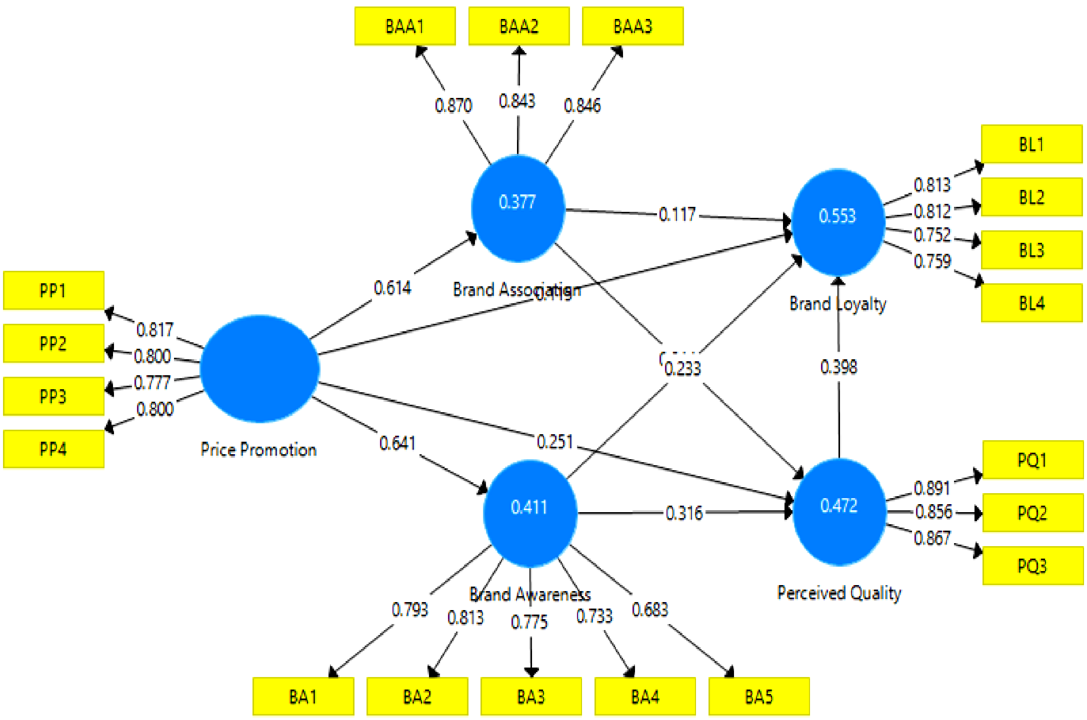
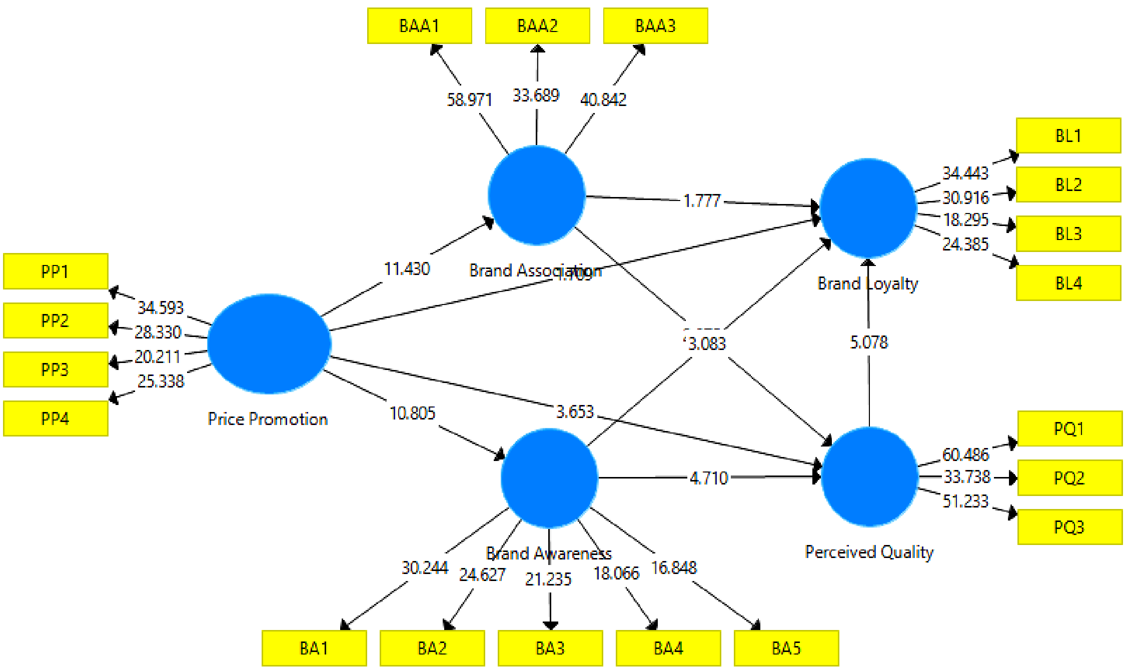


Figure 2: Showing Bootstrapped-'t' test values of the Model



A PREDICTIVE MODEL OF EXPRESSIVENESS BASED ON DEMOGRAPHIC AND SOCIO-ECONOMIC FACTORS OF THE INDIAN YOUTH: A SELF - PERCEPTION

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ABSTRACT

The objective of this research is to identify various demographic and socio-economic factors which play a role in shaping the expressive behavior of an individual, based upon their self-perception. The research methodology comprises of aclose-ended questionnaire, which records not only the demographic and socioeconomic details but also, objectively quantifies the qualitative aspects of expressiveness in an individual. Results of 220 respondentswereanalyzed usingSPSS. Thereafter, a predictive model of expressiveness was created using Regression Analysis. Considering a significance level of 10%, major findings indicate that factors like the education level, openness to the opposite gender, number of friends, family income, occupation of the mother, highest level of education attained by the father, and expression in front of a stranger are significant. Research implications suggest that schools and Institutes should design curriculums which encourage students to participate in team-building and other leadership activities in order to boost their expressiveness.

Keywords: Expressiveness, Demographic Factors, Self-Perception, Education level, Predictive Model

INTRODUCTION

The world today has multiple avenues for millennials and generation Z in terms of job prospects. There are diverse fields that an individual can explore. Among the host of opportunities prevalent in the current scenario, the youth today is oriented towards finding jobs in the technical, administrative and sales sectors, which is different from the earlier trend where the thrust was more towards finding jobs related to sectors in managerial, executive and professionally specialized areas (Ryscavage, P., 1993). Nevertheless, no matter what the preferred job sector might be, the fact remains that employees hired by organizations are sought on the basis oftheir personality, the knowledge that they carry in a particular domain, interpersonal skills and soft skills.

The objective of companies is to hire employees who are adept at improving workforce productivity, which in turn, would naturally increase productivity in the company (Winkler, S., König, C., & Kleinmann, M., 2013). In addition to this, with changes in both the nature of work and the workplace, employers today have new expectations from their employees (Morris M and Massie P., 1999). Resultantly, cognitive skills are highly valued considering the ever-changing nature of jobs. Furthermore, with the latest buzzword being "sustainability," it is imperative that employees today are flexible and adept in their attitudes. Employees being sought out need to be able to learn rapidly and possess good generic skills (Maclean and Ordonez, 2007). Companies seek individuals who would be employable for longer durations to ensure stability within the organization. This further implies that if one wants to be employable, an individual should be responsive to changing demands in the industry in terms of skill sets required for a particular job (Sanders & De Grip, Fugate et al, 2004).

With a huge emphasis on soft skills, there lies even a greater thrust on hiring employees according to their personality profile, depending on the nature of their respective jobs. For example, it would be ideal to hire extroverts, especially if the job entails interactions with the outside world. In an interview on Radio's Employability Mix, the General Manager, George Fiacchi stated that on-air personalities are generally more extroverted as compared to the administration staff who are introverted (Advertiser, The Adelaide, 8th December 2007). Extroverts have the ability to think fast and act accordingly. Other characteristics of an extrovert include being good at building networks, speaking while thinking, and generating ideas during conversations. They are good at team collaborations, generating ideas while talking and they simply adore attention given to them. It is stated that companies should prefer having face-to-face conversations with extroverts in order to collaborate on their views and ideas (Kahnweiler, J. B., 2011).

On the other hand, traits of introverts include thinking before speaking, knowing more than they project, and they happen to work well under little supervision. An interesting fact is that many researches publications state that the population is made up of 25% introverts (Edelberg, G. S., 2006).

Whether we consider traits of an extrovert or an introvert, there is a level of expressiveness involved in both. It may further be added that culture has a major role to play in individuals being either introverted or extroverted, thereby affecting their expressiveness. That is to say, low context cultures believe in open and frank communication which leads them towards extraversion. However, in high context cultures, where meaning is implied, people tend to be veered towards introversion. Nevertheless, any given culture displays fluidity between high and low contexts, depending upon the circumstances. Similarly, an individual also tends to display traits that can either be introvert or extrovert, subjectupon the circumstances. Depending upon various factors, an individual may be skewed more towards introversion or extraversion. Based on the same, it is interesting note the level of expressiveness in both cases and factors that affect it.

In current times, the role of media and social on-line platforms on the expressiveness of individuals cannot be denied. According to Mangla and Manisha (2019), media plays a strong role as far as social responsiblities of individuals are concerned. In another study by Arjun and Rai (2018), the concepts of online trolling, bullying, abuse and rampant social media trial are explored. Utpal (2017) traces the patterns of student engagement, usage and network patterns and routine activitieson Facebook. Quite clearly, social media and media also tend to affect the way individuals express themselves.

Based upon demographic and socio-economic factors, the various research questions framed to analyse expressiveness are as follows;

RQ_1: Does age of an Individual affect his/her expressive behavior?
RQ_2: Is one better able to express oneself in his/her mother tongue?
RQ_3: Does one's gender affect the expressive behavior of an individual?
RQ_4: Does the type of place one belongs to affect the expressive behavior of an individual?
RQ_5: Does the medium of Education affect the degree of expressiveness in a person?
RQ_6: Does Convent Education affect the expressive behavior of a person?
RQ_7: Does Family Composition affect the expressive behavior in an individual?
RQ_8: Do the number of siblings affect the degree of expressiveness in a person?
$RQ_{9:}$ Does the education level affect the level of expressiveness?
$RQ_{10:}$ Does openness to the opposite gender affect expressiveness?
RQ_{11}: Do the number of friendsinfluence expressiveness?
$RQ_{12:}$ Does family income affect expressiveness?
$RQ_{13:}$ Does the education level of parents have an effect on expressiveness?
$RQ_{14:}$ Can articulating in front of a stranger have an impact on expressiveness?

Primarily, the objective is to analyse an individual's basic details, family details and level of expressivess with respect to the research questions framed above. Thereafter, based on the information provided, the research proposes a predidictive model of expressiveness based on self-perception.

LITERATURE REVIEW

Before coming to the term "expressiveness," it's imperative to understand the terms "introvert and extrovert" as well. The term "introvert," according to The Cambridge University has been defined as "someone who is shy, quiet, and prefers to spend time alone rather than often being with other people.” On the other hand, the definition of an extrovert in the same dictionary has been stated as “an energetic person who enjoys being with other people: Most salespeople are extroverts.”

Further definitions are as follows; "(1) Introvert: An individual in whom exists an exaggeration of the thought processes in relation to directly observable social behavior, with an accompanying tendency to withdraw from social contacts. (2) Extrovert: An individual in whom exists a diminution of the thought processes in relation to directly observable social behavior, with an accompanying tendency to make social contacts." (Wikipedia)

Similarly, the term “expressiveness,” as defined in the Cambridge Dictionary is; “the state of showing what someone thinks or feels.” According to Kozhina, expressiveness is a “speech structure, fulfilling the communication purposes and aims at attaining the highest degree of communication effectiveness” (Kozhina, 1987). Therfore, it can be said that expressiveness is a mode of communication which enhances utterance.

Tracing the history of introverts and extroverts, they were first introduced by Carl Jung, the Swiss psychiatrist. Jung has described an introvert as person who withdraws into oneself, especially during emotionally stressful and conflicting times. Another feature of an introvert is the tendency to be shy and to work in solitude. On the other hand, in stark comparison to the introvert, the extrovert seeks others’ company during stressful times and is more sociable by nature.

Hans Eysenck’s research lists two main dimensions of personality which account for different traits among persons we come across; they are extroversion and introversion. Eysenck has described the characteristics of an introverted person as being unsociable, reserved, pessimistic, anxious and moody. On the other hand, the qualities of an extrovert are that one is sociable, optimistic, carefree and lively. (Eysenck and Eysenck, 1963).

There have been various researches which have attempted to explore the relationship between personality and the occupation that an individual opts for. According to Filer (1986), an individual’s occupational prediction should not be based upon salary but on an individual’s tastes and productive attributes. These productive attributes are inclusive of educational background, experience and personality trait which make certain individuals more suited for a particular job.

Career Needs Theory states that differences in occupation are caused by selective factors or pressures that an occupation wields upon the individual. Super and Crites have stressed upon the importance of understanding personality and its influence on an individual’s vocational choice. According to them, “every individual has certain abilities, interests, personality traits, and other characteristics which, if he/she knows them and their potential value, will make him/her a happier man/woman, a more effective worker, and a more useful citizen.” (Super and Crites, 1962)

There have been various other researches which have investigated factors affecting introversion and extraversion. According to Vidhu Mohan and Dalip Kumar (1976), their research on “The Qualitative Analysis of the Performance of Introverts and Extroverts on Standard Progressive Matrices” points towards the initial superiority of extroverts over introverts. Interestingly, the research further proved that with increased time duration and increased level of difficulty, introverts showed better performance.

Eysenck (1967) has clearly stated that difference in the intellect of an individual might be based upon personality dimensions of Extraversion/Introversion (E/I) and Neuroticism (N). Nevertheless, the relation between E/I and intelligence is found to be linear and negative (Lynn & Gordon, 1961; Child, 1964; Madan, 1967; Eysenck, 1967). Resultantly, introverts opt for accuracy whereas, speed is opted for by extroverts. In addition to this, extraversion is significantly related to entrepreneurial potential (R. Zeffane, 2013).

It is on the basis of personality traits that organizations today seek people who would fit into their culture and add value to it. Therefore, it is not just conceptual knowledge which is sought after but also interpersonal skills and passion for a given job profile. To get the perfect fit, as far as passion is concerned, companies should hire people on the basis of "Big Five" This is a statistical technique which began in 90's. It is based on factor analysis. These five factors have developed from careful "meta-analyses" (McCrae & Costa., 2002) and have stood true to various cultures and countries. They are the universals of personality and they include; Extraversion vs. Introversion, Conscientiousness vs. Un-directedness, Agreeableness vs. Antagonism, Emotional Stability vs. Neuroticism and Openness vs. Closed to Experience

The big five are used majorly in professional development and testing. Based on the above, while an extrovert would want to work with others and social activities, an introvert would prefer sticking around in one corner and working alone in a quiet environment.
Further research conducted in this regard is with specific reference to social media. This is considering the fact that we live in a hyper-mediated world around us and that youth today is highly active on the social media. In fact, the manner in which introverts present themselves on-line is way different from extroverts. As it is, introverts present their "real-selves" online whereas extroverts present their "real-side" through traditional and social interaction (Mary Ann Liebert, Inc., 2002).

With such a close link between an individual's personality trait and job occupation, Management Institutes across the globe aim at identifying personalities of an individual and specifically counselling students on the jobs that they should take up in the future. The aim is to identify and match students on the basis of their personality profile to a job best suited for them. Resultantly, there are a host of electives which management institutes offer today to cater to a vista of opportunities in various industries across all sectors.

It cannot be denied that there is a direct link between the personality of the individual and his/her impact on the working style and his/ her performance. Interestingly, many researches establish a relation between the student and his/ her academic performance, choice of electives and that of career (Tett et al., 1991; and Singh, 1994). Therefore, an analysis of familial, demographic and socio-economic factors which contribute to expressiveness in an individual can not only aid managerial students into the kind of job that they should opt for, but also give an insight to soft skill trainers, career counsellors and psychologists in selecting and adopting appropriate training techniques thereby facilitating students acquire the required skill sets for a specific job.

OBJECTIVE OF RESEARCH

The aim of this paper is to chalk out factors that influence expressiveness in the Indian youth of today with specific reference to the family, demographics and socioeconomics. The factors taken into account include the role of family, upbringing, education and expressiveness in terms of social media. The idea is to understand major contributors as far as expressiveness is concerned and predict a model for the same.

Since this paper explores the familial aspect and its effect on Indian youth as far as expressiveness is concerned, it would be ideal to understand the family composition of the Indian community. Indians, by far, have always been a people who have thrived in communities. The Indian society is one which is both collectivistic and interdependent (Chadda RK, Deb KS, 2013). In addition to this, it promotes social cohesion (Chadda RK, Deb KS, 2013). Collectivism has been defined as "a sense of harmony, interdependence and concern for others" (C. Hui and H. Triandis, 1985). Tracing back yesteryears, the concept, as far as families were concerned, used to be that of a joint one. The idea behind joint families was quite simple; a large group of people who belong to a similar bloodline, living together to give each other support and care. India is majorly a patriarchal society (barring a few regions in the South). In it, the head of the family, who is a male, is responsible for the well-being of all and is also "the" decision maker. Obviously, children who are born and bred in joint families have rules to adhere to along with prescribed codes of conduct. There is a code of conduct meant for each and every member of the household. For example, while females are bearers of offspring, their key responsibility is raising children, both their own and of others in the family, while also taking care of the kitchen. In earlier days, there used to be one kitchen in which food used to be cooked for many members. The males had to take care of errands outside the four walls of the home. This entailed farming, merchandising or running business.

Now, children in these families had their perspectives built on what they saw and what they heard. Furthermore, it was considered bad manners to speak when elders were in conversation. Obviously, it can be safely concluded that these traits had an impact on their overall personality. Resultantly, it can be inferred that children belonging to joint families were less expressive unless they belonged to the younger lot, where one could get away with whatever they said or did, on grounds of being the youngest.

However, the current trend of the Indian family scenario centers on the nuclear pattern. Furthermore, as compared to earlier times, around a decade back, a nuclear family consisted of the mother, father and two kids. Today, however, the nuclear family comprises of the mother, the father and single child. In addition to this, with the rise in urban cities and metros, there also happens to be a rise in the number of divorces which results in a higher number of single parents. Resultantly, this new structure is giving rise to a generation which has a different way of processing information and expressing it. This can majorly be contributed to the rise of social media and the ever-increasing usage of cell phones, embedded with a plethora of apps. Ideally, if children today above the age of 25are able to express themselves freely, both on-line and off-line, they should be more expressive in terms of personality. In addition to the family, there are external factors may influence expressiveness in an individual. These include demographic and socio-economic factors. The aim of this paper is to identifythe factors which affect youngsters and draw attention to factors affecting expressiveness therein. Thereafter, the paper proposes a predictive model of expressiveness.

METHODOLOGY

For this research, a Google document with close-ended questions was shared with students belonging to five Institutes in Uttar Pradesh and Mumbai. There was a total of 220 respondents for the same. All the respondents had filled the questionnaire in totality. Therefore, there were no invalid responses.

The questionnaire focused on various parameters in order to understand factors affecting expressiveness. It was divided into three sections, wherein the first section focused on basic information which included the individual's age, gender, background, level of education, medium of education, religion, community and the number of close friends.

The second portion of the questionnaire aimed at understanding the individual's family background. Questions in this section focused on the annual income in the family, the occupation of the father and his highest degree, the occupation of the mother and her highest degree, the family composition and number of siblings.

The third and final section was based on expressiveness of the individual based on self-perception, on a Likert scale of five wherein one was the least and five, the maximum. The respondent stated whether he/ she is able to express views freely in front of a stranger, is comfortable discussing sensitive issues with parents, friends and members of the opposite gender, the level of expressiveness on social/ digital platforms, on a one-to-one level, level expressiveness in front of the mother and before an audience which is biased and whether the individual thinks of himself/ herself as an introvert or an extrovert. There were only two questions in this section which were based on a simple "yes" or "no." The questions were; whether or not the person has been a) sexually harassed or b) bullied in their lifetime.

RESULTS AND DISCUSSION

On the basis of the above questionnaire, results of all 220 respondents were run through SPSS. In addition to this, regression was applied on certain factors.

Furthermore, the advanced phase of the research is based on identifying some of the factors which might affect the degree of expression in an individual using predictive tools on SPSS software.

Regression technique is used on the said data where the degree of expression is taken as a dependent variable and a linear model has been created using the various other factors, like age, location, gender, income etc., as the independent variables. The following equation is proposed;

$E=\beta_0+\beta_1x_1+\beta_2x_2+\beta_3x_3+\cdots+\beta_nx_n+e$

The above-mentioned equation tries to make a linear model which is able to predict the factors affecting Expression / Expressiveness of an individual. Where 'E' stands for the level or degree of Expression of an individual. 'β_0' is the constant, 'β_1' is the unstandardized coefficient for the factor 'x_1.' Similarly, 'β_2' is the unstandardized coefficient for the factor 'x_2.' Progressively, 'β_n' is the unstandardized coefficient of the 'n_{th}' factor (x_n) is taken into consideration.

At first, dummy variables were created for the categorical variables (Annexure A). Thereafter, the Descriptive Statistics of the data was listed. It is as follows;

The Descriptive statistics gives us the following information;

Majority of the respondents belong to an age group of 18-22 followed by 22-25, are males, belong to an urban setting, are well educated (45% postgraduates, 34% graduates), and are educated in the English medium. 55% of the respondents have been educated in a Convent School (92%). Around 43% respondents have 2-5 close friends. The major chunk of respondents belongs to below 5 lakh annual income group (35%), 5-8 lakh annual income group (28.18%). 52% of the participants have their fathers working in a salaried job. However, when it comes to mothers, 85% of the respondents have their mothers as Home-Makers. The majority of responders have their father's highest educational qualification as graduates (53%) and so is it the case with Mother's highest education (47%). It is strange that majority of the mothers who are well educated in the Indian subcontinent prefer giving huge importance to their roles as a homemaker in the family and they give up their careers and other ambitions.

Most of the respondents have been bred in a nuclear family setting. Majority of the respondents have 1-2 siblings, have neither been bullied in their lives, nor have faced any form of harassment. In addition to this, majority of the respondents seem comfortable in expressing themselves, apart from discussing the sensitive issues like sexual life, puberty and periods with their parents, where the mean is relatively low (3.07).

The R square and Adjusted R square values are 0.415 and 0.280, respectively. The Durbin Watson is 2.117 signifying the absence of autocorrelation in the residuals.

Descriptive Statistics

	Mean	Std. Deviation	N
Do you consider yourself as an ExtrovertorIntrovert	3.17	1.104	220
I am able to expressmyviewsfreelyinfrontofastranger	3.16	1.161	220
IamcomfortablediscussingsensitiveissueslikePeriod/ Puberty	3.07	1.346	220
IcanfreelydiscusssensitiveissueslikePeriod /Pubertyissues	3.81	1.209	220
Iaminclinedtoexpressmyselffreelyonadigitalplatform	3.37	1.193	220
Iamcomfortableinexpressingthesameideas in person	3.83	1.035	220
Iamcomfortableinopeninguporspeakingmymindinfront of others	3.88	1.015	220
IamabletoexpressmyselfbetterinmyMotherTongue	4.03	1.040	220
IamunabletoexpressmyselfbecauseIthink about others	2.69	1.149	220
IamcomfortablehavingconversationswithmyFamilyregarding sensitive issues	3.57	1.205	220
Age=18-22	.4318	.49646	220
Age=22-25	.3409	.47510	220
Age=Above 25	.2000	.40091	220
Age=Below 18	.0273	.16325	220
Gender=Female	.3227	.46859	220
Gender=Male	.6773	.46859	220
Whichtypeofplacedoyoubelongto=Metro	.2682	.44402	220
Whichtypeofplacedoyoubelongto=Rural	.1182	.32356	220

	Mean	Std. Deviation	N
Whichtypeofplacedoyoubelongto=Urban	.6136	.48803	220
WhatisthehighestlevelofEducationattainedbyyou=Graduate	.3409	.47510	220
WhatisthehighestlevelofEducationattainedbyyou=High School	.2091	.40759	220
WhatisthehighestlevelofEducationattainedbyyou=Postgraduate	.4500	.49863	220
WhathasbeenthemediumofEducationpursuedbyyou=English Medium	.9273	.26028	220
WhathasbeenthemediumofEducationpursuedbyyou=Hindi Medium	.0727	.26028	220
HaveyoueverbeeneducatedinaConventSchool=No	.4500	.49863	220
HaveyoueverbeeneducatedinaConventSchool=Yes	.5500	.49863	220
Howmanyclosefriendsdoyouhavewhomyoucanconfidein=0-2	.3455	.47660	220
Howmanyclosefriendsdoyouhavewhomyoucanconfidein =2-5	.4364	.49706	220
Howmanyclosefriendsdoyouhavewhomyoucanconfidein =More than 5	.2182	.41395	220
Whatisyourannualhouseholdincome=5-8 lakh p.a.	.2818	.45091	220
Whatisyourannualhouseholdincome=8-10 lakh p.a.	.1318	.33906	220
Whatisyourannualhouseholdincome=Above 10 lakh p.a.	.2318	.42296	220
Whatisyourannualhouseholdincome=Below 5 lakh p.a.	.3545	.47947	220
WhatistheoccupationofyourFather=Businessman (Shops/Restaurant/Factory/Plant/Other Family Businesses etc)	.3955	.49006	220
WhatistheoccupationofyourFather=Salaried (Banks/State Services/ Central Government/RBI/Police/Professor/Bureaucrat/Corporate/ Private etc)	.5273	.50039	220
WhatistheoccupationofyourFather=Self Employed (Engineer/Doctor/Chartered Accountant/Free Lancer/ etc)	.0773	.26763	220
WhatistheoccupationofyourMother=Businesswoman (Shops/Restaurant/Factory/Plant/Other Family Businesses etc)	.0182	.13391	220
WhatistheoccupationofyourMother=Homemaker	.8545	.35336	220
WhatistheoccupationofyourMother=Salaried (Banks/State Services/ Central Government/RBI/Police/Professor/Bureaucrat/Corporate/ Private etc)	.1045	.30666	220
WhatistheoccupationofyourMother=Self Employed (Engineer/Doctor/Chartered Accountant/Free Lancer/ etc)	.0227	.14937	220
WhatisthehighestEducationofyourFather=Graduate	.5364	.49981	220
WhatisthehighestEducationofyourFather=High School	.1818	.38657	220
WhatisthehighestEducationofyourFather=Phd	.0182	.13391	220
WhatisthehighestEducationofyourFather=Postgraduate	.1682	.37488	220
WhatisthehighestEducationofyourFather=Professional Course (Engineering/MBBS/MS/CA/MCA/MBA etc)	.0955	.29451	220
WhatisthehighestEducationofyourMother=Graduate	.4727	.50039	220
WhatisthehighestEducationofyourMother=High School	.2955	.45729	220
WhatisthehighestEducationofyourMother=Phd	.0136	.11624	220
WhatisthehighestEducationofyourMother=Postgraduate	.2182	.41395	220
WhattypeofFamilyCompositiondoyoubelongto=Joint Family	.3455	.47660	220
WhattypeofFamilyCompositiondoyoubelongto=Nuclear Family	.6545	.47660	220
HowmanySiblingsdoyouhave=1-2	.6727	.47029	220
HowmanySiblingsdoyouhave=More than 2	.2136	.41081	220
HowmanySiblingsdoyouhave=None (you are the single child of your parents)	.1136	.31809	220
HaveyoueverfacedanyformofharassmentinyourlifeSexual=No	.6000	.49102	220
HaveyoueverfacedanyformofharassmentinyourlifeSexual=Yes	.4000	.49102	220
WereyoueverbulliedbyanyoneduringyourSchoolorCollegedays=No	.6273	.48463	220
WereyoueverbulliedbyanyoneduringyourSchoolorCollegedays=Yes	.3727	.48463	220

Excluded Variables[a]

Model		Beta In	t	Sig.	Partial Correlation	Collinearity Statistics		
						Tolerance	VIF	Minimum Tolerance
1	Age=18-22	.[b]	.	.	.	.000	.	.000
	Gender=Female	.[b]	.	.	.	.000	.	.000
	Whichtypeofplacedoyoubelongto=Urban	.[b]	.	.	.	.000	.	.000
	WhatisthehighestlevelofEducationattainedbyyou=Post Graduate	.[b]	.	.	.	.000	.	.000
	WhathasbeenthemediumofEducationpursuedbyyou=Hindi Medium	.[b]	.	.	.	.000	.	.000
	HaveyoueverbeeneducatedinaConventSchool=No	.[b]	.	.	.	.000	.	.000
	Howmanyclosefriendsdoyouhavewhomyoucanconfidein=02-May	.[b]	.	.	.	.000	.	.000
	Whatisyourannualhouseholdincome=Below 5 lakh p.a.	.[b]	.	.	.	.000	.	.000
	WhatistheoccupationofyourFather=Salaried (Banks/State Services/ Central Government/RBI/Police/Professor/Bureaucrat/Corporate/Private etc)	.[b]	.	.	.	.000	.	.000
	WhatistheoccupationofyourMother=Home-maker	.[b]	.	.	.	.000	.	.000
	WhatisthehighestEducationofyourFather=High School	.[b]	.	.	.	.000	.	.000
	WhatisthehighestEducationofyourMother=Graduate	.[b]	.	.	.	.000	.	.000
	WhattypeofFamilyCompositiondoyoubelongto=Joint Family	.[b]	.	.	.	.000	.	.000
	HowmanySiblingsdoyouhave=More than 2	.[b]	.	.	.	.000	.	.000
	HaveyoueverfacedanyformofharassmentinyourlifeSexual=No	.[b]	.	.	.	.000	.	.000
	WereyoueverbulliedbyanyoneduringyourSchoolorCollegeda=No	.[b]	.	.	.	.000	.	.000

a. Dependent Variable: DoyouconsideryourselfasanExtrovertorIntrovert

b. Predictors in the Model: (Constant), WereyoueverbulliedbyanyoneduringyourSchoolorCollegeda=Yes, IamunabletoexpressmyselfbecauseIthinkthatothersAudien, IamabletoexpressmyselfbetterinmyMotherTongue, HaveyoueverbeeneducatedinaConventSchool=Yes, IamcomfortablediscussingsensitiveissueslikePeriodPuberty, WhatisthehighestEducationofyourMother=Post Graduate, WhatistheoccupationofyourMother=Businessman (Shops/Restaurant/Factory/Plant/Other Family Businesses etc), Age=Below 18, Howmanyclosefriendsdoyouhavewhomyoucanconfidein=More than 5, WhatisthehighestlevelofEducationattainedbyyou=Graduate, WhatisthehighestEducationofyourFather=Graduate, HowmanySiblingsdoyouhave=01-Feb, Whatisyourannualhouseholdincome=5-8 lakh p.a., WhatistheoccupationofyourFather=Self Employed (Engineer/Doctor/Chartered Accountant/Free Lancer/ etc), WhatisthehighestEducationofyourFather=Phd, WhattypeofFamilyCompositiondoyoubelongto=Nuclear Family, Gender=Male, Whichtypeofplacedoyoubelongto=Metro, WhatistheoccupationofyourMother=Self Employed (Engineer/Doctor/Chartered Accountant/Free Lancer/ etc), Whatisyourannualhouseholdincome=8-10 lakh p.a., Age=22-25, Iaminclinedtoexpressmyselffreelyonadigitalplatformlik, WhathasbeenthemediumofEducationpursuedbyyou=English Medium, WhatistheoccupationofyourMother=Salaried (Banks/State Services/ Central Government/RBI/Police/Professor/Bureaucrat/Corporate/Private etc), Iamabletoexpressmyviewsfreelyinfrontofastranger, Howmanyclosefriendsdoyouhavewhomyoucanconfidein=0-2, WhatisthehighestEducationofyourMother=Phd, WhatisthehighestEducationofyourFather=Professional Course (Engineering/MBBS/MS/CA/MCA/MBA etc), HaveyoueverfacedanyformofharassmentinyourlifeSexual=Yes, WhatistheoccupationofyourFather=Businessman (Shops/Restaurant/Factory/Plant/Other Family Businesses etc), Whichtypeofplacedoyoubelongto=Rural, Iamcomfortableinopeninguporspeakingmymindinfrontoft, Whatisyourannualhouseholdincome=Above 10 lakh p.a., HowmanySiblingsdoyouhave=None (you are the single child of your parents), IamcomfortablehavingconversationswithmyFamilyregardingi, IcanfreelydiscusssensitiveissueslikePeriodPubertyissues, WhatisthehighestEducationofyourMother=High School, WhatisthehighestlevelofEducationattainedbyyou=High School, IamcomfortableinexpressingthesameideasWhichicanexpre, Age=Above 25, WhatisthehighestEducationofyourFather=Post Graduate

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.644[a]	.415	.280	.936	.415	3.079	41	178	.000	2.117

a. Predictors: (Constant), WereyoueverbulliedbyanyoneduringyourSchoolorCollegeda=Yes, IamunabletoexpressmyselfbecauseIthinkthatothersAudien, IamabletoexpressmyselfbetterinmyMotherTongue, HaveyoueverbeeneducatedinaConventSchool=Yes, IamcomfortablediscussingsensitiveissueslikePeriodPuberty, WhatisthehighestEducationofyourMother=Post Graduate, WhatistheoccupationofyourMother=Businessman (Shops/Restaurant/Factory/Plant/Other Family Businesses etc), Age=Below 18, Howmanyclosefriendsdoyouhavewhomyoucanconfidein=More than 5, WhatisthehighestlevelofEducationattainedbyyou=Graduate, WhatisthehighestEducationofyourFather=Graduate, HowmanySiblingsdoyouhave=01-Feb, Whatisyourannualhouseholdincome=5-8 lakh p.a., WhatistheoccupationofyourFather=Self Employed (Engineer/Doctor/Chartered Accountant/Free Lancer/ etc), WhatisthehighestEducationofyourFather=Phd, WhattypeofFamilyCompositiondoyoubelongto=Nuclear Family, Gender=Male, Whichtypeofplacedoyoubelongto=Metro, WhatistheoccupationofyourMother=Self Employed (Engineer/Doctor/Chartered Accountant/Free Lancer/ etc), Whatisyourannualhouseholdincome=8-10 lakh p.a., Age=22-25, Iaminclinedtoexpressmyselffreelyonadigitalplatformlik, WhathasbeenthemediumofEducationpursuedbyyou=English Medium, WhatistheoccupationofyourMother=Salaried (Banks/State Services/ Central Government/RBI/Police/Professor/Bureaucrat/Corporate/Private etc), Iamabletoexpressmyviewsfreelyinfrontofastranger, Howmanyclosefriendsdoyouhavewhomyoucanconfidein=0-2, WhatisthehighestEducationofyourMother=Phd, WhatisthehighestEducationofyourFather=Professional Course (Engineering/MBBS/MS/CA/MCA/MBA etc), HaveyoueverfacedanyformofharassmentinyourlifeSexual=Yes, WhatistheoccupationofyourFather=Businessman (Shops/Restaurant/Factory/Plant/Other Family Businesses etc), Whichtypeofplacedoyoubelongto=Rural, Iamcomfortableinopeninguporspeakingmymindinfrontoft, Whatisyourannualhouseholdincome=Above 10 lakh p.a., HowmanySiblingsdoyouhave=None (you are the single child of your parents), IamcomfortablehavingconversationswithmyFamilyregardingi, IcanfreelydiscusssensitiveissueslikePeriodPubertyissues, WhatisthehighestEducationofyourMother=High School, WhatisthehighestlevelofEducationattainedbyyou=High School, IamcomfortableinexpressingthesameideasWhichicanexpre, Age=Above 25, WhatisthehighestEducationofyourFather=Post Graduate

b. Dependent Variable: DoyouconsideryourselfasanExtrovertorIntrovert

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	110.701	41	2.700	3.079	.000[b]
	Residual	156.076	178	.877		
	Total	266.777	219			

a. Dependent Variable: DoyouconsideryourselfasanExtrovertorIntrovert

b. Predictors: (Constant), WereyoueverbulliedbyanyoneduringyourSchoolorCollegeda=Yes, IamunabletoexpressmyselfbecauseIthinkthatothersAudien, IamabletoexpressmyselfbetterinmyMotherTongue, HaveyoueverbeeneducatedinaConventSchool=Yes, IamcomfortablediscussingsensitiveissueslikePeriodPuberty, WhatisthehighestEducationofyourMother=Post Graduate, WhatistheoccupationofyourMother=Businessman (Shops/Restaurant/Factory/Plant/Other Family Businesses etc), Age=Below 18, Howmanyclosefriendsdoyouhavewhomyoucanconfidein=More than 5, WhatisthehighestlevelofEducationattainedbyyou=Graduate, WhatisthehighestEducationofyourFather=Graduate, HowmanySiblingsdoyouhave=01-Feb, Whatisyourannualhouseholdincome=5-8 lakh p.a., WhatistheoccupationofyourFather=Self Employed (Engineer/Doctor/Chartered Accountant/Free Lancer/ etc), WhatisthehighestEducationofyourFather=Phd, WhattypeofFamilyCompositiondoyoubelongto=Nuclear Family, Gender=Male, Whichtypeofplacedoyoubelongto=Metro, WhatistheoccupationofyourMother=Self Employed (Engineer/Doctor/Chartered Accountant/Free Lancer/ etc), Whatisyourannualhouseholdincome=8-10 lakh p.a., Age=22-25, Iaminclinedtoexpressmyselffreelyonadigitalplatformlik, WhathasbeenthemediumofEducationpursuedbyyou=English Medium, WhatistheoccupationofyourMother=Salaried (Banks/State Services/ Central Government/RBI/Police/Professor/Bureaucrat/Corporate/Private etc), Iamabletoexpressmyviewsfreelyinfrontofastranger, Howmanyclosefriendsdoyouhavewhomyoucanconfidein=0-2, WhatisthehighestEducationofyourMother=Phd, WhatisthehighestEducationofyourFather=Professional Course (Engineering/MBBS/MS/CA/MCA/MBA etc), HaveyoueverfacedanyformofharassmentinyourlifeSexual=Yes, WhatistheoccupationofyourFather=Businessman (Shops/Restaurant/Factory/Plant/Other Family Businesses etc), Whichtypeofplacedoyoubelongto=Rural, Iamcomfortableinopeninguporspeakingmymindinfrontoft, Whatisyourannualhouseholdincome=Above 10 lakh p.a., HowmanySiblingsdoyouhave=None (you are the single child of your parents), IamcomfortablehavingconversationswithmyFamilyregardingi, IcanfreelydiscusssensitiveissueslikePeriodPubertyissues, WhatisthehighestEducationofyourMother=High School, WhatisthehighestlevelofEducationattainedbyyou=High School, IamcomfortableinexpressingthesameideasWhichicanexpre, Age=Above 25, WhatisthehighestEducationofyourFather=Post Graduate

There are some variables which have been exclued from the analysis with the tolerance = 0, since these variables can be perfectly predicted from one or the other independent variables. These variables are listed in the excluded variables table below and are as follows;

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.546	.711		3.580	.000
	Iamabletoexpressmyviewsfreelyinfrontofastranger	.301	.069	.317	4.360	.000
	IamcomfortablediscussingsensitiveissueslikePeriodPuberty	.021	.066	.025	.315	.753
	IcanfreelydiscusssensitiveissueslikePeriodPubertyissues	.108	.073	.118	1.465	.145
	Iaminclinedtoexpressmyselffreelyonadigitalplatform	-.067	.068	-.073	-.984	.326
	IamcomfortableinexpressingthesameideasWhich I canexpress digitally	-.019	.093	-.018	-.208	.836
	Iamcomfortableinopeninguporspeakingmymindinfrontofthe opposite gender	.171	.089	.158	1.919	.057
	IamabletoexpressmyselfbetterinmyMotherTongue	-.041	.071	-.039	-.579	.564
	IamunabletoexpressmyselfbecauseIthinkthatothersAudience might not like my thoughts	-.093	.065	-.097	-1.440	.152
	IamcomfortablehavingconversationswithmyFamilyregardingissues which shook nation like Nirbhaya	.001	.074	.001	.010	.992
	Age=22-25	-.287	.188	-.124	-1.523	.130
	Age=Above 25	-.387	.260	-.140	-1.486	.139
	Age=Below 18	-.056	.430	-.008	-.129	.897
	Gender=Male	-.013	.161	-.005	-.079	.937
	Whichtypeofplacedoyoubelongto=Metro	-.037	.166	-.015	-.223	.824
	Whichtypeofplacedoyoubelongto=Rural	.412	.266	.121	1.549	.123
	WhatisthehighestlevelofEducation attained byyou=Graduate	-.316	.178	-.136	-1.771	.078
	WhatisthehighestlevelofEducationattainedbyyou=High School	-.517	.249	-.191	-2.077	.039
	WhathasbeenthemediumofEducationpursuedbyyou=English Medium	.322	.296	.076	1.085	.279
	HaveyoueverbeeneducatedinaConventSchool=Yes	.130	.144	.059	.899	.370
	Howmanyclosefriendsdoyouhavewhomyoucanconfidein=0-2	-.252	.167	-.109	-1.508	.133
	Howmanyclosefriendsdoyouhavewhomyoucanconfidein=More than 5	.304	.179	.114	1.699	.091
	Whatisyourannualhouseholdincome=5-8 lakh p.a.	-.359	.185	-.147	-1.937	.054
	Whatisyourannualhouseholdincome=8-10 lakh p.a.	-.292	.245	-.090	-1.193	.235
	Whatisyourannualhouseholdincome=Above 10 lakh p.a.	.209	.215	.080	.972	.332
	WhatistheoccupationofyourFather=Businessman (Shops/Restaurant/Factory/Plant/Other Family Businesses etc)	-.249	.168	-.110	-1.481	.141
	WhatistheoccupationofyourFather=Self Employed (Engineer/ Doctor/ Chartered Accountant/Free Lancer/ etc)	.194	.284	.047	.682	.496
	WhatistheoccupationofyourMother=Businessman (Shops/Restaurant/Factory/Plant/Other Family Businesses etc)	-.251	.546	-.030	-.458	.647
	WhatistheoccupationofyourMother=Salaried (Banks/State Services/ Central Government/RBI/Police/Professor/Bureaucrat/ Corporate/Private etc)	-.559	.242	-.155	-2.313	.022
	WhatistheoccupationofyourMother=Self Employed (Engineer/Doctor/Chartered Accountant/Free Lancer/ etc)	-.491	.471	-.066	-1.041	.299
	WhatisthehighestEducationofyourFather=Graduate	-.207	.233	-.094	-.888	.375
	WhatisthehighestEducationofyourFather=PhD	-.203	.597	-.025	-.339	.735
	WhatisthehighestEducationofyourFather=PostGraduate	-.411	.280	-.140	-1.467	.144
	WhatisthehighestEducationofyourFather=Professional Course (Engineering/MBBS/MS/CA/MCA/MBA etc)	-.554	.324	-.148	-1.709	.089
	WhatisthehighestEducationofyourMother=High School	-.230	.219	-.095	-1.049	.296
	WhatisthehighestEducationofyourMother=PhD	.693	.659	.073	1.051	.295
	WhatisthehighestEducationofyourMother=PostGraduate	-.311	.192	-.117	-1.625	.106
	WhattypeofFamilyCompositiondoyoubelongto=Nuclear Family	-.200	.153	-.086	-1.302	.195
	HowmanySiblingsdoyouhave=01-Feb	.073	.189	.031	.385	.700
	HowmanySiblingsdoyouhave=None (you are the single child of your parents)	.073	.279	.021	.261	.795
	HaveyoueverfacedanyformofharassmentinyourlifeSexual=Yes	-.198	.162	-.088	-1.223	.223
	WereyoueverbulliedbyanyoneduringyourSchoolorCollegedays=Yes	.069	.155	.030	.444	.658

With reference to the results above and research questions framed in the Introduction section, we have the followingoutputs:

RQ_1: Does age of an Individual affect his/her expressive behavior? No

RQ_2: Is one better able to express oneself in his/her mother tongue? No

RQ$_3$: Does one's gender affect the expressive behavior of an individual? No
RQ$_4$: Does the type of place one belongs to affect the expressive behavior of an individual? No
RQ$_5$: Does the medium of Education affect the degree of expressiveness in a person? No
RQ$_6$: Does Convent Education affect the expressive behavior of a person? No
RQ$_7$: Does Family Composition affect the expressive behavior in an individual? No
RQ$_8$: Do the number of siblings affect the degree of expressiveness in a person? No
RQ$_{9:}$ Does the education level affect the level of expressiveness? Yes
RQ$_{10:}$ Does openness to the opposite gender affect expressiveness? Yes
RQ $_{11}$: Do the Number of friends influence Expressiveness? Yes
RQ $_{12:}$ Does family income affect expressiveness? Yes
RQ $_{13:}$ Does the education level of parents have an effect on expressiveness? Yes
RQ $_{14:}$ Can articulating in front of a stranger have an impact on expressiveness? Yes

That is to say, contrary to many myths and beliefs, demographic factors, the mother tongue, etc. do not affect the expressiveness of an individual. The predictive model does not consider these factors as significant. Furthermore, considering the significance of 'α' to the level of 10% or 0.10, the following factors are significant;

1. Whether an individual is able to express himself in front of a stranger.
2. If an individual is comfortable in opening up or speaking his/ her mind in front of the opposite gender.
3. Where the highest Educational qualification is Graduation.
4. Where the highest Educational qualification is High School.
5. People who have more than 5 friends in whom one can confide in.
6. People with household family income between 5-8 lakhs per annum.
7. Where the Mother is employed in a salaried job.
8. Where the father has highest Education as a professional course like Engineering/ MBBS/CA/MBA etc.

On taking into account the coefficients of factors which have shown significance through analysis, we have the following output:

It can be seen that none of the coefficients are greater than 1 or less than -1. This is suggestive that there are many factors which affect an individual's expressiveness, depending upon the various experiences which s/he might have faced in his/her life. This includes the type of surroundings where one has grown up during early childhood days. In addition to this, there are some factors which affect expressiveness such as the number of friends one has (which has a positive Coefficient of 0.304), expression in front of a stranger(0.301), expression in front of the opposite gender(0.171), Highest Educational Qualification of Graduate(-0.316) and High School(-0.517), Household income between 5-8 lakhs p.a.(-0.359), Mother is employed in a salaried job(-0.559) and Highest education of father is a Professional degree course like Engineering/MBBS/CA/MBA etc. (-0.554)

CONCLUSION/ IMPLICATIONS

Based on the above results, points which can be concluded from the predictive model of expressiveness are as follows;

i) Friendship is definitely a strong bond which boosts expressive in an individual. Friendship is also one of the pillars of Social Development since it gives more emphasis to relationships which a person makes during one's lifetime rather than the relationships with which one is born with. Having said this, the first friend which a person gets during the journey of life is one's sibling. It is often seen that siblings develop a better bond between themselves which leads to better expression in an individual. This is also proved by the model where the highest Coefficient of 0.545 has been given to the number of siblings. The number of siblings is positively and directly proportional in the Model.
ii) Expressing one's views in front of a stranger makes an individual more confident. In this highly competitive world, it is necessary to convey the right meaning to the right person without any ambiguity. Therefore, Schools, Colleges, Managerial Institutes and Universities should lay more emphasis on speaking in front of a crowd. This can be done by

building a robust curriculum which focusses on activities that promote expressiveness. At Jaipuria Institute of Management, presentations are encouraged in front of peer groups through project presentations. This forms a valuable part of the final assessment of a student throughout the program. It can be advised to the Ministry of Human Resource and Development, Government of India, to replicate this Model throughout the country in order to make India a Service Exporter to the World and also a Skilled Manpower exporter.

iii) It is also observed that the social structure in the country doesn't allow students of opposite genders to intermingle. This is specifically true in Tier II and Tier III cities. This has huge impact on the expressive behaviour of an individual. The participation of women in higher education needs to be boosted. This factor has a positive impact on the degree of expressiveness, as is shown in the results.. In general, with reference to the SDGs, huge emphasis should be laid upon on the education and participation of females in the workforce of the country.

LIMITATIONS AND SCOPE OF FUTURE STUDY

Since the sample size was not big enough to study the influence of factors affecting expressiveness based on geography that is, state-wise, further studies may be conducted to analyse the same. A greater geographical area would aid in understanding the impact of socio-cultural and religious factors on expressiveness. The above findings are preliminary which can be explored in depth and be validated. The idea is to understand the impact of demography, socio-economics and the family on the expressive behaviour ofan individual.In addition to this, the behaviour of an individual is shaped by many factors which are difficult to quantify objectively. Hence, predicting the exact behaviour might be difficult with the present technical expertise but maybe in future, humanity may reach the technical zenith to do so.

Annexure A
Variable Creation

	Label
Age_1	Age=18-22
Age_2	Age=22-25
Age_3	Age=Above 25
Age_4	Age=Below 18
Gender_5	Gender=Female
Gender_6	Gender=Male
Place_7	Which type of place do you belong to=Metro
Place_8	Which type of place do you belong to=Rural
Place_9	Which type of place do you belong to=Urban
EducationLevel_10	What is the highest level of Education attained by you=Graduate
EducationLevel_11	What is the highest level of Education attained by you=High School
EducationLevel_12	What is the highest level of Education attained by you=Post Graduate
EducationMedium_13	What has been the medium of Education pursued by you=English Medium
EducationMedium_14	What has been the medium of Education pursued by you=Hindi Medium
ConventEdu_15	Have you ever been educated in a Convent School=No
ConventEdu_16	Have you ever been educated in a Convent School=Yes
CloseFriends_17	How many close friends do you have whom you can confide in=0-2
CloseFriends_18	How many close friends do you have whom you can confide in=2-5
CloseFriends_19	How many close friends do you have whom you can confide in=More than 5
Income_20	What is your annual house hold income=5-8 lakh p.a.
Income_21	What is your annual house hold income=8-10 lakh p.a.
Income_22	What is your annual house-hold income=Above 10 lakh p.a.
Income_23	What is your annual household income=Below 5 lakh p.a.

FatherOccupation_24	What is the occupation of your Father=Businessman (Shops/Restaurant/Factory/Plant/Other Family Businesses etc)
FatherOccupation_25	What is the occupation of your Father=Salaried (Banks/State Services/ Central Government/RBI/Police/Professor/Bureaucrat/Corporate/Private etc)
FatherOccupation_26	What is the occupation of your Father=Self Employed (Engineer/Doctor/Chartered Accountant/Free Lancer/ etc)
MotherOccupation_27	What is the occupation of your Mother=Businessman (Shops/Restaurant/Factory/Plant/Other Family Businesses etc)
MotherOccupation_28	What is the occupation of your Mother=Home-maker
MotherOccupation_29	What is the occupation of your Mother=Salaried (Banks/State Services/ Central Government/RBI/Police/Professor/Bureaucrat/Corporate/Private etc)
MotherOccupation_30	What is the occupation of your Mother=Self Employed (Engineer/Doctor/Chartered Accountant/Free Lancer/ etc)
FatherEducation_31	What is the highest Education of your Father=Graduate
FatherEducation_32	What is the highest Education of your Father=High School
FatherEducation_33	What is the highest Education of your Father=PhD
FatherEducation_34	What is the highest Education of your Father=PostGraduate
FatherEducation_35	What is the highest Education of your Father=Professional Course (Engineering/MBBS/MS/CA/MCA/MBA etc.)
MotherEducation_36	What is the highest Education of your Mother=Graduate
MotherEducation_37	What is the highest Education of your Mother=High School
MotherEducation_38	What is the highest Education of your Mother=PhD
MotherEducation_39	What is the highest Education of your Mother=PostGraduate
FamilyComposition_40	What type of Family Composition do you belong to=Joint Family
FamilyComposition_41	What type of Family Composition do you belong to=Nuclear Family
NoOfSiblings_42	How many Siblings do you have=1-2
NoOfSiblings_43	How many Siblings do you have=More than 2
NoOfSiblings_44	How many Siblings do you have=None (you are the single child of your parents)
Harassment_45	Have you ever faced any form of harassment in your life Sexual=No
Harassment_46	Have you ever faced any form of harassment in your life Sexual=Yes
Bullying_47	Were you ever bullied by anyone during your School or College days=No
Bullying_48	Were you ever bullied by anyone during your School or College days=Yes

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LANGUAGE PATTERN AND CONTENT VARIATION IN PRIVATE HINDI RADIO FMS: A STUDY

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ABSTRACT

At time when private FM radio stations are switching over to alternate patterns of language, it becomes imperative for academia to decipher what are the patterns and how much potential they have in keeping audience involved. The paper is based on the language used by radio presenter in contemporary time and that the success of messages is not altogether dependent of a standard and established language which has been practiced earlier generation of radio presenter. Alternate language patterns use nowadays in radio sometimes leave deep impression on listeners and society in general. In view of these facts, the present study attempts to understand the alternate language pattern of private FM radio stations in India and that too in Hindi centric belt. In this study, three different private radio stations have been taken for the study and one programme of each station has been analyzed in detail. These three radio stations are from New Delhi, Chandigarh, and Karnal. The study draws attention of the academia and radio industry on context to perception that despite popular standard style of presentation and language, there are presenters who are breaking the monotony of standard language and it's rules and are more concern with whether the audience will be able to extract meaning and comprehend it or not. The study explores possibilities of further study to analyze correlation between decoding of the messages by the listeners and their impact on public communication and its further impact on culture as well.

Keywords: Private FM, Radio Station, Language Pattern, Code-Mixing, Radio Jockey, Programme Content.

INTODUCTION
Unprecedented evolution and growth were witnessed in the history of mankind when human became conscious enough to decode their surroundings. Decoding of the surrounding by men didn't start with the advent of language only. It had started with the use of sign & symbols and became a conveyor among early humans. Since the communication is basically meaning making process and a message can create meaning even in sign and symbol and some time silence carries some message; we need to understand the alternate mode of communication. But, it depends on the fact to what extent the sign and symbol or code language is popular among the community. And after the advent of the language as medium of communication, a large number of languages came into being throughout the world.

In the development process various cultures came together resulting into cross culture integration mixed use of the languages from opposite culture. A survey of European commission (2006) states that, 56 respondents were speaking a language other than their mother tongue e.g., 99 percent people of Luxembourg and 95 of Latvians speak more than one language.

The paper proceeds with argument that, cross culture integration made the mixed use of language a way of life and that needs to be studied in the prism of code switching e.g., *using mixture of words of two or more languages while completing a sentence*. The scholars (Marian, Shook, 2012) opined that majority of the world's population is bilingual or multilingual. They concluded that, bilingual brain has better attention and task switching capacity.

This study looks into the correlations of bilingual culture and use of code switching in media. It further analyzed to what extent media users are receptive to this trend. This study proceeds with the idea that, alternate language pattern adopted by private FM radio stations need serious research. It further argues that, private FM radio stations appears to be breaking rules by adopting their own code-mixing type language, but they are becoming a part of the community. At this point it is pertinent to mention the scholarly argument. According to Al Zabibi and Saleh (2017), when it becomes common practice to switch code e.g., *a form of communication wherein speakers switch from one language to other in the same sentence,* it becomes cultural feature and speech of the community is characterized by it. Some other scholars (Patel and Parikh, 2020) argued that, sentences with phrases from multiple languages are accepted among the various cultures.

In view of the above theorization by scholars from different disciplines, the paper is an attempt to decipher the meaning making potential of the communication with mixture of code (words) from different languages. To further elaborate the concept, the paper first of all defines the various dimensions of term code mixing/code switching. A 'code' is generally used in place of speech variety, language or dialect. Code-mixing or code-switching means when a speaker mixes two or more languages in his/her communication. According to the definition in the Longman Dictionary, "A person may start speaking one language and then change to another one in the middle of their speech, or sometimes even in the middle of a sentence. On the other hand, code mixing is a mixing of two codes or languages, usually without a change of topic." Additionally, "Code mixing involves the assimilation of linguistic elements from one language into another: a sentence begins in one language then makes use of word(s) and grammatical features belonging to another and comes back to the first code." (Chowdhury, 2012). Multilingualism is a normal phenomenon in a country like India, where diverse culture, caste and languages co-exist. People frequently combined words from one language to another which result is code-mixing. In present scenario, this code-mixing is also a key feature of the RJs to entertain and increase the listenership. They use different languages with various styles to attract and engage the listeners. The paper analyzed this pattern on the basis of various types of Code Mixing/Switching.

Intra- sentential code- mixing: in this type, mixing occurs within a sentence or a clause. In intra-sentential code-mixing, while speaking a sentence in one language speaker mixes the words from another language.

Inter (Extra)-sentential code-mixing: switching/mixing happens outside the sentence or the clause level. Speaker mixes the whole sentence or clause with one language to another.

Intra-word switching: this switching takes place within a word itself, like English '*movie' with Hindi plural turns into 'movieyaa'.* (Ahmed and Tinny 2013: Tashi and Karekatti, 2019).The primary focus of this paper is to discuss the language pattern and content of the programmes broadcasted by private radio stations.

Theoretical perspective of the research

The research draws its theoretical basis from the 'structural' and 'social linguistic approach' of code switching (CS). The structural approach to CS (Boztepe, 2003) is concerned with formation of a sentence in any communication. This branch of study analyzes how a particular way of sentence formation in oral or written communication affects the encoding and decoding. On the other 'Social Linguistic' approach focuses on the aspect, how social meaning is created through CS. It is pertinent to mention here that these two areas underline a number of research problem related to the CS. In view of its importance in this branch of knowledge, the paper deconstructs the sentence formation (using CS) of some selected private radio stations on standard parameters that helps academia to know its meaning making potential. Along with this dimension, it analyses the social linguistic dimension from audiences' point of view e.g., *to what extent they are at ease with CS in radio jockeys conversation.* It also tests the conclusion of the scholars in the similar field who states that CS based communication reduce the linguistic distance and helpful to amplify the message and clarify what is said (Mahata et.al. 2020).

In time immemorial, the radio presenter used vocabulary which was not colloquial and hence was not used by a layman or common listeners. Listeners get impressed by the extreme formal language and style of the presenter. But times have changed; now radio jockey presents their programmes in such a language which we use and hear in our day to day lives. They likewise use the age specific language in their programmes. The purpose of this is it to connect with their listeners one to one. Listeners also feel now that the RJ is one of them.

Today, Radio jockey has the freedom to choose the way in which he wants to present the programme. (Ravi, 2012: Kak, 2008)

This study is based on to find out the language pattern and programme's content of the various private radio stations. The objective of the programming strategy is to fetch new listeners as well as retrain older listeners. Good listenership base can only be created by very good programming, content, music selection; RJs consist of good performance and connectivity with the audience. It is found that the various studies and researches have done on different private radio stations of various States & cities, but no specific study has taken place on private radio stations operating in Hindi belt cities with reference to the language pattern and content strategy. In this context, this study focused on the analysis of private radios with special reference to their language pattern and content variation.

Programming Format of Private FM Radio Channels

Media allude to aggregate specialized apparatus that is utilized to convey the data to the huge mass at once; it incorporates print media, electronic media and new media. Lifestyle is the medium to express our life and the content about lifestyle is exceptionally spread by the media (Paul and Uikey, 2017). Similarly, language is also an essential part of the lifestyle, which could be described as one of the significant types of conversation that executes an essential place in human communication. To understand the language of the programmes broadcasted by private FM radio stations, we need to understand the programming format of them. Private FM radio channels are very different from All India Radio and Community Radio in terms of content, language and presentation. Private FM radio stations' style is fast, catchy, friendly and interactive. RJs have to represent a lot with few words because they have limited time to speak on-air. (Spangardt et.al. 2016: Sen, 2014). The paper argues that these radio stations are targeting young listeners and designed the programme's format according to them. According to the scholars Sachdeva and Tripathi (2019), the young generation is the most important section of the society and also the most powerful for bringing a social change. The size of the youthful people's populace decides the development and potential of the nation. Youth is the most significant mass with enthusiasm, motivations and persistence for endorsing financial, social and cultural developments of a country.

LITERATURE REVIEW

Researcher reviewed the various research papers, books and articles to study the code-mixing/switching language strategy of the Radio Jockeys and the programming content of the various radio stations running in India and internationally.To examine the language pattern of the radio presenters and programme's content of the radio stations, Okumbe M.A. (2017) has done a study on the three local radio stations of Kenya with the help of social responsibility theory. Researcher opined that, these radio stations have broken the monotony of English and Kiswahili languages and communicated programmes in nearby dialects. Listeners' contribution through phone-in based programmes is also enhancing this culture in the society. The researcher suggested that, the further study can be done on the reflection of the content upon the listeners, because radio stations are also responsible and accountable for the social development of the society.

The success of the FM radio channels has brought an exclusive change in speech style among the Bangladeshi youth. Ahmed S. and Tinny F. Z. (2013) studied this new phenomenon of the speech style using by the RJs and the listeners. The study pointed out the significant feature that, the RJs are using inter and intra-sentential code mixing/switching by mixing the language of Hindi, English and Bangla. The reason is that, RJs are being influenced by the new language pattern of the young generation to some extent. They adopted this mix language pattern so that their listeners could feel connected with them. Further, this study argues that with the adoption of this phenomenon of language, the young generation is creating a subculture among themselves.

Vijayakumar N. (2014) came up with an evaluative study about the listening pattern of FM radio users according to the language and content of the programmes in Mysore district. Descriptive statistics were used to analyze the collected data. The study mentions that, the younger generation is more inclined towards private radio stations and preferred to listen to it more frequently. While the old/aged audience still finds charm in listening to Vivid Bharati station, probably because of their old connection to its programmes since their young age and they do not identify themselves with the content and language of the private/commercial FM radio channels. FM radio stations can influence to its listeners in worldwide areas, so researcher recommended that, FM radio stations may work on redesigning the programming format and convert into an overall family entertainment medium so that its reach can also be enhanced.

In a study conducted by Dey A. and Pascale F. (2014) throws light on the fact that the most regular types of code-switchingisintra-sententialand inter-sentential, which are being used in the communication. They investigated the rules and constraints of code-switching in Hindi-English mixed language data and explained the various reasons for the same. The majority of the Hindi speakers generally tend to turn toEnglish, because it is simpler to use the code -switching with EnglishwordcomparedtoHindicounterpart.The othermostpopularreasonfor switching to Engli sh is to define the explanations, as it is someti mes simpler to understand the notion in Englis h than in Hindi and also whenever there is no well-known Hindi word for an English word. The study also pointed out that code switching occurs unintentionally as it has become a part of the speaking habit.

With this view, the language contact is an important phenomenon in the society, Barnali C. (2017) done an empirical study on the code-mixing/switching and found that it has changed the meaning of communication in India. In terms of radio, the researcher found that, radio jockey purposely blend English words with Hindi sentences to sound more funky and trendy. The researcher recommended that, this code mixing & switching trend have set up themselves as the most widely used language in the Hindi speaking states. In a multilingual country like India code-mixing and switching has become a norm rather than a deviation.

To examine the code mixing language pattern of the public and private radio stations in the Kohlapur city of Maharashtra, Tashi K. And Karekatti T. (2019)analyzed the recorded data of the radio stations. On the basis of the talking data of the RJs, it is found that,code-mixing takes place more in the programmes broadcasted by Radio Mirchi & Tomato FM and much less on Prasarbharati channel. Researcher opined that, wheneverjockeysorannouncers are unable to r ecollect a suitablewordinMarathilanguage,the y combine Englishwords as common people do in their daily conversation.

In the view of the study of the related literature, content analysis methodology has applied in this paper to accomplish the desired result.

OBJECTIVES OF THE STUDY

- To analyze the usage of differentlanguages by private radio stations located at various places.
- To study the variety of content of programmes broadcasted by private radio stations.
- To understand the social linguistic approach in code-mixing/switching used by private FM radio stations.

RESEARCH METHODOLOGY

In this study, for analyzing the selected radio stations' content, the researcher conducted qualitative research and applied content analysis technique for describing the data. Content Analysis is described as the scientific study of the content of communication. Kerlinger (1986) defined content analysis as a method of studying and analyzing communication in a systematic, objective and quantitative manner for the purpose of measuring variables. According to Weber (1985), content analysis is a research methodology that utilizes a set of procedures to make valid inferences from text. These inferences are about the sender(s) of the message, the message itself, or the audience of message. In this study, the data of three private radio stations were selected and analyzed on various parameters. These radio stations are from 3 different areas such as Ishq FM from New Delhi, Big FM from Chandigarh and Radio City from Karnal.

One week programme of the each radio station is the sample size for the content analysis. From morning time band show Ishq FM of New Delhi and Radio City of Karnal was taken. In the evening time band show, Big FM of Chandigarh was in the sample.

The researcher selected the morning and evening time band shows for the study because both time band shows are considered as drive time shows and has a highest listenership. In this research, content analysis technique has applied for analyzing many recorded words and sentences into different content categories based on explicit rule of coding. First of all, the researcher recorded the selected aired contentmeans radio showsand then it was analyzed. Self-observations were also conducted in order to support the significance of the result.

DATA ANALYSIS

The researcher listened to the recorded audio files in the Sound Forge software and identified the RJs' and callers/guests' talking content so that the 'links' can be analyzed in depth. In this section, the Hindi words and sentences are marked in italic font.

Table-1-Details of the selected radio stations and content's duration

Radio Station	Show Timing	RJ Name	Show Name	Place	Total duration of recorded content	Total duration of RJ's Content
Ishq FM	7am-11am	Sarthak	Ishq	Delhi	20 Hours	198.25 Minutes
Big FM	7pm-9pm	Vidya Balan	*Dhun badal ke toh dekho*	Chandigarh (also broadcasted in all stations of BIG FM)	10 Hours	74.13 Minutes
Radio City	7am-11am	Rocky	7 *se* 11	Karnal	20 Hours	114.09 Minutes

Source:Authors' Calculations'

This table evident that, tentative a total of 50 hours of aired radio shows/programmes' content were recorded from three radio stations. A total of 6 hours, 43 minutes and 47 seconds of content of RJs' links was identified, which was analyzed on various parameters. One syndicate show of Big FM is also included in the study, which was broadcasted in many stations simultaneously.

Table-2-Data of Code mixing by RJs

Sr. No.	Radio Station	RJ Name	Intra Sententialcode-mixing	Inter Sentential code-mixing	Intra-Word Switching
1	Big FM	Vidya Balan	265 Words	10 Sentences	0
2	Ishq FM	Sarthak	105 Words	130 Sentences	0
3	Radio City	Rocky	190 Words	8 Sentences	4

Source:'Authors' Calculations'

This table provides the data of using code-mixing by RJs of these 3 radio stations. The maximum Intra sentential code-mixing is done by the RJ of BIG FM. However, Radio City is at number two by using 190 words in one week under intra sentential code-mixing category and then followed by Ishq FM comprises 105 words in a week for the same category. Thereafter, in inter sentential code-mixing type; RJ of Ishq FM has done code-mixing in 130 sentences, whereas, RJ of BIG FM just limited herself on 10 sentences, which are a huge difference. In fact, RJ of Radio City has used only 8 sentences in his show. One more category called intra word switching is being used by RJ of Radio City only.

Table-2.1- Examples of Intra Sentential Code Mixing by RJ Vidya Balan on BIG FM

Sr. No.	On-Air Content of RJ Vidya Balan	Code Mixing Structure (Mixing of English words in Hindi language)
1	*Aisa karna kisi ke* self confidence *ko kitni thes pahuncha sakta hai*	Self confidence
2	*Bure* percentage *se duniya khatam nahi ho jaati aur na hi ache* marks decide *kerte hai ki aage jaa ke bache apni* life *se kaise* deal	Percentage, Decide, Life, Deal,

	karenge	
3	*kisi ke rang,* size *ya* shape *ko lekar us par* comments *karna ya mazak uda ker unhe* humiliate *karna* body shaming *kehlaata hai*	Comments, Humiliate
4	Feature *ke liye* constantly *toka jaaye ya mazak banaya* jaaye toh inadequate *ya* under confident feel *karna* natural *hai*	Constantly, Inadequate, Under confident, Feel, Natural
5	*Bachpan umar ka wo hissa jo sebse* zyada care free *aur* exciting *maana jaata tha ab wahi sabse bade* stress *ka* reason *hai*	Care free, Exciting, Stress, Reason

Source:Authors' Calculations'

Table-2.2- Examples of Inter Sentential Code Mixing by RJ Vidya Balan on BIG FM

Sr. No.	On-Air Content of RJ Vidya Balan
1	*Saare hi* parents *apne bacho ko* successful *dekhna chahte hai.* which is ok.
2	I do feel *ki haan hamari society badal rahi hai.*
3	*Unhe in naamo se* address *kerna bilkulbhi* funny *nahi hai.* Body shaming is not a joke.
4	Neha, I can totally relate to you *kyunki maine bhi kaafi kuch aapki tarah* face *kiya hai.*
5	*Mere saath hai* Mohit. Mohit what do you think

Source:'Authors' Calculations'

In the above mentioned examples, RJ Vidya used the complete sentences in one language and then moved to another language.

Table-2.3- Examples of Intra Sentential Code Mixing by RJ Sarthak on Fever FM

Sr. No.	On-Air Content of RJ Sarthak	Code Mixing Structure (Mixing of English words in Hindi language)
1	*kya* imperial music *bajaya hai aur ye* pure water *aur ye* green tea *ki* health	Imperial, Pure water, Green tea
2	Tuesday morning	Tuesday morning

	aa chuki hai	
3	*Matlab* intellectual satisfaction *ke saath* materialistic joy *ohh yaar*	Intellectual satisfaction, Materialistic joy
4	Beating me in the music *matlab ye toh ekdum* salt in the wounds *wala* scene *ho gaya*	Beating me in the music, Salt in the wounds, Scene
5	*Saat samunder paar se* queen *ki* blessings *ke saath aayi* tea *hai.*	Queen, Blessings, Tea

Source:Authors' Calculations'

Table-2.4- Examples of Inter Sentential Code Mixing by RJ Sarthak on Fever FM

Sr. No.	On-Air Content of RJ Sarthak
1	Then will call you back *aur thode se sawalo ka jawab dijiye* and who knows you could be the one for flying with your significant one for ishq in England.
2	*Ashish 2 sahi jawab to de diye hai* lady *ne haar toh tum chuke ho matlab* play for pride old champ.
3	You are sounding so happy *yaar matlab aise lag raha hai ki* Monday morning *toh hai hi nahi bilkul ekdum.*
4	Monday morning *kisi chal rahi hai tumhari.* you are a manager with telecom firms.
5	You are of course an assistant general manager with a consumer electronic sponsors *aur subah subah aapko lga ki thodi chai pee leni chaiye radio pe.*

Source:'Authors' Calculations'

In the above examples, RJ Sarthak used the complete sentence in one language and then switched to another language.

Table-2.5- Examples of Intra Sentential Code Mixing by RJ Rocky on Radio City

Sr. No.	On-Air Content of RJ Rocky	Code Mixing Structure (Mixing of English words in Hindi language)
1	*Main is baat pe* two hundred percent believe *karta hu*	Two hundred percent believe
2	300 plus runs impossible *sa hi*	Plus, impossible

	kaam hai	
3	Friday *wali* good morning	Friday
4	Multi story *bhawan*	Multi story
5	*Ye* difference *hi sab kuch* create *karta hai*	Difference, Create

Source:Authors' Calculations'

Table-2.6- Examples of Inter Sentential Code Mixing by RJ Rocky on Radio City

r. No.	On-Air Content of RJ Rocky
1	*Kamaal ke* batsman *kamal ke* bowler. He is an amazing bowler.
2	Mind blowing acting and mind blowing movie and anamika *banti hai hamari aaj ki* lucky winner.
3	Let's see *kya hota hai.*

Source:Authors' Calculations'

In the above mentioned examples, RJ Rocky used the Hindi and English languages in both the sentences.

Table-2.7- Examples of Intra-word switching by RJ Rocky on Radio City

Sr. No.	On-Air Content of RJ Rocky
1	Movieya (Movies)
2	Coaching centro (Centres)
3	Schooli (Schools)
4	Liney (lines)

Source:Authors' Calculations'

In the above mentioned examples, intra word code-switching occurred within these words itself here English word turned into Hindi plural.

Table-3-Data of Code mixing by Callers/Guest

Sr. No.	Radio Station	Intra Sententialcode-mixing	Inter Sentential code-mixing	Intra-Word Switching
1	Big FM	85 Words	60 Sentences	0
2	Ishq FM	30 Words	65 Sentences	0
3	Radio City	25 Words	10 Sentences	0

Source:Authors' Calculations'

This table evident the data of using code-mixing by listeners/callers on the conversation with the RJs through phone of these 3 radio stations. The most extreme code-mixing is done by the callers/guest of BIG FM with 85 words in one week in Intra sentential code-mixing category. However, Ishq FM is on the second position by utilizing 30 words in a single week and afterward pursued by Radio City contains 25 words in a single week for a similar classification. From there on, in inter sentential code-mixing type, callers/guest on Ishq FM used code-mixing in 65 sentences though callers/guest of BIG FM used 60 sentences. Callers/guest of Radio City simply constrained themselves on 10 sentences which is an enormous contrast. Intra word switching is not utilized by any caller.

Table-3.1- Examples of Intra Sentential Code Mixing by Callers/Guests on BIG FM

Sr. No.	On-Air Content of Callers/Guest	Code Mixing Structure (Mixing of English words in Hindi language)
1	I think bachpan se hai aise incidents ko main yaad ker ker ke hi strong hui hu.	I think, Incidents, Strong
2	Bacpan mein definitely padta tha because itni strength nahi thi.	Definitely Because Strength
3	Comparison ke chakkar mein humare jo ambitious hai wo kahin na kahin bacho ke upar impose ker rahe hai.	Comparison, Ambitious, Impose

Source:Authors' Calculations'

Table-3.2- Examples of Inter Sentential Code Mixing by Callers/Guests on BIG FM

Sr. No.	On-Air Content of Callers/Guests
1	*Pichle ek saal mein* pregrancy *ki wajah se mera 20-25 kilo wazan bada tha. Logo ne iske liye mujhe tokka bhi hai*. But I love myself the way I am because I have the most beautiful reason to be fat that is my son.
2	*Toh har cheez ko* pressure *le le ker karna* I think that is why we hear so much of people passes away at such young age.
3	So I don't want negativity around me. *jitna* avoid *ker sakti hu kerti hu*.

Source:Authors' Calculations'

In the above mentioned examples, callers/guests used the Hindi and English languages in their conversation with the RJ.

Table-3.3- Examples of Intra Sentential Code Mixing by Callers/ Guests on Ishq FMSr. No.	On-Air Content of Callers/Guests	Code Mixing Structure (Mixing of English words in Hindi language)
1	Grass *ke saath thoda mitti bhi aayega*	Grass
2	Flower *ke jaisa* logo *hota hai*	Flower
3	Haan agar mera network nahi aa raha hai because of you	Because of you

Source:Authors' Calculations'

Table-3.4- Examples of Inter Sentential Code Mixing by Callers/Guests on Ishq FM

Sr. No.	On-Air Content of Callers/Guests
1	*Jab aap* camera *chalate ho* every time you turn it on and goes back to default mode.
2	you know, what I like about you. *Ghamand nahi hai yaar tum mein*
3	Now the problem with first two types of people is *ki unki zindagi mein ek ajeeb si vidambna hai.*

Source:Authors' Calculations'

In the above mentioned examples, callers/guests started speaking in one language and then switched to another language.

Table-3.5- Examples of Intra Sentential Code Mixing by Callers/Guest on Radio City

Sr. No.	On-Air Content of Callers/Guest	Code Mixing Structure (Mixing of English words in Hindi language)
1	Isme thoda na leniency ki wajah se ho raha hai.	leniency
2	Ye unbelievable team hai	Unbelievable
3	Infect 5 baar inke saath aisa hua hai	Infect

Source:Authors' Calculations'

Table-3.6- Examples of Inter Sentential Code Mixing by Callers/Guest on Radio City

Sr. No.	On-Air Content of Callers/Guests
1	*Aur mazedaar baat kya hai haar baar* all 5 occasions they won the game.
2	*Dil keh raha hai* India *dimaag keh raha hai* Australia. So dil over *dimaag, dimaag over dil.*

Source:'Authors' Calculations'

In the above mentioned examples, callers/guests giving their viewpoint in both the languages.

Finding and conclusion

The study was conducted to identify the language pattern of the private FM radio stations and variation in the content of the programme. The study concludes that, RJs are presenting programmes in a language, which they feel is appropriate according to the topic and the target listeners. It is also observed that, RJs are utilizing full range and assortment of words and sentences of different languages in their presentation. Usage of Code mixing language pattern is a natural mode of speaking in private FM radio programmes. But it is also found that, this pattern is free from the standard norms and rules of the any particular language. Even listeners are also decoding this code mixing pattern and using it during the conversation with the RJs. By doing this, RJs and listeners are trying to create and maintain a strong association between them. The paper argues that, the primary objective of the usage of this code-mixing pattern is to express the particular topic, so that listeners can understand in a better way. Another objective is to attract and enhance the listenership of the radio station.

The study also reveals that, RJs of these radio stations are using this code-mixing/switching language pattern a lot in their communication, ether it is inter sentential code-mixing or intra sentential code-mixing. Different words from regional languages are also being used by the RJs. Several English words are so frequent in Hindi that they have become a part of Hindi language**.**

In terms of content, the study concludes that, commercial FM radio stations are providing the content variation in their programmes. The content and presentation of the every programme is entirely different from each other. Private FM radio stations have created programme names, segments and other station utilities based on such words and languages which are targeting the young listeners. The content of these programmes of Radio City, Big FM and Ishq FM is mainly based on the various segments related tosocial issues,current affairs and phone-in conversation. Bollowood actress Vidya Balan hosted the show '*Dhun Badal ke toh Dekho*'on Big FM and picks up the issue pertaining to society and trending social problems and tries to come up with a solution of such issues. This show comprises various segments such as 'Reporter kaviraj' in which topic of the show used to be described in a poetic way by one poet. The show has another section in which viewpoints/opinions from famous bollywood celebrities and other listeners were also included. The show broadcasted by Ishq FM has two phone-in contests named 'Battle of sexes' and 'Youbet' in which listeners participated and got a chance to win the exciting prizes on-air.

RJ also describes brief description about any one word in the show as 'word of the day segment.' In the programme of Radio City, RJ conveyed the traffic update, city update and weather update to inform the listeners. The content of this show is based on the current happenings related to International, National, Regional and local. RJ also included one phone-in contest, which was related to films. A part of phone-in, RJ played the vox-pop bytes from common people based on the various social issues. RJs are communicating in casual style, formal style and consultative style according to the content and target listeners of their programmes.

LIMITATION AND FURTHER SCOPE OF THE STUDY

There are certain limitations in this study. The present study has been conducted only from the 3 private radio channels of 3 Hindi belt cities- New Delhi, Chandigarh and Karnal. Therefore, we are not sure whether these results could be generalized to the other part of the Hindi belt cities. Due to the time constraints, it was not possible to take 24 hours content of the each radio, so only one time band show of each radio station was analyzed. The other time band shows must have some other different content of the programme. Hence, the study further can be extended by taking other programmes of different private radio stations from other cities. Another area is that, to find out the more reasons of using code-mixing or code-switching for further research.

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Private Radio Stations

- Big FM
- Ishq FM
- Radio City

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EXPLORING ONLINE NEWS AS COMPARATIVE STUDY BETWEEN VENDATU AT INDIAAND RUANGGURU FROM INDONESIA IN COVID-19 PANDEMIC

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ABSTRACT

To prevent the spread of COVID-19, schools are closed in India and Indonesia. Governments have to make hard decisions which result in students are having a hard time studying. They have to stay and study at home. Not all schools are ready for online school as the tools or systems are not ready. Fortunately, Vedantu and RuangGuru as education platforms based on mobile applications and computers give free access to students in times of COVID-19. Through this research the authors find many ideations come up back and forth through the process from the decision which the governments made until solutions come from the support of Vedantu and RuangGuru application. In this journal, the authors try to compare two news reported by *NewIndianExpress.com* and *JakartaGlobe.id* where the authors find three parts of news that have similar ideations and the three categories which in part of ideation (cognitive, emotional, social). To analyze the news the authors use Mayring methodology as the tools to analyze textual content and ideations as the theory to compare between the two news. There are three similarities being compared between India and Indonesia. Firstly, the governments' policy to prevent the spread COVID-19 where they want to establish beliefs, values, and self-image through cognitive categories, Secondly Decision making to close the school and start online learning which is not well-prepared as their emotional category involved to bring self-efficacy and responses, Lastly Vedantu and Ruangguru come to support and influence (Social category).

Keywords: Ideations, Mayring, Vedantu, RuangGuru, COVID-19.

INTRODUCTION

Education International organization tracks the country-wide school closures in 188 countries with 1,576,021,818 learners are impacted, and 63,000,000 are affected. The pandemic COVID-19 creates problems in the world of education, such as, students and teachers are not able to go school like it used to be, schools have to find a way out to ensure students are still able to study and teachers are also able to teach in the midst of this outbreak. While Education contributes to people's life meaning, the education system creates future adults who can give good contributions to their own country in the future. Thus, it is a disaster if education stops, and people are not able to study or learn any longer (Schinkel et al., 2015). This might happen now since the pandemic COVID-19, where some countries are having a hard time to go to school as most of the governments try to prevent the spread towards home quarantine (Asquith, 2020).

Figure 1 UNESCO Monitoring Data

Source: https://www.ei-ie.org/en/detail/16669/education-international-covid-19-tracker

In history, there are many significant disease outbreaks and pandemics recorded, for instance, Spanish Flu, Hong Kong Flu, SARS, H7N9, Ebola, Zika. Influenza pandemics have struck three times every century since 1500. Pandemic refers to a widespread epidemic of the contagious disease the whole of a country or one or more continents face at the same time. The term has not been defined (Qiu et al., 2017).

Schwartz et al. (2010:722) wrote about Severe Acute Respiratory Syndrome (SARS) which spread 5 continents with thousands of cases, hundreds of deaths caused by SARS. Thus people were asked to self-quarantined and restricted to travel. At the same time, online shopping had a role to fulfill the crisis. At that time online shopping contributed to preventing infection or the spread of SARS which dramatically changed consumer behavior on how they shop in the future (Forster & Tang, 2005).

Li et al. (2014:2) also wrote about the Avian Influenza (AI) outbreak in China where the virus was derived from poultry and there was no indication on the avian when it is infected by the virus, thus, people are hard to identify. Then, social media was used in public health surveillance to facilitate interpersonal communication to share regarding monitoring on AI outbreak. It became a global phenomenon as a communication tool to disseminate disease risks and interventions and to promote a healthy lifestyle and policy in 2014 (Fung et al., 2015).

Journals Title	Authors and Years Published
Severe Acute Respiratory Syndrome (SARS) — Lessons for Future Pandemics	Schwartz et al. 2007
Preliminary Report: Epidemiology of the Avian Influenza A (H7N9) Outbreak in China	Li et al. (2014)
The Role of Online Shopping and Fulfillment in the Hong Kong SARS Crisis	Forster & Tang (2005)
The use of social media in public health surveillance	Fung, Tse, and Fu (2015)

Table 1: State of the Art

The previous studies explained during the outbreak technology became platforms which help people to prevent/stop the spread, to educate people, and to communicate. In this study during the break of COVID-19, the authors will observe how educational platforms based on technology are used to help people who are quarantined still able to study online as a revolutionary breakthrough to help the government in stopping the spread of COVID-19.

Moreover, Schools are temporarily closed in many regions in Indonesia, in an attempt to prevent the spread of COVID-19 (Nugroho, 2020). Simultaneously, many schools are also closed in India to prevent the spread of COVID-19 (NewIndianExpress.com, 2020). In other words, Indonesia and India also have the same problems in education where the world now faces.

Technological developments in the 21st century directly change people's lives (Singh, 2019). Technology capability also changes the culture of people's lives from closed to public consumption (Sachdeva & Tripathi, 2019).

Nevertheless, Educational platforms based in technology become a trend in Indonesia and India during the outbreak. Reported by Jakarta

Post, RuangGuru as an education application gives open access to students who are in need to study (Editor, 2020b). At the same time, NewIndianExpress.com reports Vedantu offers online learning with no cost for who is also in need to study in the times of COVID-19 (Editor, 2020c).

Through media representation, RuangGuru and Vedantu being highlighted. People are more noticed in the applications. It shows that media is a powerful tool to bring something into society or community (Govender, 2014). This study looks at how the online media newindianexpress.com and jakartaglobe.id is raising the contribution of education application amid the COVID-19 pandemic. This study also uses qualitative content analysis as a research method and Ideation as a theory to find related issues brought by Vedantu and RuangGuru as an educational platform.

LITERATURE REVIEW

Ideation is a process to help people to develop truly original ideas in order to develop the right solution. In other words, ideation is all about brainstorming of many ideas as we can (Rgovic et al., 2013). There are two aspects which are related. They are social interaction and a new way of thinking. Ideation is all about innovation where a new way thinking are shared within a social system (Kincaid, 2015).

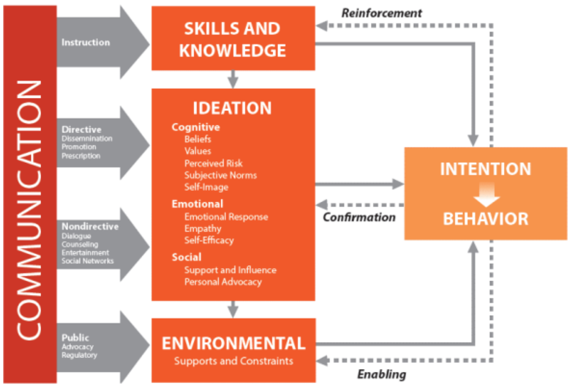

Figure 3 Ideation Process (Source: Gode, 2019)

The model (figure 3) shows that all the component affects the intermediate outcome. It determined the behavior changes. Moreover, there are three categories in ideation cognitive, emotional, and social which address different output in every category where are related to the discussion. Firstly, Cognitive is a risk perception where an individual's beliefs, values, and attitudes are addressed. Subjective norms mean what an individual perceives and what others should do. Social norms are related to what an individual thinks others are doing. Lastly, the individual thinks about himself (self-image). All the components are in the cognitive category. Second, Emotional is how an individual feels about the new behaviors either it is positive or negative and how the behavior can be performed (self-efficacy). Lastly, Social factors consist of interpersonal interaction to convince someone to behave in a certain way to adopt the new behavior when an individual can ensure someone to adopt the new behavior is called personal advocacy (Babalola et al., 2016).

Ideation can be improved when it is brainstormed. Brainstorming creates many ideas to get the synthesis to build on each other ideas rather than one person's idea. The better quality of ideation comes up when people refrained from criticizing one another's ideas. Thus, it is important to have a large number of ideas. In other words, the more ideas people generate the more good ideas will be produced (Briggs & Reinig, 2007).

In other words, Ideation is a collaborative way of looking at social issues through putting creative ideas on the table communicating those ideas, challenging those ideas all process that leads to landing what the real question we want to ask ourselves about what the real issue is. The process makes us understand what ideation is and its focus on solution orientation (Hay et al., 2019). While the ideation's process is going through, there seem questions back and forth but they are related to the real question and what focuses on the topic. Furthermore, we never know what is right, but through ideation, we get a chance to get it right. Through ideation, it opens creativity and inspiration to get brainstorming as many as we can and grouped the ideas. So that, we can well-organized many ideas into a clear concept (Gode, 2019).

This theory fits and contributes to the topic of the field where the authors will analyze how governments' decision regarding online education creates many ideations which are related to two categories of ideation (cognitive-emotional, and social) and to see how the process creates new intention and new behavior of online schooling, also, Vedantu and RuangGuru as a support platform which actualizes the new behavior or intention.

METHODOLOGY

This research uses a qualitative analysis content method (Fong & Nyathi, 2019). The object of this study consists of two news articles, representing two countries India and Indonesia. The first news article came from newindianexpress.com entitled "Education in the times of COVID-19 and how to keep up with studies" and the second news article came from jakartaglobe.id titled "Cities Turn to Online Learning to Prevent COVID-19 Spreading Among Students". This research will use the Mayring content analysis method. The mass media where the authors choose is e-news. Mass media means to deliver messages or information to a large group of people where people can access anytime to receive what they are looking for (Kholik, 2015). Thus, the two news where the authors have taken, are from NewIndianExpress.com and JakartaGlobe. Id.

The two news articles through several criteria, such as an online media platform on a national scale, and exposure to international audiences, as well as continuing updates on the development of the COVID-19 pandemic in each country, were selected. The education segment was specifically chosen because it is one of the most important sectors affected, thus, encouraging all students to carry out learning activities at home using an internet service connection.

Khiang, Ahmad, Ibrahim, and Kee (2012:22) explained that framing as a way to evaluate evaluative perceptions, as it is considered by Mustaffa and Ibrahim (2018:171), the media can provide prominent information or problems on the mind of audiences. Therefore, the news becomes manipulative because it aims to dominate the subject's existence as something legal, objective, natural, and inevitable (Satriani, 2018:250).Also, (Priyo Sadono & Fensi, 2015) describe framing as a tool to analyze a phenomenon to construct reality. Where the media has their way to deliver the news and how they stress in one particular issue with their framing (Marta et al., 2019). Categorization will be carried out before the research begins, so this study uses induction formation in qualitative content analysis. This categorization is formed from the formulation of research questions which will be followed by theoretical and conceptual frameworks.

Mayring has developed a sequential analysis of qualitative content and proposed three analytical procedures that can be carried out both independently and in combination, depending on specific research questions. The three things mentioned above (Marta & Rieuwpassa, 2018) include abstraction, application, and structuration.

Abstraction is an attempt to reduce the material in such a way that only important content is retained. A collection of texts can be managed properly through abstractions that do not eliminate the essence of the original material. The text is paraphrased, then tries to be generalized to be abstracted and reduced. The text abstraction treatment forms a paraphrase of the message contained in newsindianexpress.com and jakartaglobe.id news content about the role of Vedantu and RuangGuru online application in the success of online learning in the general period during the COVID-19 pandemic.

Vedantu is an online tutoring platform to provide interactive online learning systems. Vedantu uses a real-time virtual learning environment named Whiteboard Audio Video Environment where students can study, browse, and discover what they want to learn. It was founded in 2011 by Vamsi Krishna, Pulkit Jain, Saurabh Saxena, and Anand Prakash. Vedantu itself means Veda: 'knowledge' Tantu: Network, thus, the founders hope a knowledge network where any student can tap into a teacher directly and learning can happen in a personalized way, anytime-anywhere (Source: Vedantu.com/v/about-us).

Vedantu

LIVE ONLINE TUTORING

Figure 4 Vedantu Logo

Source: https://www.vedantu.com/v/about-us

RuangGuru was founded by Adamas Belva Syah and Muhammad Iman Usman 2014. RuangGuru provides various tutor online systems, for instance, private class, virtual classroom, online exam, etc. RuangGuru is in cooperation with 32 out of 34 provinces in Indonesia to support online learning. 15 million students have experienced to use RuangGuru.

Figure 5RuangGuru Logo
Source:https://RuangGuru.com/general/about

Questions raised through unit analysis are examined by qualitative content analysis in online media. The author's implications are based on adequate literary quotations, can form a glossary, or comprise footnotes. In the first step, the lexico-grammatical resolution is traced from the use or choice of vocabulary (lexicon) and structuring of the language used (grammatical). Both of these things have been determined, then exploration material is determined followed by boundary analysis and broad context analysis.

Structure following procedures is used in classical content analysis which is often seen as the most crucial content analysis technique. The goal is to filter out certain structures of material because texts are generally structured according to specific contents, shapes, and scales. The first stage is the determination of the unit of analysis, after which the dimension of structuring will be formed based on a theoretical framework as the basis for a predefined data categorization system. This research uses Ideation theory to describe the news..

DISCUSSION
There are two articles from e-newspapers related to education in times of Covid-19. The e-newspapers which the authors would like to analyze are NewIndianExpress.com and JakartaGlobe.id. The authors would like to compare and find the similarities between those two articles. The authors also relate the ideation theory with the Mayring method to find the same ideas or brainstorming on those two articles. The two news is divided into three parts which have different categories of ideation which are cognitive, emotional, and social. The two news are listed below (figure 6 and figure 7).

The abstraction process can be seen in the news when the government made policies to dismiss all students affected, this situation is used by various learning service providers through the online application to the selling point of the product. So that online learning has the value of substitution in the process of conventional learning towards online learning.


THE NEW INDIAN EXPRESS

NATION WORLD STATES CITIES BUSINESS SPORT GOOD NEWS MOVIES GALLERIES

STOCK MARKET BSE 30379.81 -310.21(-1.01%) NSE 8925.30

Home › Cities › Delhi

Education in the times of COVID-19 and how to keep up with studies

Following the outbreak of COVID-19 in the country, many schools and other educational institutions have stalled their classes.

Figure 6 NewIndianExpress.com

The newsindianexpress.com news quote shows that the government has the same beliefs, values, perceived risks, and subjective norms that prevent COVID-19. Prime Minister Narendra Modi spoke to the public on March 19 to maintain social distance and provide online education for students who are required to stay at home. The value of trust between the government and various online learning service providers is also conveyed to assist students in using a good platform. It was written that responding from various platforms also supported positively as did the British Council language learning institutions.

"Following the outbreak of COVID-19 in the country, many schools and other educational institutions have stalled their classes. Even before Prime Minister Narendra Modi addressed the nation on March 19 to maintain social distancing, a lot of students had already confined themselves to their homes..." (Source: NewIndianExpress.com)

The online media of jakartaglobe.id writes about the decisiveness of several local governments in Indonesia. One of them is the

Bogor city government, represented by Fahkrudin as head of the education service, urging people to stay at home to reduce the spread of COVID-19. In this case, Modi and Fahkrudin have actions against subjective norms that give them direction to order their people to remain at home.

Fahkrudin, the head of Bogor's education department, said at the moment the city faced difficulty with providing adequate face masks and antiseptic liquid for the schools. "Prevention protocols dictate we must provide protective equipment at the schools. But this time, it is still difficult to obtain," Fahkrudin said. (Source JakartaGlobe.id)

Figure 7 JakartaGlobe.id

The news on newindianexpress.com and jakartaglobe.id shows the emphasis on subjective norms on society. Subjective norms are a belief which most of the people will approve of someone's decision. The belief is determined by social pressure, thus, all individuals will act in the same actions or certain manner (Ham et al., 2016). As their subjective norms relate to the social pressure which they have made decisions to reduce perceived risks, thus, the belief and the decisions which they make are the best solutions for all.

The content application in the news newindianexpress.com and jakartaglobe.id is seen in the presence of Vedantu and RuangGuru application as a representation amidst various start-ups in the globalization era, which were initially used as an alternative, means to support learning but succeeded in increasing confidence to take the government to assist in the education sector during the pandemic COVID-19. Belief means acceptance of someone's decision or how we apprehend and discuss the reality that can be traced through the historical development of academic discourse (Motz, 2014). In this situation, Modi and Fahkrudin believe their people will accept their decisions or policy to limit activities outside included school activity.

Lastly, it comes out with a certain value that the decision that Modi and Fahkrudin have decided is important and it is the way to act in this situation of Pandemic COVID-19. Eventually, it converts to a self-image that Modi and Fahkrudin have the ability to lead their people against COVID-19. Amid social distancing policy, Narendra Modi and Fahkrudin still give a good solution in education problems where they provide Vedantu and RuangGuru as tools to learn online. Amid social distancing policies, Modi and Fahkrudin still provide good solutions to educational problems where they provide Vedantu and RuangGuru as a tool for online learning.

"The spread of COVID-19 has forced many educational institutions across the globe to close campuses. India has over 37 million students enrolled in higher education. An interruption in the delivery of education could cause long term disruption. Thepandemic requires universities to rapidly offer online learning to their students..." says Raghav Gupta, Managing Director (India and APAC), Coursera." (Source: NewIndianExpress.com)

The Emotional Concept in Ideation explains how emotions can be responded to and so becomes empathy. The Newsindianexpress.com framing takes a perspective on the ability of Indian universities to use technology. So that technology, in this case, can improve the quality of empathy of policyholders in making quick decisions during the COVID-19 pandemic. This reinforces McLuhan's idea of the Global Village concept of how humans are encouraged to be able to connect fully in the digital age so that it becomes a challenge for other countries that are not yet capable of developing to move quickly.

"In West Java, Indonesia's most populous province with 49 million people, students would also study at home for two weeks, Governor Ridwan Kamil said on Sunday. "Students will be able to receive instruction from their teacher remotely using an online system," Ridwan said... Meanwhile, Central Java Governor Ganjar Pranowo said on Saturday that the province suspended teaching activities at all levels of educations, except for those who would be facing the final exam next week. "Those who are not taking exams, will not go to schools and should take an online course," Ganjar said. (Source: JakartaGlobe.id)

Indonesia as a broad country is a challenge where decisions must be centralized responded with various regional studies (Fernando et al, 2019). So the empathy produced depends on each regional head. The media of jakartaglobe.id provides a different perspective by raising several provinces with an indication of the spread of the highest cases. The Governor of Banten, West Java, and East Java have the same empathy to stop all offline educational activities and go online by promoting humanity even though on one side of education technology is inadequate.

Framing the media in India and Indonesia, explained the figure of leadership has similar efficacy in which they believe students can still study at home with online education. Meanwhile, it creates an emotional response, since, some schools' online system is not ready for this situation in India (Banchariya Sheetal And, 2020) even so in Indonesia (Angdhiri, 2020). Governments have to make quick decisions through this outbreak since the virus is rapidly spreading. As a result, not all decisions can be applied, ideally. During the outbreak, there is ideation back and forth which is related to the emotional category where self-efficacy and emotional response is being created.

Social concepts talk about support and influence, and the ability to carry out personal advocacy. The rapid reaction issued by online learning service providers actually helped the government through quick decisions made regarding several schools not ready to do so. Vedantu, as an online learning application provides free online schooling during the COVID-19 pandemic in India (Editor, 2020a). The news of newindianexpress.com covers the whole statement of Vanmsi Krisha as CEO of the Vedantu application which supports and collaborates with the Indian state to provide online guidance during the pandemic.

"We also support and cooperate with state and national government authorities to put all necessary measures in place to ensure the continued well-being of all... "At Vedantu, we believe that the best quality of education should be accessible to everyone, anytime. We believe online learning is a safe option in these risky and uncertain times. The students can study from the safety of their home and avoid travel to public places. We are closely monitoring the impact of COVID-19 and are here to assist students and schools with all their learning needs." (Source: NewIndianExpress.com)

In this situation, Vedantu and RuangGuru have given support and influence to society. Where online learning before COVID-19 was only alternation or secondary method, now, it becomes the main method where it can help to prevent the spread of pandemic COVID-19. The news on jakartaglobe.id also frames the RuangGuru appellation which shows support and advocacy that provides free online classes. RuangGuru supports the majority of users to provide free internet access, in collaboration with one of the largest telecommunications providers in Indonesia, Telkomsel (Fach, 2020).

"RuangGuru, an Indonesian online learning platform, announced on Saturday that it would open access to its interactive online courses for free to all students in Indonesia. Starting on Monday, the live course sessions would be available from 08:00 a.m. to 12:00 p.m. every day, said Belva Devara, RuangGuru's co-founder and chief executive in a video announcement." (Source: JakartaGlobe)"

The Pandemic COVID-19 has risen ideations in education. Through governments' decision to close schools the government tries to replace the offline class into an online class. However, there are problems through the limitations of technology or tools. Fortunately, Vedantu and RuangGuru as educational platforms provide free online classes amid the outbreak. They support the government to keep students in India and Indonesia learning in times of COVID-19. In a time of the pandemic, technologies have empowered citizens to form transportation for advancing concern where this situation linked to human rights, ecology, and development (Narula, 2012). Moreover, Vedantu and Ruangguru are technology that is easy to use. It would lead to an era where people are more knowledgeable and to improve all decisions (Kabha et al., 2019).

CONCLUSION

Governments' temporary policies in India and Indonesia such as social distancing and close schools' activities create many ideations as a theory in this journal. The theory explains how cognitive and emotional are involved in creating ideations. Cognitively, the governments give policies to prevent the spread, however, in case of schools' activities being stopped its emotional factor is not supported by the system in India neither in Indonesia, but Vedantu and RuangGuru support to provide online learning in a time of COVID-19. It implies that technology can help society when they are restricted to do activities outside in the time of Pandemic. Companies could see this as references how they should develop their companies where absolutely technology is needed to support the companies at any time, they need it.

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PROLIFERATION OF HALLYU WAVE AND KOREAN POPULAR CULTURE ACROSS THE WORLD: A SYSTEMATIC LITERATURE REVIEW FROM 2000-2019

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ABSTRACT

The exponential growth in the popularity of Korean pop cultural products across the globe known as Hallyu wave has grabbed the attention of people worldwide. At times when the geographic boundaries have become blurred due to the virtual connectivity and advancement in internet technology, South Korean popular culture is developing at an unprecedented rate across the globe. The popularity is such that it has entered the mainstream even competing with the Hollywood films, dramas and music. The field of Hallyu though has attracted many from the academia, as it is still a newer research area, not many significant attempts have been made to review the literature in a systematic manner. The major objective of this paper is to acquire a better understanding, and a detailed review of the research regarding Hallyu wave, its allied areas, current status and trends. Systematic Literature Review (SLR) is the method used for this paper. This research has utilized the methods presented by Junior & Filho (2010), Jabbour (2013) and Seuring (2013). The researchers have deployed a systematic literature review approach to collect, analyze and synthesize data regarding the Hallyu wave, addressing a variety of topics using Google Scholar between 2000 and 2019 and selected 100 primary research articles. From the systematic literature review, the results or main gaps from the existing literature have been uncovered. For example: most of the low income countries do not have extensive research on Hallyu or most of the research on Hallyu is done in the region of East Asia and Pacific.

Keywords: Hallyu Wave, Korean Popular Culture, Cultural Hybridity, Cultural Diplomacy, Cultural Proximity.

INTRODUCTION

With over two decades of the evolution of Hallyu wave which can be roughly described as the spread of the Korean popular culture and media throughout the globe, the phenomenon of Hallyu wave has been successful in grasping the attention of academicians all over the world (Lyan, 2019; Masood & Rahim, 2020; Mustikawati, 2020; Ravina, 2009; Yoon, 2020). It is the powerful impact of Hallyu wave that has contributed to the growth of Korean economy and eventually created a positive image of Korea in the world (Elaskary, 2018; Lee, 2020; Kim, 2014; Sung, 2010).

There are numerous reasons that have facilitated the rise of Hallyu. According to Yin & Liew (2005), the economic growth of Korea, Korea's history of decolonization and the reassurance of Asian identity that came out as a response of social and cultural hegemony of the West caused the growth of Hallyu. Also the financial crisis of 1997 played a crucial part in expanding Hallyu as its aftermath led Korea to explore new export markets (Cho, 2005; Elfving-Hwang, 2013; Kim, 2007; Shim 2006). Undeniably, the role of South Korean government is very significant in popularising Hallyu.

As an outcome of the government's policies that provided opportunities to the domestic cultural industries, the Korean pop culture began to flourish (Korean Center for Information Services [KOCIS], 2013). Be it the establishment of Korean Culture Centers in every corner of the world or promoting Korea as a tourist hotspot via publicizing the locations of popular drama sets or providing incentives on the purchase of Korean goods in form of Korean pop culture, the role of government is noteworthy (Trolan, 2017; Walsh, 2014). Let's discuss the meaning of Hallyu.

Defining Hallyu Wave:

Evolving in the late 1990s, the spread of Korean popular culture (Hallyu) in China, Japan and rest of East Asia met with an unprecedented success. The dramas like "What is love"; "Winter Sonata" became very popular and grabbed the attention of the locals in China and Japan. This drama craze soon spread like fire across a major part of Asia and even in far off places like Middle East and Europe. Later on K-pop spearheaded this phenomenon accompanied by advancement in technology and advent of social media and networking in the late 2000s. It has to be noted that K-movies were simultaneously enjoyed by the general public of Korea and other nations after the government opened up the markets and provided more opportunities and less stringent rules of film making to the film makers.

Today the word Hallyu means anything that is Korean ranging from Korean popular culture products such as drama, music, movies, to food, cosmetics, games, animations etc. It would not be wrong to say that Hallyu is a cultural tsunami that has swept across the world (Dator & Seo, 2004; Endo & Matsumoto, 2004; Hanaki et al., 2007; Ji-eun, 2005; Tachasakulmas, 2011).Therefore Hallyu has been defined in numerous ways.

In fact, Hallyu is a term applicable only when the popular cultural products are exposed to the audiences outside Korea. Chua states that Hallyu content is mostly foreign to its audience (as cited in Lyan & Levkowitz, 2015). The popular cultural products fall under the category of Hallyu only when the products are exported to other countries and are successful irrespective of their popularity and reception within Korea (Kim, 2007).

According to Choi (2015), Hallyu covers multiple cultural domains as it include essential content (K-drama, K-pop), semi-essential content (videogame, food), para Hallyu products and services (tourism, cosmetic products, plastic surgery, fashion items and language services), distribution channels (various communication technologies) and effects (sale of commodities and national image. He further uses the term, Hallyu-hwa (literally meaning Hallyu-ize) to highlight the contribution and urge of both the producers and customers to popularize Hallyu.

Different scholars have categorized Hallyu in numerous ways. It has been groupedas Hallyu wave or Neo-Hallyu wave. Jin (2016) classified Hallyu into two phases as Hallyu 1.0 that extended from 1990s to 2007 and Hallyu 2.0 as the phase from 2007 to the present day. The second Hallyu wave has included not only Korean pop cultural products but also products like digital games, cosmetics, plastic surgery etc.

The period of Hallyu wave from 1990s-2007 witnessed the advancement in technology, smartphone revolution and advent of social media networking which enabled the fans to enjoy the Korean pop cultural products throughout the world. Whereas the present day Hallyu is the era of Neo- Hallyu where many new dimensions have been added like cosmetics, aesthetics and plastic surgery. Hallyu can be dissected into four parts: Hallyu 1.0 led by K-dramas, Hallyu 2.0 led by K-pop music, Hallyu 3.0 led by K-culture and finally Hallyu 4.0 led by K-style (Bok-rae, 2015).

Today with the K-pop bands like BTS, BLACKPINK, MAMAMOO, TXT attracting millions of audiences around the world; Movies like Parasite, The Host and Train to Busan gaining critics attention; Korean food like Kimchi, Bibimbap, Bulgogi and drinks like Soju, Bokbunja ju being served in all corners of the globe, the craze for Korean things is like never before. For the popularity of Korean things, the credit should be given to the fans and supranational fandoms that actively act as ambassadors and facilitators of Korean culture among their acquaintances and thus play a crucial role in spreading the Hallyu wave (Bok-rae, 2015; Otmagzin & Lyan, 2014). With all better things said of Hallyu, there are also instances where Hallyu is losing popularity and there are anti-Hallyu movements increasing in some countries (Ainslie et al., 2017; Chen, 2017; Ki-kim et al., 2014).

The aim of this article is to identify the variety of topics, subjects, and areas around which the research is being conducted across the world with regard to the Hallyu wave. For this purpose, the researchers carried out a systematic literature review. In relation to the context, the major objective of the article is to analyse the literature to present the gaps in the area of Hallyu studies.

As the area of Hallyu research is relatively new, the Hallyu phenomenon is changing its form since its inception in 1990s that has led to evolution of newer dimensions of Hallyu. For example, in the initial phase Hallyu to a major extent was limited to Korean-drama, Korean-movies in countries in East Asia and South East Asia. However, after the advent of social media, internet and new media roughly after 2000, Hallyu wave has been continuously expanding to the places in Europe, North America, Middle East, Latin America and South Asia.

Moreover, there is the inclusion of K-pop music, cosmetics, animation, games, plastic surgery, tourism etc. in the present day Hallyu. Therefore, it necessitates the need for an effort that can consolidate the existing literature. Through the detailed enquiry into the literature using the technique of systematic literature review, the areas thoroughly studied, areas not paid much attention, and emerging areas have been recognised. This would certainly help the academicians, researchers to follow up with the research and allow them to identify trends, pointers of the Hallyu research. Thus, the literature limiting to 100 research articles from 2000 to 2019 in Google Scholar was selected for the study.

The structure of the article is described below. Firstly, a brief review of the main subjects addressed in the research articles included in the study. Secondly, the methods used for carrying out the literature review have been stated. Finally, the main results or gaps of the analysis along with the conclusions and recommendations for future research are stated.

OBJECTIVES OF THE RESEARCH STUDY:

The objectives of the study are as follows:

1. To locate the countries and geographical regions where the research on Hallyu wave has expanded.
2. Toexplore the key areas, subjects and sub-themesof the research around theHallyu discourse.
3. To identify the methods deployed for researching Hallyu and its dimensions.
4. To recognize the dominant theories those have served as the background for the Hallyu research and studies.

Theoretical frame of reference
From the review of literature, the following theories are the ones primarily used:

Uses & gratifications approach: One of the classical theories of communicationUses & gratifications theory deals with what the audience does with the media. It was proposed by Elihu Katz, Jay Blumler and Gurevitch in 1973. This theory posits that the audiences' use of media is goal-directed and their goal is to satisfy their various needs. There are five types of needs that motivate people to seek media for gratification: Cognitive needs, Affective needs, Personal integrative needs, Social integrative needs, Tension release needs (Katz et al., 1973). This theory holds an important place in media studies due to the fact that with changing technologies there is also change in humans' habits of media usage (Mairaru et al., 2019). With reference to the consumption of Hallyu products, the various needs and media the audience uses is of significance, thus many researchers have utilized the Uses & gratifications approach (Alanzalon, 2011; Kato, 2013; Kwon, 2007; Millanyani & Pramiyanti 2015; Que, 2014).

Cultural Hybridity: One of the reasons, Hallyu appeals to the audiences throughout the world is the presence of the element of Hybridity. The interplay and blending between the local and global elements in a culture is the simplest explanation for cultural hybridity. Hybridization is significant as it is a useful concept for understanding and examining the influences of multiple cultures (Wagner, 2012).

For the audiences in Asia, the Hallyu cultural products such as K-dramas, K- movies and K-pop music provide them with a balanced mix of Asian values and western ideas. Therefore, hybridization leads to the sustenance of local identities in the global landscape (Shim, 2006). On the other hand, when the audiences outside Asia consume Hallyu products, in most cases, they are attracted towards the underrated and unknown Asian culture that is completely alien to them. Thus, the element of hybridity generates a curiosity towards the exotic Asian culture (Kim, 2018; Pramadya & Oktaviani, 2016; Yang, 2012).

Cultural Diplomacy/Soft power: The growth and success of Hallyu is facilitated by the use of soft power and cultural diplomacy of the government. Where one cannot win over the audiences throughout the world through the use of hard power such as military, war and authoritarian regime, the clever usage of soft power from the government side via diplomatic ways can influence the varied cultures hence people across the globe. Both these terms are intertwined with each other.

Cultural diplomacy a subset of public diplomacy can be described as "an actor's attempt to manage the international environment through making its cultural resources and achievements known overseas and/or facilitating cultural transmission abroad" (Cull, 2008, p.33). On the other hand, Soft power refers to "the ability to influence the behavior of others to get the outcomes one wants through attraction rather than coercion" (Nye, 2004, p. 2). Thus in case of Hallyu, it is the Korean government's policies and to win the hearts of public through its pop culture comes under cultural diplomacy where soft power is a tool to improve the country's image in other countries (Ainslie, 2016; Jang & Paik, 2012; Kim et al., 2016).

Audience/ Reception Analysis- Stuart Hall's encoding decoding:The idea behind audience reception analysis is to understand how the audience receives the media i.e. what happens when the audience encounters a media text. Taking into consideration of the active nature of the audience, the reception analysis framework focus on the ways audience constructs meanings out of the media texts. As per Stuart Hall (1973), there are three categorizations of readings of a media (Television) text: Dominant or preferred readings are produced when viewers who fully believe in whatever is displayed on television meaning that the viewers get the intended message the television apparatus (producers, directors, and scriptwriters) wanted to convey.

Negotiated readings are produced when viewers add their personal interpretation of the content that differs from the preferred reading in important ways but not completely. Oppositional readings are produced by the viewers when they develop interpretations of content which are directly opposition to the dominant reading of the text. Thus, there are also attempts from the side of the researchers to check the audience interpretation of the Korean pop cultural products (Briandana & Ibrahim, 2015; Espiritu, 2011; Ruslan & Latif, 2016).

Cultural proximity: Joseph D. Straubhaar proposed the cultural proximity theory in 1991. This theory states that audiences are more likely to select products from their own culture or from countries similar to theirs. The audience opts for the local media content because of the identifiable cultural content and language. If the local media is unable to deliver the content desired by the audience, they would prefer a country that's proximate to their native country in terms of the language, culture, and geography. Straubhaar argues that it is due to the presence of a certain set of cultural offerings that audience experience cultural proximity and identify with the media content. These can include language, customs, ethnic appearances, values (Straubhaar, 1991).

The commonalities and familiarity that Hallyu products share with the culture of the countries of reception is one of the significant forces for the success of Hallyu especially in East Asia and South East Asia (Ho, 2013). The common values shared across the Asian region allows for the easier dissemination of Hallyu products as the audiences can understand the meaning of certain traditions, systems and norms followed in the society. Often Korean dramas and movies have plot, storyline that make a reference to Confucianism, a faith system followed in China, Taiwan and other parts of East Asia. The themes of filial piety, family system and traditions related to Confucianism in the Korean popular culture is a major factor for the success of Hallyu (Ryoo, 2009).

Cultural discount: Colin Hoskins and Rolf Mirus introduced the Cultural Discount theory in 1988. The theory states that the cultural distinctiveness of a country's cultural products in terms of styles, values, beliefs, institutions and behavioral patterns might hinder the acceptance of cultural products in other countries. This means that larger the cultural distance between the imported media products and audience, less likely the audience is to develop a connection with the media products.

It further throws light on how cultural products when exported to a foreign country lose its appeal owing to the differences between the country of origin and country of reception and audiences' inability to identify with the norms and values portrayed in the cultural products (Hoskins & Mirus, 1988). It means that the media products with low cultural discount would be able to penetrate the foreign markets more easily than the media products with high cultural discount. Thus there is a probability that Hallyu products have low cultural discount than its counterparts. This has generated a lot of interest in the researchers to explore the relationship between Hallyu's success and cultural discount (Sora, 2004; Yang, 2012).

Media Dependency: In 1976, American communications researchers, Sandra Ball-Rokeach and Melvin De Fleur developed the media dependency theory. This theory focuses on the relationship between the media and the audiences. It states that individuals tend to develop a dependency on the media, which is capable of meeting various needs. The two major propositions of the theory include 1. Greater the number of social functions performed by the media greater will be the audience dependency on the media; 2. In times of social conflict and change, the audience dependence on the media increases thus the media's effect on the audiences will also increase (Ball-Rokeach & De Fleur, 1976). Thus there are chances where the audiences might develop a dependency on the Korean media products (Cabello, 2018; Utami, 2019).

Cultivation Analysis: Cultivation theory / Cultivation Analysis was proposed by George Gerbner. This theory argues that media especially television presents exaggerated and unreal images, as a result of which people perceive the real world through television's perspective. They think of the world as displayed on the television.

As television offers many ideas, the continuing consumption of television over a long time cultivates specific values, beliefs, attitudes, and desires in people, which shapes their perception of the world. It means that media consumption leads to the shaping of people's mind-sets (Gerbner, 1998). Hence the long term effects of Korean media consumption in case of Hallyu wave can be understood with the help of cultivation theory. There is a possibility that the transnational audience might develop a different attitude, picture, imagery and ideology about anything portrayed in the popular cultural products such as Korean culture, Koreans and Korea. For example a positive image of Korea is constructed among the audience of K-pop culture makes them to visit Korea, buy Korean products (Jung, 2016; Trolan, 2017).

Cultural Imperialism/Americanization: The Hallyu phenomenon has strived to make the Korean pop culture known throughout the world. Hallyu not only has developed a sense of Koreanness among the people of Korea but also providing an identity to Asians in the world (Oh, 2009; Sung, 2012).

Hallyu is thus seen as the response to the dominant Western culture in one way (Kim, 2007; Kim et al., 2017). There are also debates around Hallyu products being a copy cat of the west and invading the weaker markets of Asia as a form of cultural imperialism (Duong, 2016; Huang, 2009). Cultural imperialism can be defined as "a verifiable process of social influence by which a nation imposes on other countries its sets of beliefs, values, knowledge and behavioural norms as well as its overall style of life" (Beltran, 1978, p. 184).Thus, the area concerning cultural imperialism and its linkage with Hallyu wave needs to be researched upon in a much detailed manner.

Methods and research technique

This research is based on a systematic literature review, which provides an analysis on the emerging topics of a subject area (Jabbour, 2013, p. 145). According to Dewey & Drahota (2016), a Systematic Literature Review (SLR) "identifies, selects and critically appraises research in order to answer a clearly formulated question".

In field of media studies the systematic literature review has been utilized by various researchers to find out the relation between social media and outbreak and management of disease (Charles-Smith et al., 2015), social media and sharing of knowledge (Ahmed et al., 2019), user generated content studies (Naab & Sehl, 2016), and in health communication research (Moonrhead et al., 2013; Sharma et al., 2019)In the present study, the researchers have adapted the method of systematic literature review based on the works of Junior & Filho (2010), Seuring (2013) andJabbour (2013) to analyse the research articles related to Hallyu wave on Google Scholar.

The reason why Google scholar was utilized for the present study is due to its free availability and convenient usage and the display of articles from where it can be sourced and found online.

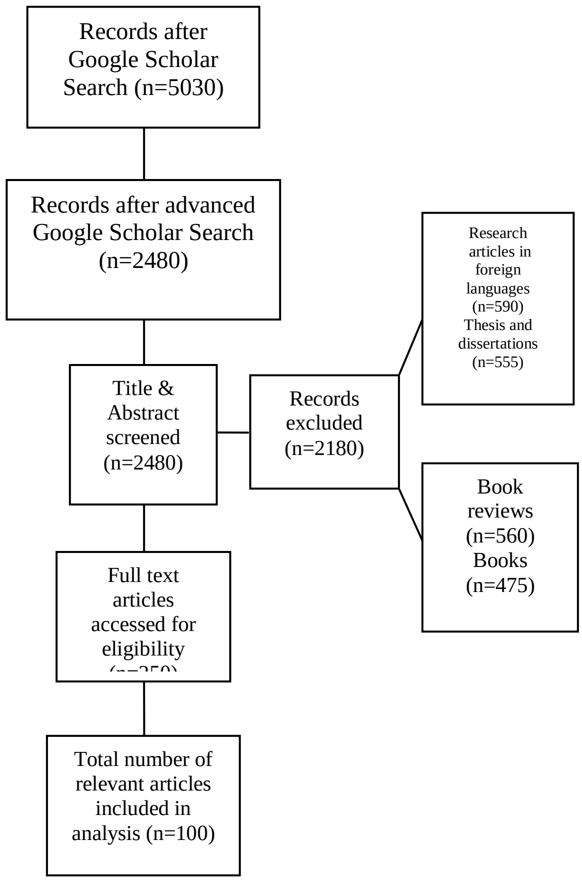
Following are the various activities carried out in this literature review:

1. Identifying and analysing research articles on Google Scholar after extensively searching key words like Hallyu wave, Korean popular culture, K-dramas, K-pop music, K-movies from the year 2000 till 2019;
2. Developing a classification and coding for the key features of the articles;
3. Analysing the results obtained from the coding and classification of the articles and describing the strengths and weaknesses of the articles;
4. Providing the suggestions for filling the main gaps after the analysis of the articles related to the subject matter.

The first steps of the methodology are presented here whereas the last two steps are discussed in the result section:

Characterization of the instrument and execution of the research:
The search in Google Scholar was only limited to research articles (journal articles, conference papers, proceedings) and omitted results that contained book reviews, thesis, and newspaper, magazines and website articles. The key words used for the Google Scholar search were Hallyu Wave, K-dramas, K-pop music, K-movie.

PRISMA flow diagram



*PRISMAstands for Preferred Reporting Items for Systematic Reviews and Meta-Analyses, "is an evidence-based minimum set of items for reporting systematic reviews and meta-analyses"("PRISMA", 2020).

Initially, an analysis of the research articles carrying the citations on Google Scholar was made, as shown in Table A1. The purpose was to highlight the contributions made by these articles in the academia. Throughout the paper the order and sequencing was followed as was present in Table A1. In Table A2, after the evaluation of the issues raised by the authors in the selected articles, a brief summary of each article's objective is presented.

Note: TABLE A1 and TABLE A2 are placed at the APPENDIX section of this research paper.
From the data collected from the analysis of the research articles related to Hallyu wave, the classification and coding for the articles was developed. There are around ten categories/classifications sequenced from 1 to 10 as these categories represent major subjects in the articles.

The coding for the classifications range from A to K as shown in Table 1:

Table 1: Categories and subcategories used in this paper

Category	Meaning	Codes of Alternative
1	Context (countries where Hallyu has expanded)	High Income Low and Middle Income Low Income Lower Middle Income Middle income Upper Middle Income General (Worldwide) Non - applicable
2	Geographic region	East Asia and Pacific Europe and Central Asia Latin America and Caribbean Middle East and North Africa North America South Asia Sub – Saharan Africa General (Worldwide) Non-applicable
3	Objective	Conceptually contributes to the subject Presents a case study Literature review / Critical commentary Non-applicable
4	Main subject	Related to fandom Related to tourism Related to fashion Related to market & consumerism, consumption Related to identity construction Related to transnational flow, contra flow & globalisation Related to international relations between Korea and other countries Related to the growth, evolution of Hallyu Related to the response to Hallyu Others (Gendered perspective. Class formation, Family structure, Gay rights, Film studies) Non-applicable
5	Methods used	Quantitative Qualitative Conceptual Hybrid (Quantitative and qualitative; Qualitative and quantitative) Non-applicable
6	Dimension Analyzed	Hallyu K-Drama K-Pop K-Movies General (Korean Media) Non – applicable
7	Theoretical Framework	Uses & gratifications approach Cultural hybridity Cultural diplomacy; Soft power Audience/ Reception Analysis- Stuart Hall's encoding decoding Cultural proximity Cultural discount Media Dependency Cultivation Analysis Cultural Imperialism/ Americanisation Others(Brand placement, Grounded theory, Pop nationalism; Diffusion of Innovation; Agenda setting, Cultural Regionalization, Word of mouth, Data Analysis, Construction Theory, Windowing, Melodrama, Feminism, Globalization, Sexuality, Dramaturgy, Confucianism, Multilingualism, Structural Equation Mode, Film induced tourism, Social change, Cultural technology, Social learning theory) Non applicable
8	Topics	Linkage of govt. support to Hallyu Increasing negative sentiments and outrage towards Hallyu Hallyu as an image building tool for South Korea Link of new media technologies, Social networking, YouTube with soaring popularity of Hallyu Construction of spaces and online communities of Hallyu Perception towards Hallyu Others(Exportability of movies, Brand placement in movies, Rising indigenous capacity of Korean media producers, Religion as a contributory factor for Hallyu, Family in Hallyu, Love values in K-drama, Role of gender, Cultural values, Hallyu as mobilizing source, Active audience, Multilingual identity, Hallyu as a pull for tourism, destination image, Fandom as subculture, Global positioning of Hallyu, Representation of narrators in K-movies, Hallyu as ethnic media) Non - applicable
9	Results	Comparative study Newer perspectives(Anti-Hallyu sentiments, Gendered perspectives, Cultural diffusion, Role of narrators, Fan activism) Evaluation of the effect, impact, and influence of Hallyu Observations and experiences from Hallyu Past, Present and future of Hallyu Non – applicable
10	Analysis period	Less than 3 yrs Between 3-5 yrs Between 5-10 yrs More than 10 yrs Non -applicable

"Authors' Calculations"

The first classification denotes the context of the research articles under study. Here context mean the countries where the expansion of Hallyu has taken place. The codes for context ranged from A to H. For the classification, the researchers have chosen the categorization of countries on the basis of income levels according to the World Bank from A to F.

The code G is used for General having a worldwide context whereas the code H stands for non- applicable when the studies do not fit under the codes presented. It is important to study the context in case of Hallyu wave as it gives us the idea whether countries where Hallyu has expanded have some relation with the income level or not.

The second classification denotes the identification of the geographic region of the research countries. With codes ranging from A to I, where A to G represent the countries falling under geographic region as per the World Bank, the code H represents General whereas code I is used for non-applicable meaning the studies do not fit under the codes presented.

The third classification is about the objectives of the articles. It shows whether the article takes a conceptual approach or a case study taking about a particular case, instance, occasion or a literature review dealing with the existing literature of the subject that might be looked from a critical angle. The summary of the objectives of the articles is presented in Table A1.

The fourth classification is about the main subject or focus of the articles with codes ranging from A to K. Here, the concern is the identification of the key areas dealt in the articles.

The fifth classification involves the identification of the methods applied in the selected articles, coded from A to E. This step helps in verifying which methods are most used by the authors in articles regarding Hallyu wave.

The sixth classification deals with the identification of various dimensions analysed in the selected articles. It is coded from letters A to F. The aim here is to discover the dominant dimension analysed in the articles.

The seventh classification is related to highlighting the various theories used while analysing Hallyu and its dimensions. It is coded using letters from A to K assessing whether the dominant theories used in the articles fall under the category of cultural studies, media studies, globalization etc.

The eighth classification deals with the identification of major topics covered in the articles, it is coded from A to H.

The ninth classification is related to the assessment of results of the articles under study. It is coded from letters A to F. The aim of this classification is to analyse whether there are new trends, perspectives emerging in the field related to Hallyu or added to the already existing knowledge and literature.

Lastly, the tenth classification deals with the period during which the research studies have been conducted. The codes for this classification range from A to E, it assess the scope of the data collected in the studies.

RESULTS AND DISCUSSIONS

In this section, the overall categorization of the articles according to each classification and coding has been shown in Table 2. It further throws light into their analysis of each classification.

Table 2: Data classification and categorization for each paper

N	Context	Geographic Region	Objective	Main subject	Method	Dimension Analyzed	Theoretical Framework	Topics	Results	Analysis Period
1	A, F	A	A	I	C	A	C	A	C	E
2	A	A	B	G	B	A	C	C	B	E
3	G	H	C	H	C	A	K	A	E	E
4	G	H	B	F	C	A	C	A	E	E
5	H	I	B	E	B	B	J	G	C	E
6	D	F	B	F	C	A	J	D	B	E

7	F	A	B	I	B	A	J	C	C	C
8	D, F	A	B	I	B	A	C	B	B	E
9	F	B	B	H	B	A	E	D	D	A
10	G	H	A	F	C	A	K	D	D	E
11	H	I	A	H	C	A	K	D	E	E
12	A	E	B	F	B	A	B	D	C	A
13	A	B, C	B	A	A	A	B	F	C	E
14	D	A	B	I	B	A	J	F	C	E
15	H	A	A	G	C	A	J	F	C	E
16	A	B	B	E	B	A	J	D	C	A
17	A	A	A	H	C	A	C	A	D	E
18	A	E	B	E	B	A	J	G	D	A
19	G	H	A	H	C	C	K	D	D	E
20	F	A	B	D	A	A	J	D	C	E
21	F	A	B	D	A	A	C	F	C	E
22	G	H	A	F	C	A	K	D	D	E
23	A	A	B	H	B	D	K	A	C	D
24	F	A	B	F	D	B	A	F	C	E
25	F	A	B	J	D	B	D	F	C	E
26	G	H	B	J	A	B	J	G	B	A
27	H	G	B	G	D	B	J	F	C	E
28	G	H	B	A	B	B	J	E	B	A
29	A	A	B	F	A	B	I	G	C	D
30	G	H	B	A	B	B	B	E	C	A
31	F	A	B	H	B	B	J	G	A	E
32	F	A	B	I	B	B	D	F	C	E
33	G	H	B	D	A	C	B	D	D	A
34	D	A	B	D	B	B	D	G	C	E
35	A	A	B	D	A	B	J	D	B	A
36	H	I	A	J	B	B	J	G	D	E
37	F	A	B	D	D	B	E	G	C	B
38	A	A	B	J	B	B	J	G	B	E
39	F	D	B	D	B	B	J	F	C	E
40	F	A	B	D	A	B	D	F	C	A
41	D	A	B	I	D	B	C	G	C	E
42	A	A	B	J	D	B	D	G	B	A
43	D	A	B	F	B	B	D	F	B	E
44	A	A	B	J	B	B	J	G	B	C
45	H	I	B	H	B	C	J	D	B	A
46	D	A	B	A	B	B	D	C	C	A
47	A, F	A	B	E	A	B	E	C	C	A
48	A	A	B	F	B	B	C	G	B	E
49	D	A	B	I	B	B	D	G	D	E
50	H	I	B	E	B	B	J	G	B	A
51	A, F	A	B	B	A	B	J	C	C	A
52	D	D	B	B	B	B	D	G	C	E
53	A	A	B	A	B	A	J	C	C	E
54	G	H	A	B	B	A	B	A	C	E
55	A	A	B	B	B	B	J	G	C	A

56	A	A	B	B	B	B	E	G	C	A
57	A	A	B	I	A	A	E	F	C	E
58	A	D	B	A	D	C	D	E	B	E
59	F	A	B	E	C	C	D	F	C	E
60	A	A	B	G	B	A	B	D	B	E
61	A	A	B	F	B	C	B	D	B	E
62	A	E	B	A	B	C	E	D	B	A
63	A	A	B	D	B	A	J	C	D	E
64	A, F	A	B	D	B	A	D	F	A	E
65	H	A	C	F	B	A	B	A	D	E
66	D	A	B	A	D	A	K	E	C	E
67	G	H	B	D	B	A	J	G	C	B
68	A	A	C	H	B	D	K	G	B	E
69	A	A	B	H	A	C	J	D	C	E
70	A	E	B	F	B	D	D	G	B	E
71	A	A	C	H	B	D	K	G	D	E
72	H	C	B	A	D	C	C	D	C	E
73	H	A	C	D	C	A	I	F	C	E
74	A	A	B	J	B	D	J	G	B	E
75	A	E	B	E	B	D	D	B	C	E
76	D	D	B	A	B	A	B	F	B	A
77	F	A	C	G	B	A	K	F	E	E
78	A	A	C	F	B	A	J	F	C	B
79	A	A	B	H	B	D	C	A	B	E
80	A	A	B	F	B	E	J	D	C	E
81	A	A	B	D	B	D	J	G	C	C
82	A	A	B	D	A	D	F	C	A	A
83	G	H	C	F	B	A	B	D	C	E
84	A	A	C	D	D	E	K	A	C	E
85	A	A	B	D	A	D	F	G	D	C
86	D	F	B	G	C	A	C	A	C	E
87	H	I	C	D	C	A	J	C	D	E
88	A	A	B	A	D	B	C	D	C	A
89	A, F	A	B	G	D	A	J	A	B	E
90	F	B	B	A	A	C	B	F	C	A
91	A	A	C	E	C	E	B	D	B	E
92	A	A	B	F	B	D	J	F	C	E
93	D	F	B	I	A	A	J	D	C	A
94	A	A	B	F	B	C	J	D	B	E
95	F	A	B	I	D	A	D	F	C	E
96	A	A	C	F	C	C	J	A	B	E
97	A	A	B	H	B	A	C	F	C	E
98	F	A	B	B	A	D	J	G	C	E
99	D	A	B	G	A	C	A	D	C	E
100	D	F	B	F	B	A	B	G	C	E

"Authors' Calculations"

Context:
The first classification dealt with the context of the research articles under study. Here context mean the countries where the phenomenon of Hallyu has expanded. The codes for context ranged from A to H. For the classification, the researchers have chosen the categorization of countries on the basis of income levels according to the World Bank from A to F. Two more codes G and H were added to suit the research requirement. The codes are as follows: A - High Income, B – Low and Middle Income, C – Low Income, D – Lower Middle Income, E – Middle Income, F- Upper Middle Income, G- General (Worldwide), H – Non-applicable.

The results obtained after analyzing 100 articles are shown in Figure 1.

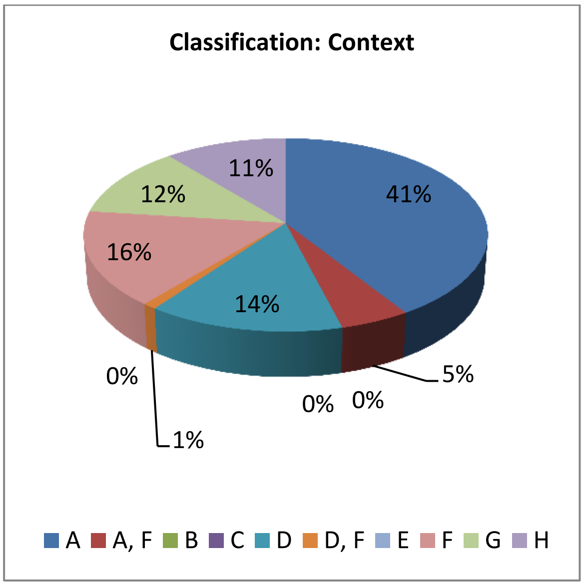


Figure.1

A majority of 41% of the studies were conducted in high income countries (A). It was followed by 16% studies in countries with upper middle income (F)and 14% studies in lower middle income (D). About 12% studies dealt with the countries all over the world in general (G) while 11% studies fall under the category of non-applicable (H). 5% of the studies were jointly conducted in countries with high income and upper middle income represented as (A, F) whereas only 1% of study was jointly conducted in countries with lower middle income and upper middle income (D, F). There was no study conducted in countries withlow and middle income (B); low income (C); and middle income (E). This showed that studies about Hallyu have been more focused on countries with high income rather than countries having middle income and low income. Thus exploring the Hallyu wave in low income countries is crucial.

Gap 1: There is a negligible amount of research conducted in countries with low income.

Geographic Region: After the identification of the countries where the Hallyu research is being carried out. The researchers have used the categorization of geographic region according to the World Bank that showed the area these countries fitin (A-G). Two more codes H and I were added to fit the requirement of the research. The letters range for geographic region range from A to I as follows: A – East Asia and Pacific, B – Europe and Central Asia, C – Latin America and Caribbean, D- Middle East and North Africa, E – North America, F – South Asia, G- Sub – Saharan Africa, H – General (Worldwide), I – Non – applicable.

This classification aimed at looking at the diversity of the articles related to Hallyu. The analysis can be seen in Figure.2

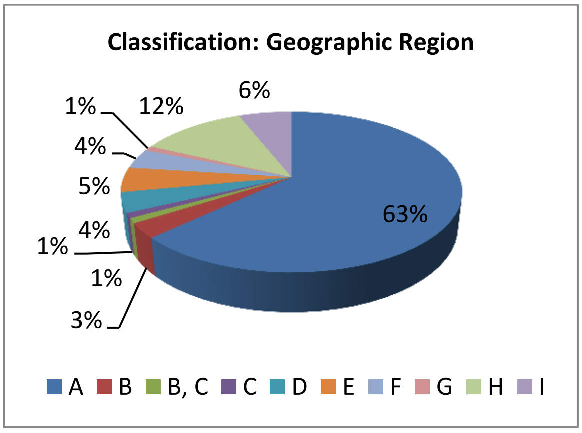


Figure.2

The analysis showed that the majority of 63% studies come from the region of East Asia and Pacific (A) whereas following it 12% of the studies have global reach (H). 6% of the articles have not mentioned the geographic region, hence falling in the category (I); 5% of the articles come from the region of North America (E); 4% of the articles were from each of Middle East and North Africa (D) andSouth Asia (F). There were 3% articles that come from Europe and Central Asia (B); and 1% of the articles each coming jointly from Europe and Central Asia and Latin America and Caribbean (B, C), Latin America and Caribbean (C) and Sub - Saharan Africa (G).

Gap 2: More studies are needed from places other than East Asia and Pacific.

Objective:
This third classification dealt with the objectives of the research articles. The objectives were coded from A to D as follows: A – Conceptually contributes to the subject, B – Presents a case study, C – Literature review / Critical commentary, D – Non – applicable. The analysis of the objective can be seen in Figure. 3.

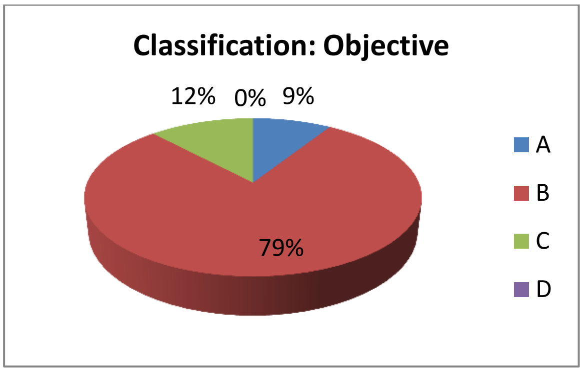


Figure.3

From the analysis of the objectives in the selected articles, it was found that the majority of 79% articles were case study (B). It was followed by 12% of the articles that presented literature review / critical commentary (C); 9% of the articles conceptually contributed to the subject (A) while there were no articles falling under the option non- applicable (D).

Gap 3: Need for more defined concepts and terminology related to the field of Hallyu.

Main subject:
This fourth classification analysed the main subject of the articles used in the study. The main subject has been coded from A to K as follows: A - Related to fandom, B - Related to tourism, C - Related to fashion, D - Related to market & consumerism, consumption, E - Related to identity construction, F - Related to transnational flow, contra flow & globalization, G - Related to international relations between Korea and other countries, H - Related to the growth, evolution of Hallyu, I - Related to the response to Hallyu, J - Others (Gendered perspective. Class formation, Family structure, Gay rights, Film studies), K - Non- applicable. The analysis is shown in Figure. 4

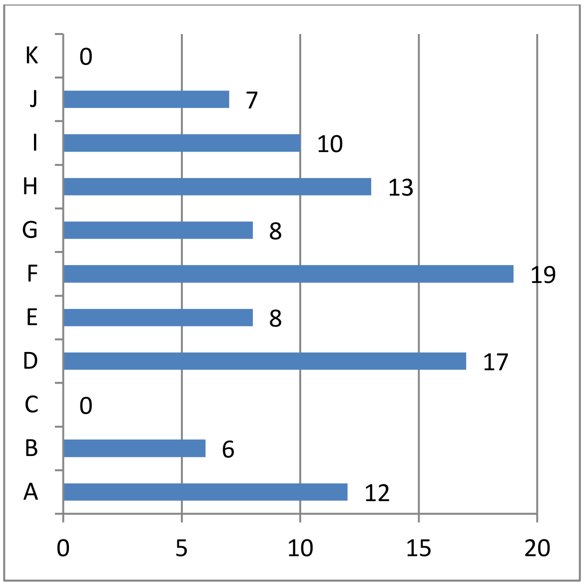


Figure.4

From the analysis of the major subjects in the articles it was found that the majority of 19% of the articles were related to transnational flow, contra flow and globalization (F); 17% articles were related to market, consumerism and consumption (D); 13% articles were related to growth, evolution of Hallyu (H); 12% articles were related to fandom (A); 10% articles dealt with response of Hallyu (I); 8% articles were related to each of identity construction (E) and international relations between Korea and other countries (G); 7% articles were related to others (J) option; 6% articles were related to tourism (B). However, there were no articles related to fashion (C) and under non-applicable (K) option.

Gap 4: Fashion is the least explored subject in the area of Hallyu research.

Methods used: This classification dealt with the various methods that have been utilized for the study. The codes for this category range from A to E as follows: A – Quantitative, B – Qualitative, C – Conceptual, D – Hybrid (Quantitative and qualitative; Qualitative and quantitative), E – Non – applicable. The analysis for the used methods is shown in Figure. 5

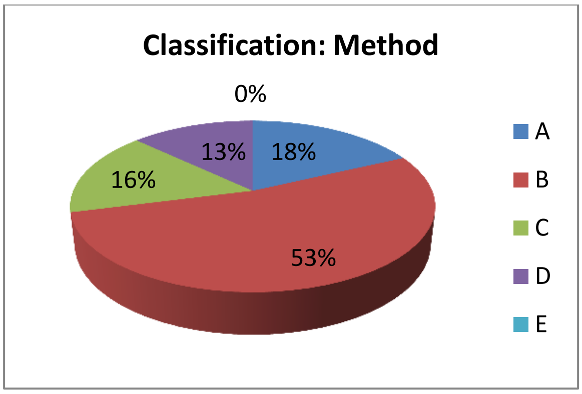


Figure 5

The majority of 53% of articles used the qualitative methods (B); followed by 18% articles that deployed quantitative methods (A); 16% articles used conceptual methods (C); 13% articles utilized the hybrid methods (D). There were no articles that did not mention the methods used hence none of the articles fit under the non-applicable option.

Gap 5: There is a requirement of new studies in the field of Hallyu wave that utilizes hybrid methods.

Dimension Analyzed: This sixth classification dealt with identifying the various dimensions of the Hallyu wave. The codes for this category range from letters A to F as follows: A – Hallyu, B – K-Drama, C – K-Pop, D – K-Movies, E – General (Korean Media) , F – Non – applicable.

The analysis for the dimensions covered in the articles is shown in Figure.6

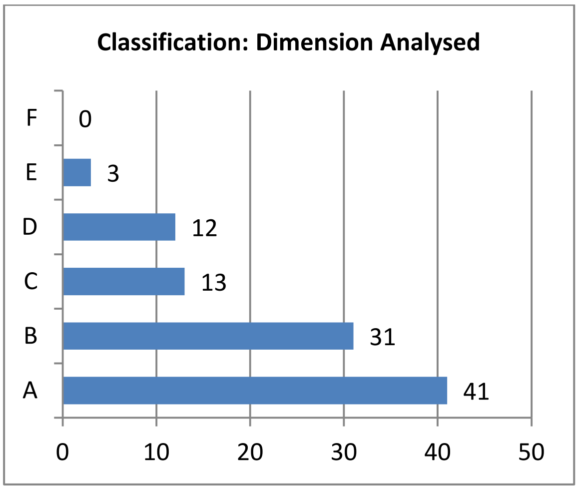


Figure.6

The majority of 41% of the articles analyzed the overall dimension of Hallyu (A). It was followed by 31% that involved the analysis of the dimension of K-dramas (B); 13% articles covered the K-pop (C) as the major dimension; 12% articles analyzed the dimension of K-movies (D); and 3% articles discussed in general, the Korean media (E). None of the articles fit under the non-applicable (F) option. **Gap 6:** K-pop and K-movies both appear to be overlooked dimension and thus there is a necessity of more studies that deal with K-pop and K-movies in future.

Theoretical Framework used: The seventh classification dealt with the identification of various theoretical frameworks utilized in the selected articles. The codes for this category range from the letters A to K as follows: A – Uses & gratifications approach, B – Cultural hybridity, C – Cultural diplomacy / Soft power, D – Audience / Reception analysis – Stuart Hall's encoding decoding, E – Cultural proximity, F – Cultural discount, G – Media dependency, H – Cultivation analysis, I – Cultural imperialism / Americanization, J – Others (Brand placement; Grounded Theory; Pop nationalism; Diffusion of Innovation; Agenda setting; Cultural Regionalization; Word of mouth; Data analysis; Construction Theory; Windowing; Melodrama; Feminism; Globalization, Sexuality; Dramaturgy; Confucianism; Multilingualism; Structural Equation Mode; Film induced tourism; Social change; Cultural technology; Social learning theory). The analysis for the classification of various theoretical frameworks utilized in the selected articles is presented in Figure. 7

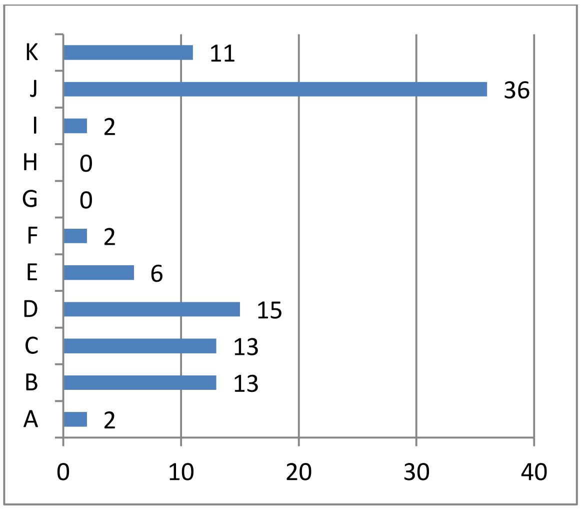


Figure.7

Around 36% of the articles were from the others option (J); 15% articles used the Audience/ Reception analysis (D) as their theoretical framework; 13% articles each utilized Cultural hybridity (B) and Cultural diplomacy/ Soft power (C) as the main theoretical framework; whereas 11% articles did not clearly mention their theoretical framework hence non-applicable (K) option. 6% articles made use of the cultural proximity (E) as their theoretical reference; and each of the 2% articles used Uses & gratifications approach (A); Cultural discount (F); Cultural imperialism/Americanization (I) as their theoretical framework. None of the articles utilized the theories of Media dependency (G) and Cultivation analysis (H), the major theories of mass communication.

Gap 7: There is an absence of studies which have used Media dependency and Cultivation analysis in the study of Hallyu and its dimensions. Hence, future studies must incorporate these media theories.

Topics:

The eighth classification involved the identification of various topics that were covered in the articles. The codes for the category included the letters from A to H as follows: A – Linkage of govt. support to Hallyu; B – Increasing negative sentiments and outrage towards Hallyu, C – Hallyu as an image building tool for South Korea, D – Link of new media technologies, Social networking, YouTube with soaring popularity of Hallyu, E – Construction of spaces and online communities of Hallyu, F – Perception towards Hallyu, G – Others (Exportability of movies; Brand Placement in movies; Rising indigenous capacity of Korean media producers; Religion as a contributory factor for Hallyu; Family in Hallyu; Love values in K-drama; Role of gender; Cultural values; Hallyu as mobilizing source; Active audience; Multilingual identity; Hallyu as a pull for tourism; Destination image; Fandom as subculture; Global positioning of Hallyu; Representation of narrators in K-movies), H – Non – applicable. The results are presented in the Figure. 8

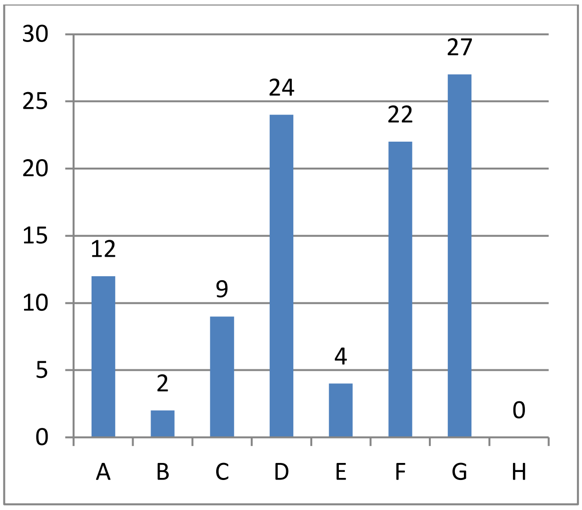


Figure.8

The majority of 27% articles have topics that fit under the option of others (G); followed by 24% articles related to the topics of link of new media technologies, Social networking, YouTube with soaring popularity of Hallyu (D) and 22% articles related to perception towards Hallyu (F). 12% articles have topics concerning linkage of governmental support to Hallyu (A); 9% articles' have topics related to Hallyu as an image building tool for South Korea (C); 4% articles have topics related to construction of spaces and online communities of Hallyu (E); and 2% articles have topics that dealt with increasing negative sentiments and outrage towards Hallyu (B). However, no articles were found in the non-applicable (H) option.

Gap 8: There is a need for more studies that look at the growth of Hallyu critically.

Results:

The ninth classification presented the results of the research articles included in the analysis. It was coded with letters from A to F as follows: A – Comparative study, B – Newer perspective (Anti-Hallyu sentiments, Gendered perspectives, Cultural diffusion, Role of narrators, Fan activism), C- Evaluation of the effect, impact, and influence of Hallyu, D – Observations and experiences from Hallyu, E – Past, present and future of Hallyu, F – Non – applicable. The analysis has been shown in Figure. 9

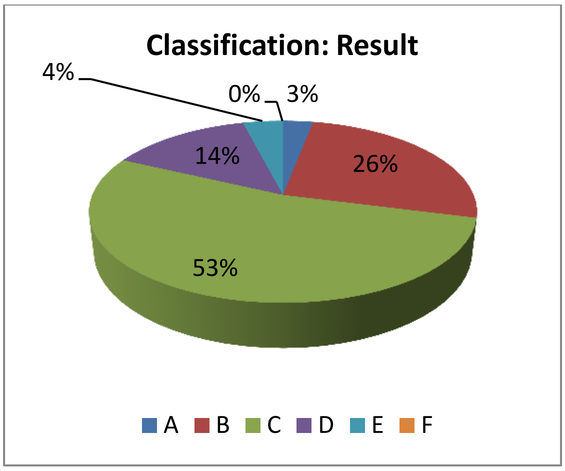


Figure.9

A majority of 53% articles dealt with the results involving evaluation of the effect, impact and influence of Hallyu (C). It was followed by 26% articles that have results mentioning newer perspectives in the field of Hallyu (B); 14% articles' results dealt with observations and experiences from Hallyu (D); 4% articles' results dealt with the past, present and future of Hallyu (E) while 3% articles' results had comparative study (A). Also there were no articles falling under non-applicable option (F).

Gap 9: More comparative studies in the area of Hallyu are required.

Analysis period:

Finally, the tenth classification dealt with the period the data has been analysed in the selected articles. The codes were developed from the letters A to E as follows: A – Less than 3 yrs, B – Between 3-5 yrs, C – Between 5-10 yrs, D – More than 10 yrs, E – Non –applicable. The analysis is shown in Figure. 10

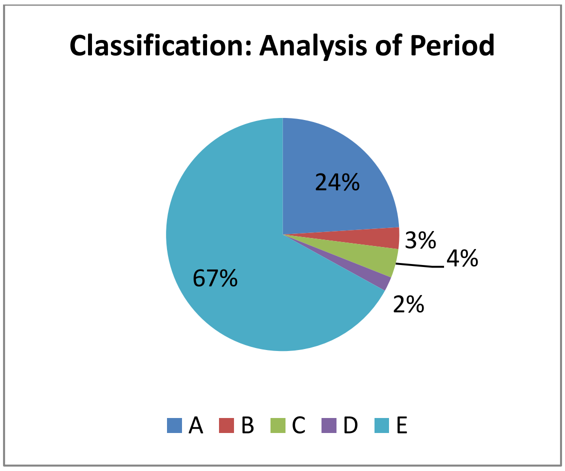


Figure.10

Most of 67% articles did not mention the period of analysis thus fit under the code, non –applicable (E). It was followed by 24% of the articles with the analysis period of less than 3 yrs (A); 4% articles with the analysis period between 5-10 yrs (C); 3% articles with the analysis period between 3-5 yrs (B); and 2% articles with the analysis period more than 10 yrs (D).

Gap 10: There is a deficit of studies that have longer time periods. To measure and understand the impact made by Hallyu in the long run, studies with longer terms are required.

CONCLUSIONS AND RECOMMENDATIONS

This article focused on the central theme of Hallyu wave to explore how the area has grown in field of academic research. As the South Korean popular culture is still spreading due to the power of social networking and new media, the phenomenon of Hallyu is in recent discussion and a growing field.Observing the material in the research articles on Google Scholar from 2000-2019, the present study aimed at presenting the major subjects of the Hallyu research and therefore, identified gaps that can be further used as opportunities in development of new areas of research in future. This article used the propositions made by Junior & Filho (2010) and adapted it to analyse the articles searched on Google Scholar. Mainly, a total of ten categories were established and ten gaps were identified from the selected articles.

In the first classification context was analysed which studied the extent of Hallyu's reach in terms of income level. It showed that there is a direct relation between the number of researches and income; in high income countries more researches are being done and in low income countries there are lesser studies. This implied that Hallyu certainly have a huge audience in high income countries whereas there might be a possibility that Hallyu was apparently unknown to a less population in low income countries. Thus researchers could explore the reasons for the slow reach of Hallyu in low income countries and also investigate the attempts of the Korean government to popularize Hallyu in low income countries.

In the second classification of geographic region, the aim was to analyse the diversity of the Hallyu research meaning which region the studies focused on. It was found that most of the studies on Hallyu had focused on the region of East Asia and Pacific whereas the regions of Europe & Central Asia, Latin America & Caribbean, and Sub-Saharan Africa have been hardly studied. This explained that the phenomenon of Hallyu has been extensively studied in the region of East Asia & Pacific owing to its origin, whereas in regions of Europe & Central Asia, Latin America & Caribbean and Sub-Saharan Africa, Hallyu has still not attained peak popularity and thus researchers there must pay more attention to the growth of Hallyu. In the third classification the objectives of the research articles were analysed.

The analysis showed that majority of the studies was case study discussing a particular instance, scenario whereas conceptual studies were least in number. This showed the convenience of focusing on individual cases over working on theories and conceptual framework related to the subject of Hallyu.Hence, researchers should undertake research studies that add to the conceptual understanding of Hallyu in developing new terminologies, theories and ideas related to Hallyu phenomenon in future.

In the fourth classification, the analysis of major subjects of the selected research articles was made. The main subject included the discourse around globalization in majority whereas there were a minimal number of research articles that discussed tourism as the main subject while none of the articles had fashion as their subject. This indicated that Hallyu's expansion was mostly seen as a transnational flow of media, information resulting out of globalisation and was explored to a large extent contrary to subjects like fashion, tourism etc. Hence, the researchers must incorporate interdisciplinary approach.

In the fifth classification, the methods used in the research articles were analysed. While the majority of the research articles used the qualitative methods, the use of hybrid methods was least utilized in the research articles. This emphasized the reliance on subjective data over objective data.Thus, there is a need for researchers to develop studies that use hybrid or mixed methods approach so that there could be a balance between objectivity and subjectivity.

In the sixth classification, dimensions of Hallyu were analysed. The most prominent dimension was of Hallyu wave itself, followed by the dimension of K-dramas whereas Korean media was the least explored dimension. This indicated the hierarchy among the dimensions of Hallyu so; the dimensions of K-pop, K-movies along with the Korean media in general should be investigated more by th
e researches in future.

In the seventh classification, the theoretical framework utilized in the articles was analysed. As the research of Hallyu is multidisciplinary, a lot of theories from different fields have been applied during the study of Hallyu phenomenon that has resulted in majority of the articles resorting to the others option whereas audience reception was the widely used theoretical background for maximum number of studies. On the other hand, none of the articles utilized Media dependency theory and Cultivation analysis. This illustrated that audiences make up a large section of Hallyu studies and more media theories should be utilized in studying Hallyu in future studies.

In the eighth classification, the topics covered under Hallyu's research area were analysed. Due to the vast range of topics the majority research articles used the others option whereas the maximum number of studies had topics related to linkage of social media, networking to the growth of Hallyu and Hallyu's perception. However, there were least number of studies that talked about growing unpopularity and negative perception of Hallyu. This implied that the researches focused more on factors related to Hallyu's success, perception of Hallyu whereas least attention was paid to negative information about Hallyu. Thus, there is need to look at Hallyu critically in countries where it has been receiving non-acceptance, loss of popularity and negative reviews.

In the ninth classification, the analysis of results of the research articles was carried out. It was found that most of the studies discussed about the effects of the Hallyu phenomena whereas least attention was paid to comparative studies. Thus, more comparative studies must be undertaken by the researchers in future. In the tenth classification, the analysis period of the studies was investigated. It was found that maximum numbers of studies were of short duration having analysis period of less than 3 years whereas the minimum number of studies were found having analysis period more than 10 years. Hence, there is a requirement of studies for longer duration so that the phenomenon of Hallyu can be studied in detail and critically.

There are also some limitations to the study. As this research is an exploratory attempt to analyse the trends, major concepts in the field of Hallyu wave with research articles selected on Google Scholar within a time frame of 2000-2019, in future studies the relationship of Hallyu with major subjects can be investigated. For example: Hallyu and cultural proximity or Hallyu and audience reception etc. In addition, the present research only included studies from Google Scholar hence more databases such as Scopus, JSTOR can be explored for more rigorous results and identification of gaps in the research area. It was noticed that the present study allowed the researcher to introduce and explore the overall context of the Hallyu research and led to the understanding of the gaps existing in the research domain, which could further be explored by other researchers.

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APPENDIX

TABLE A1: Citation score of research articles on Google Scholar

N	Title	Authors	Citation on Google Scholar
1	Catching upto Hallyu? The Japanese and Chinese response to South Korean soft power	Kim et al. (2016)	4
2	A league of their own: Female supporters of Hallyu and Korea-Japan relations	Oh &Lee (2014)	8
3	Introduction: Conceptualizing the Korean wave	Ravina (2009)	75
4	Korean Wave as Tool for Korea's New Cultural Diplomacy	Jang & Paik (2012)	127
5	The use of English in Korean TV drama to signal a modern identity	Baratta (2014)	6
6	Architectures of pirate film cultures: encounters with Korean Wave in "Northeast" India	Kuotsu (2013)	14
7	Constructing a New Image: Hallyu in Taiwan	Sung (2010)	61
8	Understanding the Hallyu backlash in Southeast Asia : A case study of consumers in Thailand, Malaysia and Philippines	Ainslie et al. (2017)	8
9	Constructing culturally proximate spaces through Social Network Services: The case of *Hallyu* (Korean Wave) in Turkey	Oh & Chae (2013)	3
10	Transnationalism, cultural flows, and the rise of the Korean Wave	Jin (2019)	1

	around the globe		
11	The Korean Wave: Retrospect and prospect *Introduction*	Jin &Yoon (2017)	19
12	An analysis of the Korean Wave as transnational popular culture: North American youth engage through social media as TV becomes obsolete	Jin (2018)	20
13	'Transatlantic connection': K-pop and K-drama fandom in Spain and Latin America	Madrid-Morales & Lovric (2015)	27
14	The perception of Makassar's teenagers toward Korean drama and music (case study on MAKASSAR KOREAN LOVERS COMMUNITY	Marjuni&Bungawati(2017)	0
15	Of the East Asian cultural sphere: Theorizing cultural regionalization	Choi(2010)	22
16	The role of Hallyu in the construction of East Asian regional identity in Vienna	Sung (2012)	17
17	The role of the government in cultural industry: Some observations from Korea's experience	Kim (2011)	38
18	The Korean Wave and Asian Americans: The ethnic meanings of transnational Korean pop culture in the USA	Ju &Lee (2015)	26
19	What is the K in K-pop? South Korean popular music, the culture industry, and national identity	Lie (2012)	173
20	Validating the antecedent effects of Hallyu WOM on Chinese consumers' intention to buy Korean products	Yoon (2016)	1
21	The impact of Korean wave on the purchase intention of Korean cosmetics of Thai people in Bangkok and Chonburi, Thailand	Son &Kijboonchoo (2016)	2
22	The Korean Wave and Korean dramas	Ju (2018)	2
23	Korean Popular culture on screen: Hong Konger's responses to Korean movies (1999–2015)	Kang (2018)	0
24	Factors of watching Korean drama among youth in Kuching city, Malaysia	Amaran &Wen (2018)	0
25	Engaging with Korean dramas: discourses of gender, media, and class formation in Taiwan	Irene Yang (2008)	33
26	Do big data support Tv viewing rate forecasting? A case study of a Korean Tv drama	Ahn et al.(2017)	9
27	Africa–Asia relations through the prism of television drama: How Africans in Hong Kong conceptualize Korean culture	Bodomo &Chabal (2014)	4
28	Korea vs. K-dramaland: The culturalization of K-dramas by international fans	Schulze (2013)	24
29	A longitudinal analysis of foreign program imports on South Korean television, 1978–2002: A case of rising indigenous capacity in program supply	Lee (2007)	6
30	A 'real'fantasy: hybridity, Korean drama, and pop cosmopolitans	Lee (2017)	7
31	Extravaganza and cosmopolitan lifestyle: Trends and approaches in Asian drama production	Wahab (2015)	0
32	Culture in Korean drama towards influencing Malaysian audiences	Ariffin et al. (2018)	3
33	The Hallyu influence. K-pop on Foreign Lands	Necula (2016)	2
34	Adolescents, Korean dramas, and local wisdom values	*Husniati &Maryam(2016)*	0
35	Distributing TV dramas in the digital environment: A Korean case	Kim &Park (2008)	11

36	The characteristics of Korean soap opera: It's focus on the structure of family power relations with interrelationship	Lee &Hahm (2013)	0
37	The analysis of the effects of love values in Korean dramas on Taiwanese viewers--from the perspective of business.	Ho (2013)	0
38	Life is beautiful: Gay representation, moral panics, and South Korean television drama beyond *Hallyu*	Glynn &Kim (2017)	5
39	The impact of Korean TV dramas series on the Iranian market and society	Mozafari (2013)	2
40	The influence of the aspects of K-drama on the favorability of Korean Wave	Lee &Yu (2018)	0
41	Impact of Korean drama in Indonesia through the spread moral values for young generation	Effendi et al. (2016)	0
42	Crossing boundaries: Male consumption of Korean TV dramas and negotiation of gender relations in modern day Hong Kong	Lin &Tong (2007)	22
43	Transnational audience reception as a theater of struggle: Young Filipino women's reception of Korean television dramas	Espiritu (2011)	19
44	Women's employment and professional empowerment in South Korean dramas: A 10-year analysis	Lee &Park (2015)	2
45	Longitudinal dynamics of the cultural diffusion of Kpop on YouTube	Xu et al. (2017)	11
46	When Indonesians routinely consume Korean pop culture: Revisiting Jakartan fans of Korean drama Dae Jang Geum	Jeon et al. (2017)	14
47	The effects of television viewing, cultural proximity, and ethnocentrism on country image	Yoo et al. (2014)	25
48	*Daejanggeum* as 'affective mobilization': lessons for (transnational) popular culture and civil society	Leung (2009)	17
49	Audience interpretation on Korean TV drama series in Jakarta	Briandana &Ibrahim (2015)	7
50	Practicing multilingual identities: Online interactions in a Korean dramas forum	Kim (2016)	14
51	The influence of a TV drama on visitors' perception: A cross-cultural study	Kim et al. (2014)	28
52	A Study on the KBS TV Drama *Winter Sonata* and its impact on Korea's *Hallyu* tourism development	Han &Lee (2008)	76
53	A qualitative analysis of the impact of popular culture on destination image: A case study of Korean Wave from Japanese fans	Lee &Bai (2010)	17
54	A look into Korean popular culture and its tourism benefits	Trolan (2017)	5
55	Who are the tourists motivated by the Korean drama "IRIS"?	Han et al. (2014)	1
56	Small screen, big tourism: The role of popular Korean television dramas in South Korean tourism	Kim et al. (2009)	98
57	Attitudes of Japanese audience toward Korean popular culture and East Asian community	Lee et al. (2005)	3
58	Hallyu across the desert: K-pop fandom in Israel and Palestine	Otmagzin &Lyan (2014)	53
59	Asianizing K- pop: Production, consumption and identification patterns among Thai youth	Siriyuvasak &Hyunjoon (2007)	140

60	The internet as a facilitator of cultural hybridization and interpersonal relationship management for Asian international students in South Korea	Kim et al. (2009)	53
61	The globalization of K-pop: Korea's place in the global music industry	Oh &Park (2013)	64
62	Cultural Translation of K-Pop Among Asian Canadian Fans	Yoon (2017)	11
63	Hallyu in Singapore: Korean cosmopolitanism or the consumption of Chineseness?	Yin &Liew (2005)	48
64	Hallyu: The rise of transnational cultural consumers in China and Japan	Oh (2009)	44
65	The cultural political economy of the Korean Wave in East Asia: Implications for cultural globalization theories	Nam (2013)	24
66	Formation, purpose and gains: An exploratory study of Hallyu fanclubs in the Philippines	Deen (2014)	2
67	Cultural technology: A framework for marketing cultural exports— analysis of Hallyu (the Korean Wave)	Chen (2016)	31
68	The power of representation: Korean movie narrators and authority	Maliangkay (2011)	3
69	K-pop in Korea: How the pop music industry is changing a post-developmental society	Oh &Lee (2014)	30
70	Why American studies needs to think about Korean cinema, or, transnational genres in the films of Bong Joon-Ho	Klein (2008)	42
71	Production and consumption of contemporary Korean cinema	Byeongcheol (2006)	6
72	K-Pop in Latin America: Transcultural fandom and digital mediation	Han (2017)	21
73	Korean Wave: The popular culture, comes as both cultural and economic imperialism in the East Asia	Huang (2009)	45
74	Politics of representation in the era of globalization: Discourse about marriage migrant women in two South Korean film	Kim (2009)	16
75	Viewing identity: Second-generation Korean American ethnic identification and the reception of Korean transnational films	Oh (2011)	12
76	Unveiling the Korean Wave in the Middle East	Noh (2010)	19
77	Korean wave in Malaysia and changes of the Korea-Malaysia relations	Cho (2010)	43
78	Reading the 'Korean Wave'as a sign of global shift	Cho (2005)	214
79	The effects of protection in cultural industries: The case of the Korean film policies	Parc (2017)	28
80	Mediating the boundaries: Second-generation Korean American adolescents' use of transnational Korean media as markers of social boundaries	Oh (2012)	26
81	Brand placements in Korean films, 1995–2003: A content analysis	Sung et al.(2008)	31
82	Local consumers' reception of imported and domestic movies in the Korean movie market	Moon et al. (2015)	16
83	Transnational Korea: A critical assessment of the Korean Wave in Asia and the United States	Jung (2009)	114
84	South Korean media industry in the 1990s and the economic crisis	Shim (2002)	93

85	On the exportability of Korean Movies	Lee et al. (2009)	7
86	Korea's cultural diplomacy: An analysis of the *Hallyu* in India	Dhawan (2017)	4
87	Korean dramas and films: Key factors for their international competitiveness	Parc & Moon (2013)	36
88	The potential of fandom and the limits of soft power: Media representations on the popularity of a Korean melodrama in Japan	Hayashi &Lee (2007)	53
89	Ethnoscapes, mediascapes, and ideoscapes: Socio-cultural relations between South Korea and China	Jeong (2012)	7
90	Korean cultural products in Eastern Europe: A case study of the K-pop impact in Romania	Marinescu &Balica (2013)	11
91	The poetics of resistance and the politics of crossing borders: Korean hip-hop and 'cultural reterritorialisation'	Um (2013)	27
92	Localized globalization and a monster national:" The Host" and the South Korean film industry	Lee (2011)	28
93	Korean media consumption in Manipur: A catalyst of acculturation to Korean culture	Reimeingam (2015)	0
94	Have you ever seen the *Rain*? And who'll stop the *Rain*?: the globalizing project of Korean pop (K- pop)	Shin (2009)	120
95	The effect of the Korean wave on Malaysian university students' perception	Lee et al. (2017)	4
96	Transnationalization of Korean popular culture and the rise of "pop nationalism" in Korea	Joo (2011)	89
97	Why does Hallyu matter? The significance of the Korean wave in South Korea	Kim (2007)	47
98	Effects of frequency of viewing Korean film on preference for Korea and intention to visit Korea	Rewtrakunphaiboon (2017)	0
99	Uses and gratification analysis of social media in K-pop information searching	Millanyani &Pramiyanti (2015)	0
100	Globalization, hybridization and cultural invasion: Korean Wave in India's North East	Kaisii (2017)	3

"Authors' Calculations"

TABLE A2: Objectives of the research articles

N	Objective
1	Response of China and Japan to Hallyu's growing influence
2	A case study of Japanese female supporters of Hallyu acting as a bridge between Korea and Japan
3	A conceptual understanding of the Korean wave, its evolution, spread throughout the world.
4	A case study of Korea about how it is using Korean wave as a tool for cultural diplomacy
5	A case study on a Korean drama where the usage of English language signifies modernity
6	A case study of India's north east where Korean pop culture is becoming popular because of piracy
7	A case study of Taiwan where Hallyu has constructed a new image of Korea
8	A case study of consumers in Thailand, Malaysia and Philippines to understand the backlash Hallyu is receiving
9	A case study of Turkey's Hallyu where social networking has led to the construction of spaces related to Hallyu
10	Hallyu as a transnational cultural flow across the globe
11	Looking at Hallyu's past and future
12	A case study of North American youth of Hallyu who consume Korean pop culture products through social media

13	A case study of K-drama and K-pop fandom in Spain and Latin America
14	A case study of the Makassar's teenagers' perception of K-drama and K-pop music
15	Cultural regionalization in East Asia, a conceptual summary
16	A case study of Vienna where the consumption of Hallyu has led to the creation of an East Asian identity
17	Role of government in the Korean cultural industry
18	A case study of Asian Americans regarding the ethnic meanings they derive after consuming Korean pop culture products
19	What makes K-pop' a detailed explanation
20	A case study of Hallyu's Chinese consumers about the relationship between Hallyu's word of mouth spread and the consumers' intention to buy Korean products
21	A case study of Thai people analysing the impact of Korean wave on their purchase intention of Korean cosmetics
22	A conceptual background of the Korean wave and Korean-dramas
23	A case study showing the Hong Kong's audience response to the Korean-movies
24	A case study of Malaysian youth exploring the reasons they watch Korean-dramas
25	A case study of Taiwanese audience of Korean-dramas with focus on gender, class formation
26	Case study of Korean tv drama analysing the relationship between data and tv viewing rate forecasting
27	A case study of Africans in Hong Kong with focus on how do they conceptualize Korean culture through Korean-dramas
28	Case study of fans who use K-dramas as a way of knowing Korean culture
29	A case study of foreign tv programs reception on Korean television from 1978-2002, resulted in the rise of indigenous production capacity in Korea
30	A case study of Korean-drama and its relation to hybridity and popcosmopolitanism
31	A case study of asian tv dramas, their trends, approaches and portrayal of cosmopolitan and extravagant lifestyle
32	A case study of Malaysian audience on how they are influenced by Korean culture shown on K-dramas
33	The case of Hallyu influence on foreign locations
34	A case study of adolescents in Indonesia regarding how their local wisdom values are affected by K-dramas
35	Case of Korean-dramas in a digital market
36	Key characteristic features of a Korean soap opera
37	A case study of Taiwanese viewers of K-dramas about how their love values are altered from the K-drama consumption
38	A case study of Life is beautiful, a Korean-drama with focus on gay representation, gendered perspective
39	A case study of the impact of Korean dramas on the market and society in Iran
40	A case study of how Chinese consumers' purchasing intention is affected after K-drama consumption
41	A case study assessing young Indonesians' moral values influenced by K-drama viewing
42	A case study about males consumption of K-dramas in Hong-Kong
43	A case study of reception of Korean-dramas among young Filipino women
44	Case involving a 10 yr analysis of Korean-dramas with focus on women empowerment
45	A case study of YouTube's role in K-pop diffusion
46	A case study involving the fans of Korean-drama, Dae Jang Geum in Indonesia and its long lasting impact
47	A case study of K-drama audience in China and Japan with cultural proximity playing a major role in changing the image of Korea in their eyes
48	A case study of the audience of K-drama, Dae Jang Geum in Hong Kong
49	A case of reception of Korean-dramas in Jakarta, dealing with audience interpretation
50	A case involving an online Korean-drama forum where different languages are used in a conversation by the participants from various ethnic identities

51	A case study dealing with the changing perception of visitors in Hong Kong, Taiwan and Thailand after the K-drama consumption
52	A case study revolving around K-drama Winter Sonata and its influence on the Korea's tourism
53	A case study of Japanese fans of Hallyu who think of Korea as a popular destination for visit and travel
54	A study focusing on the tourism benefits of Hallyu
55	A case study of the fans of the K-drama, Iris who are motivated to visit the shooting locations in the drama
56	Case involving the Korean-dramas and their contribution in the development of tourism sector in South Korea
57	A case study of Japanese audience's attitude towards the Korean pop culture
58	A case study of Hallyu fandom in Israel and Palestine
59	A case study involving Thai youth and their reception of K-pop
60	A case study of international Asian students in South Korea and the role of internet in developing their interpersonal relationships
61	A case study of Korea's pop industry in the globalized era
62	A case study of K-pop fans in Canada
63	A case of Hallyu in Singapore whether a case of cosmopolitanism or chineseness
64	A case study of rising consumers of Hallyu in Japan and China
65	The conclusions that can be drawn from the rise of Korean wave in East Asia as a means of exploring cultural globalization theories
66	A case study of Hallyu fanclubs in Phlippines focusing on their purpose, formation
67	A case study of Hallyu market using the cultural technology as a framework
68	The powerful representations in K-movies: roles of narrators and authority
69	A case study of K-pop's development in Korea's post developmental society
70	A case study of Bong –Joon Ho's movies' showcasing transnational genres that should be noticed and studied by Americans
71	A case study of contemporary Korean cinema
72	A case study of K-pop fandom in Latin America
73	The Korean wave seen as a carrier of cultural and economic imperialism in the East Asia
74	A case study of the representation of marriage in the lives of migrant women in two South Korean movies
75	A case study dealing with the identification of 2nd generation Korean Asian Americans with Korea when consuming the Korean films
76	The case of Hallyu's growth in Middle East with focus on Egypt
77	A case study of Korean wave in Malaysia and how it has affected the relations between Korea and Malaysia
78	Looking at Korean wave as a major shift in the global pop culture industry
79	The case of Korea's film policies and its effect on the Korean film industry
80	The case of 2nd generation Korean American adolescents using Korean media to associate with their ethnic identity
81	The case of brand placements in Korean films from the year 1995-2003
82	A case study of local consumers' reception of domestic and imported movies in Korea
83	A commentary on the rise of Hallyu wave in Asia and the US
84	The overview of Korean media industry in 1990s and how it overcame the economic crisis
85	A case study of Korean-movies and their export
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87	An overview of the key reasons for the international success of Korean-dramas and Korean-films
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89	A case study of the role of ethnoscapes, mediascapes and ideoscapes in facilitating the socio-cultural relations between South Korea and China
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91	The portrayal of poetics of resistance in Korean hip-hop and its transnational reach
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98	A case study of Thailand viewers' preference for Korea, Korean products after consuming Korean films
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"Authors' Calculations"

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IS FAKE NEWS SPREADING MORE RAPIDLY THAN COVID-19 IN INDIA?

A Representative Study of People's Perspective on Controlling the Spread of Fake News on Social Media

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ABSTRACT

Fake news is not a new phenomenon. With the mushrooming of smartphone users and the easy access to the internet, fake news is spreading at very high speed from people to people. Why do people flagrantly believe fake news? Why don't people fact-check before sharing information with others? etc., are still some of the questions unanswered. The panic created by fake news during the time of the Covid-19 pandemic outbreak is also not less. Hence, this study aims to focus on understanding people's perspectives on controlling the spread of fake news on social media. The respective study is based on quantitative data analysis of the responses of 300 social media users across India, collected online in April 2020 during nationwide lockdown.The study arrived at a conclusion stating that self-regulation may not deliver a proper effect on controlling the spread of fake news. But, organising effective campaigns to build social media literacy can be one of the potential measures that can be implemented in order to control the spread of fake news over social media platforms. The respondents of the study also agree to bring-in a national policy and a national regulatory body to control the spread of fake news over social media platforms. Hence, this particular study can support Government of India to make decisions to roll out regulatory measures to control the spread of fake news through social media, which is still on the red tape.

Keywords*:* Fake news, Social media, National policy, Self-regulation, Regulatory body.

INTRODUCTION

The spread of the Corona Virus Disease (Covid-19) across the globe has already left the world in a grim situation. The petrifying part is that the number of people affected by the Covid-19 as well as the spread of this deadly virus to different countries is increasing day by day. Different nations across the world have taken several measures to tackle the spread of the virus. Covid-19, which is said to have originated from Wuhan city, China, in 2019, has been in the news for months.

A humongous number of fake news stories are being shared through different social media platforms during the wake of this pandemic. The current study is based on the spread of fake news amidst the unroll of novel coronavirus throughout the world. As the world is exposed to a completely new pandemic, for which even vaccines are not yet discovered and symptoms or the behavior of the virus is not yet confirmed, this study contains new and interesting information concerning the attitudes of the people on the fast-spreading fake news during the time of Covid-19 and the role played by social media platforms on the same. The spread of fake news ata much higher pace than the real news shows that controlling measures or legal actions in India for spreading fake news are not much adequate. Thus, this study also aims to understand any possible measures to control the spread of fake news in social media platforms in India. Hence it becomes important to study people's perspectives on controlling the spread of fake news on social media.

According to the Collins Dictionary, fake news is false, often provoking, information disseminated under the form of news reporting. Fake news is forged information that imitates news contents in form but not in organizational purpose (Lazer, et al., 2018). Fake news lap over other major information disorders such as misinformation and disinformation (Lazer, et al., 2018). The term fake news was popularised during the 2016 US elections (Egelhofer, et al., 2020). Spreading fake news is not a new form of propaganda building. Accurate beliefs lead to the formation of many adaptive or modified behaviors. One supporter of mistaken convictions is misinformation, including fake news, which comprises created news stories that are introduced as being from authentic sources and elevated mostly via web-based networking sites to trick people in general for the ideological or monetary benefit (Lazer, et al., 2018). Actually, even an earlier exposure stimulates later trust in fake news, even when features are challenged by fact-checkers or are conflicting with the reader's political dogma (Pennycook, Cannon, & Rand, 2018).

Amidst the growth in high speed internet in India, the number of first time users of the internet are also increasing drastically (Kalorth, N., & Verma, M., 2018), irrespective of age. The new users definitely are overloaded with information available online in the form of varied digital contents. While misinformation is dissemination of fake data trusting it is true, disinformation, which is more riskier, is the dissemination of fake news deliberately (Kalorth, N., & Verma, M., 2018). The massive growth of fake news and its disintegration of democracy, justice, and public trust has essentially expanded the interest for accurate fake news detection. The present-day headways in this area have proposed new techniques that aim to detect fake news by analysing how it is spread on social media networks (Zhou, X., &Zafarani, R., 2018).

Using social media for consuming news is like using a double-edged sword. On the one hand, it is cost-effective and fast, but on the other hand, the information that we are consuming may be fake ones (Shu, et al., 2017). Due to the cheap availability and easy access, social media platforms are mostly used to propagate fake information. And, the rapid spread of fake news has the potential to impart a negative effect on the individual and the whole society (Shu, et al., 2017). Thus, people's perspectives on controlling the spread of fake news is an important area to be studied. The findings of this study will be different and novel as the study is dealing with the spread of fake news amidst the unfurl of Covid-19 in India. The study aims at bringing in possible measures to curb the spread of fake news. Through analysing the people's perspectives, the current study is expected to arrive at a set of findings which will be able to state effective measures to control the spread of fake news in India.

REVIEW OF RELEVANT LITERATURE

History overflows with different instances of bending reality for material augmentation, famously called lying, or flexing reality for political gain, named purposeful publicity. Fake news is commonly thought to be as old as journalism itself, and legitimate media associations have only from time to time assumed a job of "gatekeeper" for reliable data (Banerjee, A. N., & Haque, M. N., 2018). Accounts from history show that the use of fake news has been prevalent from the BCs (Weir, 2009). With the invention of the printing press in 1439, the publications became widespread. Even from the initial days, fake news has tended to provoke, arouse passions, and is also biased in nature.

It is also to be noted that it has often aroused violence.The Nazi propaganda machine relied on one of the famous false stories of the Jewish practice of drinking blood from children which in the fifteenth century had led to systematic persecution against Jews. Soon after Johannes Gutenberg invented the printing press, fake news stories also began to travel from one place to another. And, with the lack of technology during those times, it was a herculean task to distinguish between real news and fake news. Readers in search of real news had to pay close observation. Leaked secret government reports were considered as authentic sources in the 16th century. But, before long, the fake copies of the real ones started to be available in the market. During the 17th century, in order to tackle the spread of fake news, historians started to verify news by publishing their sources of information as verifiable footnotes (The Long and Brutal History of Fake News, n.d). The following years witnessed an exponential growth in terms of printing and on par with this, the spread of fake news also was on a hike.

Fake news was created based on the stories of the existence of witches and sea monsters and they went to the extent of disseminating claims that argue the reason for natural disasters are sinners, and, no matter what, the fake stories kept on influencing people. The spread of fake news during the time of an emergency as well as during elections is high compared to other times (Hunt, Agarwal, Aziz, & Zhuang, 2020; Allcott, H., & Gentzkow, M., 2017). Disseminating fake news can cause serious impacts on society. The technological advancements in a smartphone with internet connectivity are also playing its part in the spread of fake news (Alianto, H., & Chandra, Y. U., 2017).

It is to be noted that in India and other ten emerging economies such as Venezuela, Lebanon, South Africa, Columbia, Kenya, Mexico, Philippines, Vietnam, Jordan, and Tunisia, smartphone and social media use are heavily intertwined. According to a study, while a median of 91% of the people in the above-mentioned countries use both smartphones and social media, a median of 81% of the people using social media own or share a smartphone (Silver, L., & Huang, C., 2019).

Today, smartphones are an inevitable part of human lives' (Miakotko, 2017). Smartphones are evolving at a very high pace and with their technological advancements, smartphones let its users to be connected to the world always, mostly by providing instant communication (Durak, 2018). According to Andone et al (2016), the highest phone usage was seen among teenagers who are between 12 years and 17 years. They also state in their study that Females use phones more than males. For fake news to spread, it requires three important ingredients such as the tools and services for manipulation, relevant social media networks, and motivation for action. Tools and services to spread fake news are abundantly available in social media networks. When social media networks act as a tool to spread fake news propaganda, the speed in which fake news spread is very high. The motivation for spreading fake news always comes with the question-'why'. Often, it's for monetary gain via advertising, whereas, in some other cases the gain varies from criminal to political. Keeping the motive apart, the real success of fake news depends on the reach it got, as well as the effect it imparted on the target audience which can make an overall change in the real world (Goswami, 2018).

We are living in a networked society where anyone can write and post anything on social media platforms. The idea of gatekeeping in social media is still bizarre. As it seems like censorship is quite impossible in social media handles, we are living in an era of free speech for all. But, the number of information that we come across may be true and may not be true. Believing everything that we see over the internet can catalyse the process of being a misinformed society. With billions of daily users, social media platforms prove to play a vital role in the dissemination of news, opinions, comments and even personal updates.

Users can find up-to-date information on any topic of interest in social media platforms. Even when there are benefits of social media, the unmoderated use of these platforms can make mishaps as well. When fake information is spread on social media networks, it can result in umpteen numbers of misinformed audiences. According to the statistics, during the past decade, there has been a tremendous hike in the amount of false news spread during crisis events, such as natural disasters and terrorist attacks. This misinformation proves to be very dangerous during these grim situations (Hunt, Agarwal, Aziz, & Zhuang, 2020). Consequently, with the ubiquity of the number of social media outlets such as WhatsApp, Facebook, Instagram, Twitter, etc., the amount of information exchanged or the misinformation is rising every second.

A misinformed society is a real threat to democracy and it is the responsibility of everyone to share information over the internet with more culpability. Forwarding every piece of information without proper fact-checking can land the entire society in a bigger threat. Age of the users is a significant factor while talking about spreading fake news. According to Guess et al., (2019), Americans who are above 60 years of age share fake news the most and the media literacy among the same group is very less. As stated earlier, the term 'fake news' is not of a recent origin, but the medium used to share and further make it viral is comparatively new. Fake news stories are not anymore a threat only for western countries, but, the threat of fake news can be seen almost everywhere including India, which is considered as a third world country.

Nowadays creating and disseminating fake news is widely popular and that can affect the public in a negative way. With the easy availability of cheap mobile data, data usage has increased tremendously. About three out of five social media users in India believe that the usage of social media has made it easier to manipulate people with fake news. It is to be noted that Indian users spent two and a half hours on social media and also the Indian and Chinese users' patterns of using social media have converged (Krishnan, 2019).

When the world is fighting a bleak situation like the roll out of Covid-19, the spread of fake news related to that can induce panic in society. This can lead to ineffectiveness in implementing control measures imposed by different governments. Fake news stories that even propose the medications for Covid-19, such as drinking cow-urine can kill the virus, has not only made the Indian society misinformed but also, the decline in the common sense of Indians has become a topic of debate across the globe. Even though the governments have made the point clear that no cures are found to tackle the pandemic, the demand for products including home testing kits has increased all over the web. Online opportunists are working hard to take advantage of the public's anguish, they are selling medicines claiming that it can cure Covid-19 through social media platforms, e-commerce marketplaces, as well as the dark web (Heilweil, R., 2020).

According to news reports, the Government of India was planning to bring regulations on social media platforms by January 2020 (Ians, 2019). But, some of the experts say that the government should not bring-in any regulation over social media, as it is the clear violation of freedom of expression of the individuals (Indian social media users may lose their anonymity soon, 2020). In fact, India's National Policy to control the social media usage is still on the red tape, even when the country is facing an umpteen number of problems due to the uncontrollable creation and dissemination of fake news, that can disrupt the entire smooth functioning of the nation. Hence, this study which focuses on the need and importance of bringing out some possible controlling measures such as framing laws, developing media literacy, promoting self-regulation, adopting technological tools for filtering, etc., to curb the spread of fake news stories over social media platforms in India is relevant to be conducted. The findings of the respective study will be novel because the Covid-19 is a very recent pandemic outbreak and the fake news is still inducing certain effects on its audience.

Theoretical Framework

Fake news isn't novel (Banerjee, A. N., & Haque, M. N., 2018). A plethora of theories on psychology as well as perceptions of people sharing fake news are present today. Social Identity theory was proposed by Tajfel Turner and it is considered to be one of the greatest contributions of Turner (McLeod, 2019). Tajfel Turner, et al. (1979) states that social identity is a person's self-concept derived from membership in a relevant social group. That is, groups to which individuals belong were an important source of self-esteem and pride for them (McLeod, 2019).

According to Social identity theory and Normative influence theory, people consume and share news that is 'socially safe' to be shared, in order to gain social acceptance, which is a must for an individual's self-esteem and identity. Thus, it can be said that very often people might be sharing news without proper fact checking to show the society that I am a well-informed person and I know everything. On the other hand, according to Prospect theory, people make decisions based on the relative loss and gains compared to their current states. The gain can be of social acceptance too, and while combining the Social Identity Theory and Prospect Theory, it can be assumed that, in order to maintain or gain social acceptance, people might share information without proper fact checking. The rise in partisan social media groups also can act on this. Rather than giving objective and unaltered versions of news, these partisan media groups filter information according to the values and traditions of ingroup biases.

This leads to believing what the consumers like rather than believing what is true (Leonard, 2018). These information from partisan media outlets will be further shared even if it is a fake information. The theory of media literacy on the other hand, according to

W. James Potter (2014) is a cognitive approach which broadly explains how an individual absorbs information amidst the information explosion in a media-saturated society and how people construct faulty meanings from those pieces of information. According to Uses and Gratification theory, people use media for fulfilling their own needs. Hence, often, during the times of emergency, people might share fake news to fulfill their own psychological pleasure by inducing panic in the society or by thinking of the targeted results to be achieved through sharing fake information.An example for this is the 2016 US Presidential election in which fake news was used as a tool to create public votes (Shirsat, 2018). That is, the election campaigners used social media as one of the tools to propagate fake news for their own gratification.

According to Two-step flow theory, information that is shared with the opinion leaders in a community, which is further shared by them with the less active users or the opinion followers, can create an impact in the thought process of an entire society (Elkin, 1957). It can be said that the politicians use this model for their propaganda building during the times of election. The 2016 US Presidential election and the hike in fake news is a good example for this. Trump's victory in the 2016 US Presidential election is an example for effectively utilising Magic Bullet Theory too, even though it is considered to be out-fashioned with reality (Fayoyin, 2016). According to popular narrative, people voted for Trump because they believed in fake news and conspiracy theories against Hillary Clinton that were spread on social media platforms like Facebook (Marwick, 2018). Hence, it can be said that the passive consumers of social media will believe anything and everything that they get through social networking sites and they may further forward it.

The following objectives are set for the current study after carefully analysing the relevant literature in the area.

1. To study the attitude of the people in spreading fake news during the wake of Covid-19 in India.
2. To analyse the role of social media in spreading fake news amidst the outbreak of Covid-19 among Indian social media users.
3. To explore any possible measures to control the spread of fake news in social media platforms in India.

Research Questions

The objectives set for the study and the available literature on the topic have led to framing the following research questions:

RQ1: Do the variables such as Age, Gender, Education, Location, and Occupation have any significant association with Social media usage, Fake news, and Opinion on taking possible measures to regulate social media platforms?

RQ2: Are the Variables like Social media usage, Fake news, and Opinion on having regulation for Social media platforms interrelated?

RESEARCH METHODOLOGY

The main objective of this study is to explore any possible measures such as framing laws, developing media literacy, promoting self-regulation, adopting technological tools for filtering, etc. for social media platforms to control the spread of fake news. In the respective study which uses a quantitative research technique, factors such as Social media usage, Fake news, and opinions to take possible measures to control social media will be analysed.

Apart from these, demographic variables such as Age, Gender, Education, Location, and Occupation also will be analysed. The sample size of the respective study is 300 social media users across India, selected through a snowball sampling procedure. An online survey was conducted in April 2020, to collect perspectives from the selected individuals. The questionnaire for the survey will consists of 33 questions dealing with all the selected variables. The survey was conducted among individuals of age interval between less than 20 and above 34 years. The views of each individual have been considered as one unit. The web of relationships between these variables will be analysed using statistical tools after the completion of data collection.

DATA ANALYSIS

According to statistical tests, the researcher has arrived at certain findings. The tables given below are the results of the statistical analysis of the selected variables:

Table 1: Anova Test Results, Age vs. DV

		Sum of Squares	df	Mean Square	F	Sig.
Smartphone_Usage	Between Groups	346.998	4	86.749	13.453	0
	Within Groups	1902.239	295	6.448		
	Total	2249.237	299			
Fake_News	Between Groups	805.821	4	201.455	21.808	0
	Within Groups	2725.125	295	9.238		
	Total	3530.947	299			
Opinion_on_controling_measures	Between Groups	711.822	4	177.955	21.505	0
	Within Groups	2441.095	295	8.275		
	Total	3152.917	299			

Table 2: Descriptives, Age vs. DV

		N	Mean	Std. Deviation	Std. Error
Smartphone_ Usage	Less than 20 years	56	18.3	2.996	0.4
	20 - 24 years	81	15.84	2.93	0.326
	25 - 29 years	76	17.61	2.373	0.272
	30 to 34 years	47	16.34	1.845	0.269
	Above 34 years	40	15.33	1.913	0.303
Fake_News	Less than 20 years	56	38.27	3.256	0.435
	20 - 24 years	81	34.51	3.461	0.385
	25 - 29 years	76	37.74	2.391	0.274
	30 to 34 years	47	38.09	2.962	0.432
	Above 34 years	40	38.75	3.002	0.475
Opinion_on_ controling_ measures	Less than 20 years	56	24.95	3.193	0.427
	20 - 24 years	81	27.58	3.464	0.385
	25 - 29 years	76	27.87	2.457	0.282
	30 to 34 years	47	27.89	2.258	0.329
	Above 34 years	40	30.38	2.446	0.387

Anova test results indicate that the Age is having a statistically significant relationship between Smartphone usage, Fake news, and Opinion on having controlling measures over social media. The average Smartphone usage among people belonging to Less than 20 years age group is found to be more (mean = 18.3) than other age groups. Also, the tendency to spread fake news was seen mostly among the people who are Above 34 years of age (mean = 38.75) and also the average of the same group of people belonging to Above 34 years of age (mean = 30.38) says more to have controlling measures to curb the spread of fake news.

T-Test results indicate that there is a significant relationship only with the variable gender and fake news. And there is no statistically-significant relationship between the variables gender and smartphone usage and also no significant relationship was found between Gender and Opinion on having controlling measures over social media. However the averages for the Smartphone usage, fake news and Opinion on having regulation differed for these two genders. The average Smartphone usage among male (mean = 17.05) is found more than females. Whereas, females are sharing more fake news (mean = 38.13) compared to male.

The average Opinion on having controlling measures to curb the spread of fake news is found more among females (mean = 27.67) while compared to male.

Table 3: T-Test Results, Gender vs. DV

		F	Sig.	t	df	Sig. (2-tailed)
Smartphone_ Usage	Equal variances assumed	13.545	0	1.881	298	0.061
	Equal variances not assumed			1.881	287.901	0.061
Fake_News	Equal variances assumed	8.45	0.004	-5.107	298	0
	Equal variances not assumed			-5.107	287.696	0
Opinion_on_ controling_ measures	Equal variances assumed	0.123	0.726	-0.444	298	0.657
	Equal variances not assumed			-0.444	282.255	0.657

Table 4: Group Statistics, Gender vs. DV

	Gender	N	Mean	Std. Deviation	Std. Error Mean
Smartphone_Usage	Male	150	17.05	2.976	0.243
	Female	150	16.46	2.462	0.201
Fake_News	Male	150	36.18	2.972	0.243
	Female	150	38.13	3.6	0.294
Opinion_on_controling_measures	Male	150	27.5	3.615	0.295
	Female	150	27.67	2.842	0.232

Table 5: Anova Test Results, Education vs. DV

		Sum of Squares	df	Mean Square	F	Sig.
Smartphone_ Usage	Between Groups	54.304	3	18.101	2.441	0.064
	Within Groups	2194.933	296	7.415		
	Total	2249.237	299			
Fake_News	Between Groups	1183.566	3	394.522	49.748	0
	Within Groups	2347.38	296	7.93		
	Total	3530.947	299			
Opinion_on_ controling_ measures	Between Groups	216.91	3	72.303	7.289	0
	Within Groups	2936.007	296	9.919		
	Total	3152.917	299			

Table 6: Descriptives, Education vs. DV

		N	Mean	Std. Deviation	Std. Error
Smartphone_ Usage	Class 10 or below	64	16.5	1.968	0.246
	Plus-2	73	17.47	2.346	0.275
	Under graduation	81	16.73	3.24	0.36
	Post graduation or above	82	16.35	2.971	0.328
Fake_News	Class 10 or below	64	39.34	1.81	0.226
	Plus-2	73	39.27	2.594	0.304
	Under graduation	81	35.64	3.211	0.357
	Post graduation or above	82	35.05	3.205	0.354
Opinion_on_ controling_m esures	Class 10 or below	64	28.89	2.31	0.289
	Plus-2	73	26.38	2.119	0.248
	Under graduation	81	27.73	3.644	0.405
	Post graduation or above	82	27.49	3.872	0.428

Anova test results indicate that there is a statistically-significant relationship only between the variables Educational qualification with Fake news spread and Opinion on having controlling measures over social media platforms and there is no statistical relationship between Educational qualification and Smartphone usage. The averages of smartphone usage, fake news spread and opinion on having control over social media differs among people having different Educational qualifications. The average of smartphone usage is found more amoung Plus two (mean = 17.47). And people with an educational qualification of class 10 or below tend to spread more fake news (mean = 17.05) than plus two, UG and PG or above. Also people with an educational qualification of class 10 or below (mean = 28.89) agree more to have controlling measures in order to control the spread of fake news.

Table 7: Anova Test Results, Location vs. DV

		Sum of Squares	df	Mean Square	F	Sig.
Smartphone_Usage	Between Groups	177.204	3	59.068	8.438	0
	Within Groups	2072.033	296	7		
	Total	2249.237	299			
Fake_News	Between Groups	566.124	3	188.708	18.84	0
	Within Groups	2964.823	296	10.016		
	Total	3530.947	299			
Opinion_on_controling_measures	Between Groups	230.781	3	76.927	7.792	0
	Within Groups	2922.136	296	9.872		
	Total	3152.917	299			

Table 8: Descriptives, Location vs. DV

		N	Mean	Std. Deviation	Std. Error
Smartphone_Usage	Rural	67	15.63	3.384	0.413
	Town	75	16.48	2.527	0.292
	City	86	16.99	2.095	0.226
	Metro	72	17.82	2.575	0.303
Fake_News	Rural	67	35.39	3.908	0.477
	Town	75	36.24	3.594	0.415
	City	86	37.71	2.844	0.307
	Metro	72	39.08	2.101	0.248
Opinion_on_controling_measures	Rural	67	28.04	3.607	0.441
	Town	75	27.4	3.949	0.456
	City	86	28.53	2.37	0.256
	Metro	72	26.21	2.466	0.291

Anova test results indicate that there is a statistically-significant relationship between the independent variable Location and dependent variables like Smartphone usage, Fake news spread and Opinion on having control over social media. People residing in Metro tend to use more smartphones (mean = 17.82) while comparing to the people in town, city and rural areas. The average of the spread of fake news is also found to be more among people residing in Metro (mean = 39.08) than other localities. People living in the city agree more (mean = 28.53) to have control over social media in order to curb the spread of fake news.

Anova test results indicate that there is a statistically-significant relationship only between the variables Occupation with Fake news and Opinion on having control over social media and no statistical relationship is found between the variables Occupation and Smartphone usage. However the averages of smartphone usage, spread of fake news and having control over social media differs for people belonging to different occupations. Smartphone usage is found to be more among the employed (mean = 17.03) while comparing to homemakers, students and unemployed. The average of the spread of fake news is found more among Homemakers (mean = 39.73) than the employed, unemployed and students. On the other hand the average of the unemployed people agree more (mean = 29.63) to have control over social media to curb the spread of fake news over social media platforms.

Table 9: Anova Test Results, Occupation vs. DV

		Sum of Squares	df	Mean Square	F	Sig.
Smartphone_ Usage	Between Groups	38.564	3	12.855	1.721	0.163
	Within Groups	2210.673	296	7.468		
	Total	2249.237	299			
Fake_News	Between Groups	657.961	3	219.32	22.596	0
	Within Groups	2872.986	296	9.706		
	Total	3530.947	299			
Opinion_on_ controling_ measures	Between Groups	472.569	3	157.523	17.396	0
	Within Groups	2680.348	296	9.055		
	Total	3152.917	299			

Table 10: Descriptives, Occupation vs. DV

		N	Mean	Std. Deviation	Std. Error
Smartphone_ Usage	Student	135	16.98	3.201	0.275
	Unemployed	52	16.29	1.786	0.248
	Employed	72	17.03	2.964	0.349
	Homemaker	41	16.15	1.131	0.177
Fake_News	Student	135	36.05	3.748	0.323
	Unemployed	52	39.02	2.024	0.281
	Employed	72	36.4	3.138	0.37
	Homemaker	41	39.73	1.432	0.224
Opinion_on_ controling_ measures	Student	135	26.32	3.424	0.295
	Unemployed	52	29.63	2.458	0.341
	Employed	72	28.24	3.169	0.373
	Homemaker	41	28	1.483	0.232

Table 11: Pearson's Correlation Test Result: Dependent Variables vs. Dependent Variables

		SP Usage	FN	OoR
SP Usage	Pearson Correlation	1	.372**	-.207**
	Sig. (2-tailed)		0	0
FN	Pearson Correlation	.372**	1	0.061
	Sig. (2-tailed)	0		0.288
OoCM	Pearson Correlation	-.207**	0.061	1
	Sig. (2-tailed)	0	0.288	
** Correlation is significant at the 0.01 level (2-tailed).				

The correlation test on the other hand shows statistically significant relationship among Smartphone usage and spread of fake news as well as opinion on having a national policy. When Smartphone usage and fake news showed a positive correlation Smartphone usage and opinion on having a national policy showed a negative correlation. That is, with an increase in the usage of smartphones, more fake news will be spread over the social media and the ones who use the smartphones most are against having any control over social media to curb the spread of fake news in social media.

DISCUSSION

By analysis of the result, the study arrived at several interesting findings.

Smartphone Usage:

Smartphones have become one of the inevitable parts in the lives of the people (Miakotko, 2017). The usage pattern differed with differences in age, gender, education, occupation as well as location. While the present study arrived at a finding similar to the conclusions of Andone et al., (2016) regarding the smartphone usage and the age of the users, a contradiction was seen in smartphone usage and the gender of the users. That is, similar to the findings of Andone et al., (2016), in the present study also it was found that smartphones are mostly used by teenagers who are less than 20 years of age. According to Andone et al., (2016), females used smartphones more. But, in the present study it was found that the average smartphone usage of males is slightly higher than that of females. In conformity with the results of the present study, it is to be noted that the average of smartphone usage is more among the ones with a Plus-2 educational qualification. The use of smartphones depended on the location of the users as well. While the study results state that the ones who hail from metro settings used the smartphones the most, the ones from rural settings used smartphones the least. In compliance with the study, it can be seen that the smartphones are mostly used by the employed people or the ones who have a regular income, and it is least used by homemakers.

Spreading Fake News:

According to Guess et al., (2019), Americans who are above 60 years of age share fake news the most and the media literacy among the same group is very less. In the present study it was found that Indian's who are above 34 years of age tend to spread fake news the most. This can be due to lack of media literacy among Indians and the delayed technological advancements in India. It is interesting to note that the ones who are above 34 years of age think it is lawful to share fake news and they also think it is normal to create and share fake news during emergency situations like Covid-19.

The young block of the country who are less than 20 years of age strongly believes that it is the responsibility of an individual to fact check an information prior to sharing it further and the above 34 years group believes the same the least. The respective study result confirms that the females spread fake news more than that of males in India. The study results also state that the ones with an education of class 10 or below tend to spread fake news the most. It is also to be noted that the fake news rolls out the most in metros and is spread the most by homemakers. All these shows the lack of social media literacy among Indians. According to the Magic Bullet theory, which Fayoyin (2016) suggests as out-dated with reality, passive consumers of the media messages will believe anything and everything that they get through social networking sites and they may further forward it. Hence, it is important to build the media literacy of Indian social media users.

Opinion on Controlling Measures: While analysing the results of the present study, it is interesting to note that the above 34 years age group believes the most that it is better to control social media platforms in India in order to curb the spread of fake news. Whereas, the young block, the social media users below the age of 20 years, are very much critical of the same. It is also to be noted that the females believe the most that it is time to control the social media platforms in India.

Hence, it can be said that even though the above 34 years aged users and the female users tend to spread the fake news the most over social media, the same groups urge to bring in certain controlling measures on social media platforms. While the ones with an education of class 10 or below vote for implementing controlling measures, the users belonging to the city setting believe the same the most. The study result put forward another interesting finding, which is, the unemployed section of the country says the most that it is better to have some sort of control over social media to stop the spread of fake news. The study which focused on understanding any possible measures to control the spread of fake news in social media platforms in India, comes up with a set of measures that can be implemented in India.

While the study results points out that the self-regulation will be not an effective way to control the spread of fake news, organising effective campaigns among the social media users, having in-built filters in social media platforms to identify fake news, having regulations on social media through a national policy and framing a statutory body controlled by the government of India to regulate the social media contents are the key measures that can be implemented. It can be said that it is the time for Indian government to strengthen its thought of rolling-out social media regulations, for the collective good of the Indian society.

CONCLUSION

In times of crisis, misinformation abounds. A misinformed society can make chaos around the globe. With the increase in smartphone usage and cheap internet access, in the time of Covid-19 as well the number of fake news being made and further shared is snowballing in a very high velocity. The fake news stories are flooding social media platforms in each second. People who create fake news pretend to be doctors, statisticians and experts, whereas, the ones who share those are pushing the society into a furthermore grim situation. The present study is focused on understanding the kinds of solutions that can be implemented so as to control the widespread of fake news over social media. The study has come out with a number of interesting findings.The ones who use smartphones more tend to spread more fake news and the same group of people do hold the views that are against forming a national policy or having a national regulatory body to curb the spread of fake news in India. The present study could also reinforce the Social Identity theory, which says, people may be sharing the news information that they get from different social media networks, which may be fake, so as to maintain their social acceptance in the society.

The study results indicated that the Indian's lack social media literacy and that can be one of the potential reasons behind sharing anything and everything that they come across in social media platforms without a proper fact checking. According to the lion's share of respondents, it is more or less impossible to distinguish between real news and fake news. The theory of media literacy explains how people absorb information amidst the information explosion in a media-saturated society and how they construct faulty meanings from those pieces of information. According to the respective study, most of the people say that Indians lack media literacy. Hence, effective campaigns or programs from the side of the Government or social media platforms are essential to build a society who are media literate.

Most of the respondents believe that it is common to have a flood of fake news during the times of emergency and a whopping majority of the respondents say that fake news creates unnecessary panic in the society. The sharing of fake news during the times of emergency can be linked to the uses and gratification theory. That is, vested interests may be sharing fake news for their own gratification. It is also interesting to note that some of the people believe that spreading fake news is a lawful activity and majority of the respondents have shared some fake news related to Covid-19 knowingly or unknowingly. A further interesting finding is that even when the people believe that it is the responsibility of an individual to fact-check an information before further sharing, the majority of the respondents didn't do a proper fact-checking.

When the respondents say self-regulation is not a good idea, organising effective campaigns to build social media literacy is one of the measures that can be implemented in order to control the spread of fake news over social media platforms. The study arrived at a conclusion stating that it is time to bring in a national policy to control the spread of fake news over social media platforms. And, the respondents also opined that there should be stringent actions including huge fines and jail terms against the ones who spread fake news.

An important finding of the study is that it is time for India to have a National Regulatory Body to frame legal implications defining the after effects of propagating fake news.

Hence, it can be assumed that it is necessary for the Government of India to think about a National Regulatory Body for controlling social media, like Telecom Regulatory Authority of India (TRAI) which regulates the telecom sector or Press Council of India which regulates the press. The different social media platforms also can bring-in in-built filters in the respective platforms to stop sharing fake news. Thus, the findings of this study generate managerial implications for the social media corporates and the government of India to think accordingly to control the social media platforms in India.

This present study may be observed with certain limitations. India, a country with the second highest population in the world, hasa huge size of active social media users. However, the responses of a sample size of 300 individuals were collected through snowball sampling for the current study. Hence, if the future studies are conducted with a reasonable sample size, more meaningful conclusions may be drawn. Examining more demographic groups and analysing more perceptions and attitudes of the social media users may be done by the future researchers on the topic of current research. With the current pace in technological advancements in every sector, the speed of new social media advancements is also likely to increase. Thus, so far, theoretical backing for social media usage is still lacking. Hence, it is very much important to ground new theories that deal with social media usage in utmost urgency.

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SOCIAL MEDIA AND GREEN CONSUMPTION BEHAVIOR OF MILLENNIALS

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ABSTRACT

Globalization and economic growth has brought substantial shifts in consumption practices, production and technology revolution in the wake of sudden spurt of social media usage among young consumers. The social media platforms have become a reliable source of communication with consumers and are shaping consumers' purchase intentions. Therefore, a framework was developed to explain and empirically verify the factors shaping green purchase intentions. Three factors Social media usage, Interpersonal Influence and E-WOM have been taken as exogenous variables. The model was tested and validated statistically with the help of structural equation modeling.Total 500 respondents were sampled to collect the data. All four hypotheses were found to be statistically significant. The impact of social media usage was found to be most influential on purchase intention. The findings of the study will aid marketers to better understand how social media plays an important role in shaping consumers' purchase intentions and how social media can be leveraged in a better way to encourage green consumption among millennials.

Keywords: Social Media Usage, Interpersonal Influence, e-WOM, SEM

INTRODUCTION

Globalization and economic development have led to significant shifts in consumer behavior, manufacturing methods and a revolution in technology, with a large range of internet use and market acceptance (Shao, 2009; Shang, Chen and Liao, 2006; Schlosser, 2005). Social media has become one of the most effective consumer marketing gears and is increasingly entwined into the normal lives of consumers, changing the way customers and marketers interact with each other (Ismail, 2017). Social media has arisen as an electronic communication platform in this scenario by sharing information, ideas and content created by users through networking and blogging (S. Krishnamurthy and W. Dou, 2008). More than 70% of American millennials use social networking channels, frequently with several accounts on various sites and smartphone apps (The Nielsen Company, 2015).

Millennials were the first buyers to rise in the world of global interdependence, which made them more open to ethical issues than others (Johnson et.al, 2019). In addition, the childhood years of millennials lead to a rise in media coverage of environmental concern and predisposition (Lu, Bock, & Joseph, 2013). Millennials are thought to be mindful of environmental concerns (Schoolman, Tysman, Schwimmer, & Shriberg, 2016). Millennials are more than just familiar with environmental concerns while creating buying decisions or are mindful ofCSR and resilience. The Nielsen study (2015) has shown that millennials are the most reluctant generation to pay a premium for green items, particularly when produced by companies with positive social

and environmental contributions. Furthermore, millennials follow employers that pose simple, optimistic messages about their CSR and environmental initiatives.
Bedard et.al (2018) has analyzed the motives of millennials to purchase green goods, the use of social media as a marketing tool and its consequences but still there is, however, a gap in a research exploring the role of social media and behavioral regulation by millennials as potential drivers of their consumer behavior (Lee, 2008 and 2010; Ellison, Steinfield, & Lampe, 2007). Prusa, P., & Sadílek, T. (2019) have studied the perception of green consumers and presented a model for green consumption. Analysis into millennial consuming patterns is important due to their increased purchasing power and impact of this generation on the total workforce (The Nielsen Company, 2015). Several studies in the past have revealed that social media affects the buying behavior of millennials but despite that there is an unwillingness among millennials towards green consumption. Since more than any other generation, social media is essential for the everyday lives of millennials (Helal et.al, 2018),therefore, the study is required to understand the green consumption behavior and how social media affects it.

Looking at the importance of social media, it is important to understand how social media as a platform shapes young consumers' perception towards eco-friendly products. This study aims to find the factors shaping consumer perception towards green purchase intention and its subsequent impact on green purchase behavior. The findings of the study would help marketers to frame strategies to motivate millennials towards green products.

Theoretical Background and Hypothesis Development

Social Media Usage and Green Purchase Intention

Singh et al. (2012) stated that social media has pioneered how companies and people connect between green and non-green goods, encouraging consumers to buy more engaging and competitive products. Organizations are searching for expanded visibility through various social platforms to reach customers across digital networks. In 2012, Smith and Brower stated that millennials in particular favor green businesses with a large web inclusion. Customers mainly use social media to get and ingest product-related information (Heinonen, 2011). Therefore, the online existence of a product is crucial for the final customer buying decisions. Wang et al., (2012) said that interactions between social media influence purchasing decisions both directly (by urging buyers to respond to peers) and implicit (by the amount of time spent contemplating and studying a product). Furthermore, social media experiences are linked positively to brand faith and product attitude (Wang et al., 2012, Hajli, 2014). Because of the immersive existence of the social media listed earlier (Sonnenburg and Singh, 2012), both corporations and peers networks play a very important role in shaping buying decisions made by principle of social influence is used to analyze the use of social media as social media contains an excess of the populated networks, powerful virtual proximities, and content created by the users. Therefore, customers would eventually build a trust in a green brand by regular, supportive interactions delivered across social media platforms (Kang & Hur, 2012).So the principle of social influence indicates that the use of social media has a strong effect capacity in a definitive partnership. The above literature has helped us to deduce that social media usage affects purchase intentions and propose the hypothesis that:

H1: Social media usage is positively related to green purchase intentions.

Interpersonal Influence and Green Purchase Intention

Katz and Lazarsfeld proposed that customers pursue marketing recommendations to satisfy the wish to join a group or strengthen the group relationship. It proposed further that opinion-seeking conduct could be studied as a mechanism of socialization (Flynn et al. 1996). Via the cycle of product socialization and contact, opinion seekers may be encouraged to create or reinforce their bonds with the community and gradually become indirectly sensitive to normative influences (Bertrandias, L.; Goldsmith, R.E., 2006). This claim is further reinforced by practical confirmation that interpersonal factors can influence customer buying decisions. Green customers trying to join a green group may demonstrate their desire to buy green goods as a signal that they want to adhere to the social expectations set by the green community they want to belong to.

Green consumers should therefore be driven to constantly collect renewable information from diverse outlets to select the right products.

This claim is backed by the research by Vining and Ebreo (1990), which found that people who were more dedicated to green habits, such as recycling, were more likely to turn to friends or environmental conservation details than others. Feick et al. (1986) reported that opinion seekers gather knowledge or views from informal sources to determine goods and make purchasing decisions. Evidence indicates that informative interpersonal factors may affect customer decision-making processes in product reviews, product selection, and purchasing decisions .Therefore, green customers are extremely likely to rely on climate experts or opinion leaders' knowledge to purchase climate goods in the green sense. In the light of above literature, the hypotheses is proposed:

H2: Interpersonal influence is positively related to green purchase intention.

E-WOM and Green Purchase Intention

Word-of-mouth contact is essentially a message about the product or service of a client, or about the business itself, in the form of feedback about the success of the product, hospitality, integrity, level of operation, and certain issues viewed and encountered by someone else. The messages sent may be either positive or pessimistic depending on what the message-giver thinks about the programs it embraces. As mainstream messaging has been phased behind, the shift in messaging paradigms has also shifted customer behavior (Sweeney JC, Soutar GN, Tim M., 2008). Till date, consumers favor word-of-mouth, since the distribution of personal-experience-based information is considered credible. Word-of-mouth contact may have a significant impact on consumers. Wang (2015) clarified that EWOM affects consumer purchasing decisions. Lamba *et.al* (2016) have reported that customer buying decisions were affected by EWOM. With the EWOM, consumers may get a lot more intimacy with other customers and get a quicker response on product information. Where information on products or services is not clear, consumers usually seek more data and citations from other source information, besides official sources of product details. Accordingly, this study considered that the electronic word-of-mouth could spread much more information to consumers which further affect the purchase intention. The EWOM affects the purchase intention and is an antecedent of purchase intention. Therefore, we suggest the hypothesis:

H3: EWOM is positively related to Purchase Intention.

Green Purchase Intention and Green Purchase Behavior

Yadav and Pathak (2017) define intention as the readiness of a person to conduct a specific behavior. As it catches the motivation to act, including readiness to participate and heightened effort, a person is willing to exercise. As per the theory of planned behavior, the performance is the product of actions when the action is voluntary in nature. In 2017, Yadav and Pathak, found evidence of a strong correlation in the context of green products for both behavioral intentions and green buying behavior. Consumers who are highly involved have to make a deliberate purchase without condition (Sharma and Joshi, 2017: Jain and Chamola, 2019). Green purchase intention defined as the want of customers towards acquisitions of green products. Intentions describe the driving factors that influence green buying behavior among consumers. According to the research by (Richa. C & Samrat. B, 2018) green purchase intention facilitates green purchase behavior in a positive way. Since intention facilitates the purchase behaviors. Therefore, it is taken as antecedent of purchase behavior and the following hypothesis is proposed in support of the literature.

H4: Green Purchase Intention affects green purchase behavior positively.

Conceptual Framework

This paper has developed a framework to understand the green purchase intention of millennials. The variables were identified based on literature and are important in predicting green purchase intentions. The variables selected for the framework are: Social Media Usage, Interpersonal Influence, E-WOM, Green Purchase Intentions and Green Purchase Behavior.

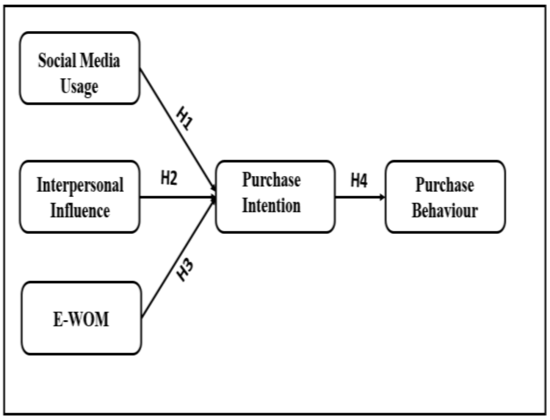

Figure 1: Conceptual Framework

METHODOLOGY

The present study has undertaken quantitative analysis on collected data. The pilot study had been administered with a sample of 50 respondents. Items were developed using existing literature for three constructs and existing scales for purchase intention and behavior had been borrowed. The questions were finalized after ensuring quality and objectivity of the instruments. The questionnaire was developed to test the propounded hypothesis.

The systematic random sampling was used to collect the data. Data was collected from students, working professionals and housewives in different parts of the country. The data were collected in the month of January and February, 2020. Total 500 respondents residing across India have answered the questionnaires.

The summary of respondents' demographics is given in Table 1.

The Instrument

The existing scales have been designed to capture the constructs taken in the study. Previous studies conducted in similarcontexts have been made for selection of these scales. Likert scales were for measurement of data. The questionnaire was composed of two parts.

Demographic details were given in the first section and second sections contains 21 items used to measure the five constructs except EWOM, all constructs were captured using four items scale. To measure social media usage, interpersonal influence and EWOM, items were developed after going through literature and in consultation with domain experts. The scales have been improved to ensemble the context and some of the items of the scales have been deleted due to low factor loadings.

Table 1: Demographic Information

Variables	Category	Frequency	(%)
Gender	Male	280	56
	Female	220	44
Age	20-30	130	26
	30-40	220	44
	40-50	150	30
Education	Graduate	140	28
	PG	170	34
	PhD	150	30
	Others	40	8
Income	10,000-25,000	100	20
	25,000-40,000	119	23
	40,000-55,000	141	28
	55,000 Above	140	29

Source: Authors' Calculations

The constructs and its indicators have been shown in Table 2.

Table 2

Construct		Items	Cronbach Alpha
Social Media Usage	SMU1	I am always keen to use social media.	0.85
	SMU2	I often read posts shared on social media.	
	SMU3	Social media posts influence my opinions.	
	SMU4	My purchasing decisions are guided by social media.	
Interpersonal Influence	IPI1	It exerts pressures on consumers to respondin a certain way.	0.81
	IPI2	I believe that interpersonal influence affects purchase decisions.	
	IPI3	It influences the product selection of consumers.	
	IPI4	I believe opinion seekersdepend on people for advice.	
E-WOM	E-WOM1	I frequently share my opinion on social media about products.	0.79
	E-WOM2	People share their real experiences on social media platforms.	
	E-WOM3	I have often used Facebook to share my opinion more than any other medium.	
	E-WOM4	I find E-WOM content reliable.	
	E-WOM5	EWOM affects the purchase decisions of consumers on social media platforms.	
Purchase Intention	PI1	I will consider purchasing only less polluting products in the coming time.	0.79
	PI2	I will change my loyalty for ecological reasons to green products.	
	PI3	Green products must be purchased as they make less environmental impact.	
	PI4	I think of spending more on environmental goods.	
Purchase Behavior	PB1	I only purchase green products for my daily needs.	0.79
	PB2	Green products are part of my daily needs products.	
	PB3	My purchasing behavior has been green for the last few weeks.	
	PB4	I have had a green buying activity in the last six months.	

Source: Authors' Calculations

Structural Equation Model
The SEM bond regression and confirmatory factor analysis to measure a series of interrelationship between constructs of the proposed model. Measurement model and Structural Model are two main elements of SEM. The relationship of latent constructs to its variable is measured by measurement model whereas structural models examine the power of the relations. It also tests the strength of the relationships.

The Measurement Model
The confirmatory factor analysis has tested the proposed model. In SEM, before proceeding for relationship testing in the constructs, the model is supposed to have high degree of validity and reliability. The hypothesized model has been tested with the help of scales mentioned in the instrument sections. Total 21 items have been used to measure five constructs in the model. The proposed model has been measured using scales mentioned in the Instrument section.

The convergent validity, discriminant validity and reliability have been checked for the proposed model. Internal consistency is a measure of the reliability of diverse survey items that intend to measure the same characteristics. Cronbach's alpha indicates inner consistency. The Cronbach alpha score was calculated for each construct and is presented in Table 1. All constructs are good on reliability. Social Media Usage, Interpersonal Influence, EWOM, Purchase Intention and Purchase Behavior have the reliability score of 0.85, 0.81, 0.79, 0.91 and 0.79 respectively.

Convergent validity test the amount of commonness among the indicators of the constructs (et al., 2010). This is assessed by standardized factor loadings which further confirms the worth of indicator variables and confirms its representation of the latent constructs. All observed variables factor loading falls between 0.69 and 0.93. It confirms the relations of individual variables to its constructs and therefore, confirms the convergent validity.

This confirms observed variables are acceptable and relate to their constructs. Therefore, convergent validity is confirmed.

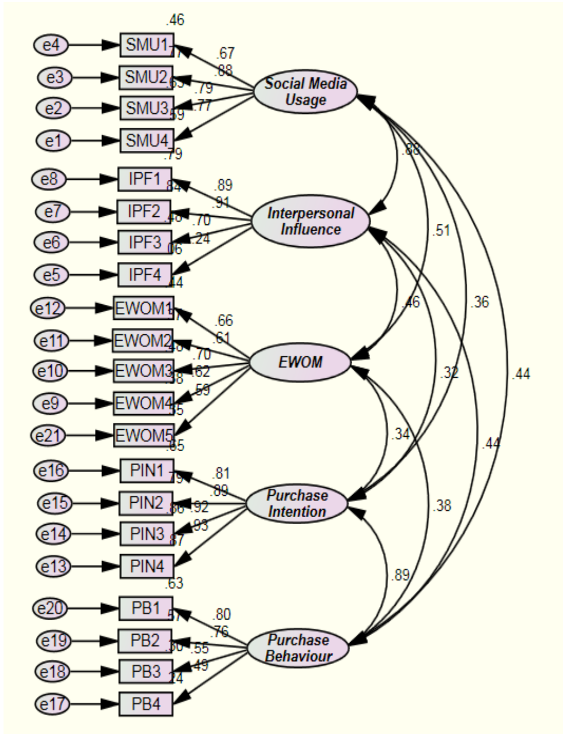

Figure 2: Measurement Model: Factors Affecting Green Purchase Intention

The model was tested for goodness of fit and

Table 3: Correlation Matrix and Average Variance Extracted

	CR	AVE	MSV	ASV	SMU	IPI	EWOM	PI	PB
SMU	0.911	0.721	0.284	0.191	0.849				
IPI	0.862	0.611	0.284	0.184	0.533	0.782			
EWOM	0.817	0.527	0.189	0.124	0.312	0.409	0.726		
PI	0.919	0.739	0.189	0.104	0.240	0.402	0.435	0.860	
PB	0.938	0.790	0.326	0.169	0.496	0.359	0.295	0.241	0.889

Source: Authors' Calculations

Table 4: Summary of goodness of fit indices

Model fit Indices	χ2/df	CFI	GFI	NFI	TLI	RMSEA
Measurement Model	1.90	0.91	0.931	0.92	0.933	0.037
Structural Model	1.92	0.95	0.91	0.93	0.95	0.041

Source: Authors' Calculations

Table 5: Summary of Testing of Hypotheses

Paths	β Coefficient	t-value	p-value	Relationship
PIN <-IPI	0.10	0.285	0.04	Confirmed
PI<-SMU	0.20	1.65	0.02	Confirmed
PI<-EWOM	0.13	2.45	0.03	Confirmed
PB<-PI	0.88	3.45	***	Confirmed

Source: Authors' Calculations

subjected to CFI, GFI, NFI, TLI and RMSEA (Hair et al. 2010) indices. The threshold value of Chi square/df has to be less than 3 for obtaining satisfactory fit. Further, CFI, GFI, NFI and TLI should be more than 0.9. The RMSEA value must be inferior than 0.08 (Gefen & Strab, 2000). Table 4 presents the summary of goodness of fit for measurement models. The respective Chi-square/df, CFI, GFI, NFI, TLI and RMSEA values are 1.90, 0.91, 0.92, 0.93 0.92, 0.93 and 0.037.

Structural Model: To confirm the propounded hypothesis in the research model, the structural model has been performed using SEM. The values of goodness of fit indices are 1.92, 0.95, 0.91, 0.93, 0.95 and 0.041 respectively. All goodness of fit measures are within the desired range and are accepted. This proves the validity of the structural model as per the fit indices and allows us to proceed further to test the research hypothesis proposed in our research model.

Table 5 presents the summary of hypothesis testing. The beta coefficient elucidates the contribution of independent variables towards dependent variables. All hypotheses are found positive in nature. Factors such asSocial Media Usage, Interpersonal Influence, EWOM and Purchase have been found to be significant and have a different beta coefficient. The different factors contribute different weights to purchase intention towards green products.

RESULTS & DISCUSSION

The proposed structure mirrored the effect of user-generated content on green customer behavior, due to its perceived level of ease of use, perceived utility and perceived feelings associated with social media use. The social media use has been found to be a significant predictor of purchase intention (β=0.20: p<0.05).Moreover, the present research also considered the effect of the interaction between many variables on the purchasing decisions and advertisement of green goods. The results reflected that while green goods purchasing decisions primarily derive from environmental consciousness, there are certain considerations that are considered crucial in deciding the preferences of customers to buy green goods.

Despite the abundance of studies on the factors that make green goods interesting to millennials, there is little data on the basic factors that enhance the green purchase intentions of millennials above social influence and environmental interest (Lee, 2008). EWOM was found to be a significant predictor of purchase intention (β=0.13: p<0.05) as the influence of EWOM on consumers' purchase intentions has long been known by researchers (Zhang et al., 2010). The results confirm the significance of the model highlighting the role of information and attitude as factors of EWOM on social media. Interpersonal influence was also found to be a significant predictor of purchase intention (β=0.10: p<0.05) and supports the model. It was found that people who were more committed to green behaviors, such as recycling, were more likely than others to turn to friends or environmental protection information.

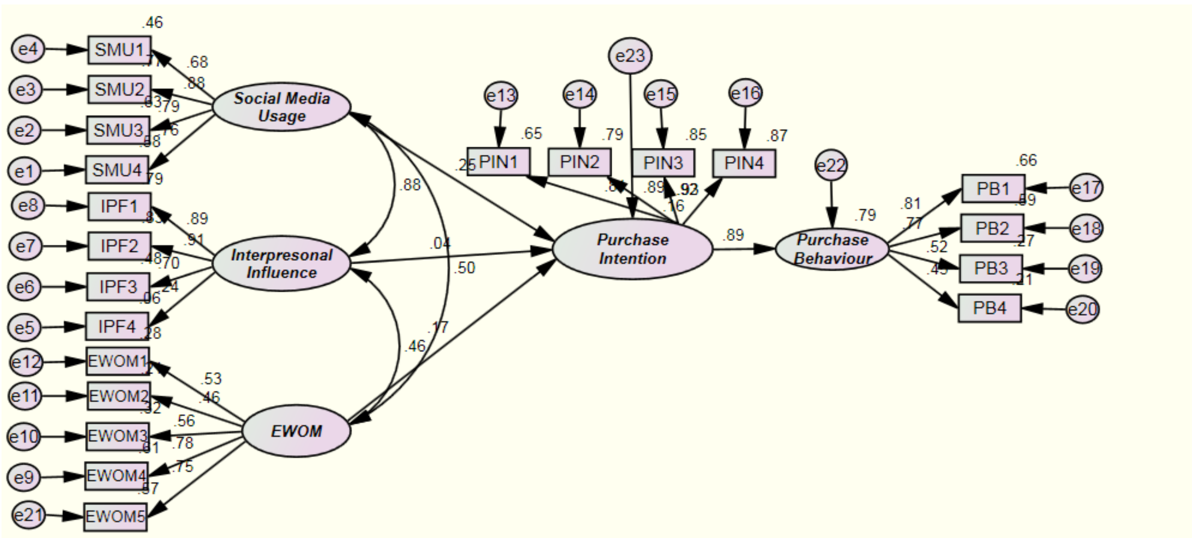

Figure 3: Structural Model: Factors affecting Green Purchase Intention

Literature indicates that insightful interpersonal considerations can influence the decision-making process of customers in product reviews, product selection and purchase decisions.

The impact of purchase intention on purchase behavior is reported significant (β=0.88: $p<0.05$) in the study. Researchers found evidence of a strong correlation in the context of green products for both behavioral intention and green buying behavior. Green purchase intention defined as the desire of customers to purchase green products. Intention means the driving factors that influence green buying behavior among consumers. As per the researchers, green purchase intention facilitates green purchase behavior in a positive way.

CONCLUSION

The presence of social media has made it an attractive mode of communication for companies. Companies have realized the power of social media as a platform to connect with consumers and promote their goods on social media. Social media holds huge potential for growth in time to come. As social media has become an important mode of connecting with millennials, therefore, it must be utilized to its fullest to leverage its benefits for society. The current paper has studied the role of social media in shaping millennials' purchase intentions towards green consumption. Shifting behavior towards green consumption practices will help in saving of resources, improving environment and reduction in wastage of resources.

Theoretical Implications

The current study has extended the existing literature by providing valuable insights. The study has explained the role of social media in shaping green purchase intentions of millennials. Millennials, being a significant chunk of the population, occupy an important role in consumption and have responsibility towards the environment. Therefore, this study has provided the framework needed to understand the green purchase intentions of millennials.

Managerial Implications

The adoption of green consumption has become imperative to consumers and companies both. Companies should strive through social media platforms as a part of environmental responsibility to create awareness among consumers about green consumption. As most of the consumers are present on the social media platforms. Therefore, the findings of the study would provide insights to companies about how they can use social media platforms to encourage green consumption among Indian consumers. Green consumption would be optimized with the increased environmental awareness through social media platforms.

LIMITATIONS & DIRECTION FOR FUTURE RESEARCH

The current study is not free from the limitations. The sample size used in India is too low to represent the entire country. The large sample size could have been helped towards generalizing the findings to the population. Second, social media habits and consumption varies across countries. As this study has been carried out in India, therefore it requires replication in some other countries before generalizing the findings. The current study has only used three factors that shape purchase intention for green products. The future study must extensively use literature to add more factors to this model to enhance their understanding towards how green intentions are shaped, future studies must segregate the sample according to generation because all generations are different from each other with respect to social media usage.

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ROLE OF FACEBOOK VIDEO ADVERTISEMENTS IN INFLUENCING THE IMPULSIVE BUYING BEHAVIOR OF CONSUMERS

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ABSTRACT

The purpose of this study is to empirically investigate the role of Facebook video advertisements in influencing the impulsive buying behavior of consumers. Social media facilitates global interaction among its users through their experiences and ideas. Social media has today become one of the greatest marketplaces for products and service providers in promoting their brands. This study has developed a conceptual framework in order to identify how video advertisements influence the impulsive buying behavior of consumers. The model has been tested empirically through the collection of quantitative primary data. The data has been collected from Indian consumers who have a Facebook account and use it frequently. Descriptive research design has been employed in this study. The collected data has been subject to statistical analysis through SPSS software. In addition to identifying the relationship between video advertisements and Impulsive buying behavior of consumers, this study also attempts to examine the role of the demographic characters of the consumers in moderating the relationship between the proposed variables. The results of the study reveal that social media video advertisements influence the cognitive and affective aspects of impulsive buying behavior of consumers. Further the results revealed that the relationship between social media video advertisements and impulsive buying behavior of consumers is moderated by the demographic characteristics namely age, gender and social status of the consumers.

Keywords: Impulsive Buying Behavior, Facebook, Social Media Video Advertisements

INTRODUCTION

In the recent times social media has become a predominant tool in influencing the buying behavior of consumers. Specifically, it has transformed customers' thinking pattern to a great extent (Mir and Zaheer, 2012). Social media acts as a common platform for individuals globally to connect with each other and provide data as well as experiences related to issues, activities and products (Heinrichs et al, 2011). People are influenced by fast growth of social media like Facebook, twitter and so on and as a result, firms are actively adopting them as advertising partner as well as activities of building brand (Georgios and Sergios, 2014). It permits firms to communicate with consumers with rapid reach using richer media. Such interactive way of communication among consumers permits to share and exchange data from the advertisers side as well as from consumers' side. Firms have the chance to change association with consumers from dialog to trialogue, whereas consumers contribute in remarkable association with firms and one another (Lipsman et al, 2012). With the help of social media firms had potential to build links with new and existing consumers and shape communities which interactively work together for identifying issues and developing solutions for them.

Seung (2012) identified that businesses adopt Facebook for building discussion associations with their loyal consumers, encourage their consumers to shop online as well as depend on their consumers for assisting to promote the brand through their involvement to Facebook and page given for brand. Some ad types are adopted in Facebook for obtaining high profit namely Facebook power editor, partner categories and more. Buying behavior of customer is integration of decisions, choices and perspectives while purchasing a product (Perera and Sutha, 2018). Factors influence the consumers buying behaviour are social factors like family, reference group, status and role, culture factors like social stratum, subculture, culture, personal factors namely career, age, life style, economic status, career and self-concept and psychological factors like attitude, belief, sensory, motivation and learning (Satrianaa, 2014).

Traditional medium for media communication was believed to be more vital for past few years whereas in recent year's social media has become significant communication mode in advertising and marketing to build brand sustainability. Social marketers communicate and interact effectively and economical to consumers by adopting the mechanism of channels in the social or digital media. Because of popularity and growth of such media, marketers are giving data and campaigns for advertisement to their consumers by adopting digital innovation (Moreno et al, 2017). With the growth of novel channels in social media the conventional electronic and print media such as newspapers, magazines, television, billboards, hoardings are facing difficulties. With the introduction of new media for interaction has developed novel chances for advertising scopes for marketers and business. Social media plays a vital role in marketing and advertising the products which highly influence consumers to buy products (Seung, 2012). Thus, this particular research intends to concentrate on examining in detail about role of Facebook video advertisements in influencing the impulsive buying behavior of consumers.

Following are the questions to be answered in this research: What are the various aspects related to impulsive buying behavior of consumers? How to develop a model for examining the role of Facebook video advertisements in influencing the impulsive buying behavior of consumers? What are strategies to be adopted for enhancing role of Facebook video advertisements in influencing the impulsive buying behavior of consumers? Aim of the research is to examine about role of Facebook video advertisements in influencing the impulsive buying behavior of consumers.

There are also researchers and studies which focus on impulsive buying behaviour of customers (Abbasi, 2017, Ahmad et al, 2019, Akram et al, 2018, Al-Zyoud, 2018, Amos et al, 2014, Badgaiyan and Verma, 2014, Farid and Ali, 2018 and Chen et al, 2019). Authors also focused on effect on social media marketing on impulsive buying behaviour in online platform (Bansal and Kumar, 2018 and Chuah and Gan, 2015). Das et al (2018) studied about effect of socioeconomic makeup of users in facebook on purchasing behaviour. Apart from these Dinesh and Bhoopathy (2019) examined about factors that influence impulsive buying behaviour with respect to Millennial consumers with respect to online platforms. Additionally, Handayani (2019) carried out a research to study about link between browsing of the product on shopping motivation and Instagram and its impacts on purchase intention. There are no studies and researchers that focused on role of facebook video advertisements in influencing the impulsive buying behaviour of consumers with cognitive and affective aspects as well as focus on demographic variables. Therefore this particular research attempts to bridge that gap by exploring role of facebook video advertisements in influencing the impulsive buying behaviour of consumers with cognitive and affective aspects as well as focus on demographic variables like age, gender, social status and family size

LITERATURE REVIEW

Social media

Social media assists people to sustain their existing links with family, friends and relatives and communicate with them with rapidity and ease. Functions of social media are categorized in different method with particular function. Social media allows the companies to directly interact with their consumers. Such strategy allows the customers to feel comfortable than conventional methods of advertising and selling. It allows the people to post comments on goods and share information (Hajli, 2014). When message is passed by different people of social media it becomes viral and reaches huge population of people. It assists marketers to know about their consumers by knowing their dislikes and like.

It assists different companies for understanding how various kinds of activities are performed. It maximizes awareness for customers how to adapt branded services and products. Social platforms assist to help existing customers and also attract new customers (Zembik, 2014). Social media marketing could be adopted in different levels namely organizational level, intra-organizational level and individual and community level. It was clear that these levels effectiveness relies on co-ordination of few factors, health care sectors, governments and policy makers that are efficient and act as basis for campaign of coherent communication (Hristodoulakis et al, 2015 and Bhattacharyya and Roy, 2016).

Introduction to Impulsive Buying Behavior:
Choudhary (2014) refers impulsive buying as acquisition or buying of products on impulse rather than from premeditation. Impulsive buying is also known as unplanned decisions to buy any merchandise or service. Impulsive buying is an unplanned shopping performed in reaction to an external trigger. Impulse purchasing emerged upon exposure or by viewing the product to a well-planned promotional message which may be impacted by traits faced by environmental or internal states of customers.

The internal states and environmental cues perform better to trigger the impulse of customers to buy. Lu and Su (2018) has mentioned that the behaviour that occurs due to buying impulse resulted from product attraction which is hasty, not planned, irrational and thoughtless buying behavior is referred as impulse buying behaviour. It is the buying behavior much of emotions rather than irresistible drives and rationality. Farid and Ali (2018) has stated that impulse buying behavior is an appealing perspective of customer behavior for firms because customers end up purchasing greater than what they have actually planned for. Impulsive buying behavior is becoming the latest trend in nowadays world.

Singh and Tandon (2016) have stated that impulse purchasing behavior is a spontaneous or unplanned buying. One who intends to make such buying is known as impulse buyer. Vasanthi and Deepa (2016) defined impulse buying as a spontaneous or unplanned buying. Impulse items can be a new sample, products or well-established goods at surprisingly reduced costs. Customers who have no preplanning to buy a product have to view the product and decide to purchase the product. Thomas et al (2018) in their study has defined impulse buying as an immediate and sudden buying with no pre-shopping intentions either to purchase the particular category of product or to satisfy a specific purchasing task. Impulse buying behavior exists after facing an urge to purchase and intends to be spontaneous without several reflections.

Similarly, Mainali et al (2016) has stated that impulse purchasing is an instantaneous and spontaneous buying where the customer is not involved actively in search of a good and has no appropriate pre-mindset to buy. Impulse buying is much emotional than rational. Thompson and Prendergast (2015) have stated that impulsive buying is a spontaneous buying or taking product ownership without any deep thinking. People who are highly involved with impulse purchasing are the ones who get connected emotionally to product easily and are the ones who tend to be fulfilled with on the spot product. Ozer and Gultekin (2015) has mentioned that people who have positive mood are probable to chose for impulse purchasing and tend to be much excited about online shopping compared to negative mood people.

Impact of Social Media Video Advertisement on Impulse Buying Behavior of consumers:
Bansal and Kumar (2018) proposed a study on the social media marketing role and their effect on impulsive buying behaviour. Unplanned buying enhances due to marketing of social media and additional expenses due to factors of social media. Similarly, in Al-Zyoud (2018) study the factors influencing social media are hedonic motivation, trust, website quality and variety seeking. The results of Akram et al (2018) ensure positive impact of situational factors on online impulse purchase among the online shoppers in social commerce surroundings. Chen et al (2019) study results urge to purchase impulsively is decided by affective trust in recommender and affection towards the suggested product which are impacted by both recommender and product related signals.

The study of Sharma, Mishra and Arora (2018) examines the impact of social media advertisement and social media community on impulse purchase intention. The study shows essential relationship among different factors that impact impulse buying behaviour of consumers with indices of adequate model fit. Chitharanjan (2016) has found in their study that if business requires impacting the customer behaviour towards their services

and products, they have to undertake their ads using channels of social media.
Kazi et al (2018) studied the impact of social media on impulse purchasing behaviour of consumers and also examined the essential factors influencing impulsive purchasing behaviour of consumers. The results of the study showed that social media have essential and positive effect on consumer's impulse purchasing behavior. Husnain et al (2016) found in their study that online social communication can strongly develop the buying behavior of customers on impulse when individual shows the traits. Similarly, in the research of Wahab et al (2018) the motivation of online buying on hedonic motivation has essential impact on impulsive purchasing and browsing of products. Shafique et al (2015) has mentioned in their research that trust plays an essential part on the buying decision of online and offline impulse buying.

Kumar and Kaur (2018) investigated the factors influencing the online impulsive buying behavior of customers. The possibility of customers to purchase impulsively is recommended to enhance further because of online shopping convenience. The outcomes of the research will be useful for online organizations which need to enhance the online impulse purchasing behavior of customers. Similarly, Badgaiyan and Verma (2014) examined the impact of personality, materialism, culture, tendency of shopping enjoyment and impulsive purchasing tendency on impulsive purchasing behavior. Chuah and Gan (2015) examined whether the emotions, hedonic motivation and personality impact impulse purchasing behavior when shopping through internet. Ahmad et al (2019) has mentioned in their study that consumers have greater self-esteem level which tends to imagine twice before buying anything as they are confident about their personality and decisions.

The study of Handayani (2019) determines how hedonic motivation and utilitarian motivation impact buying intention, impulse purchasing, intention of word of mouth and how social media browsing of information impact on hedonic and utilitarian motivation. Based on the outcome the attitude of searching beauty products has a positive impact on buying motivation. Utilitarian motivation has a positive impact on buying intention but does not have a positive impact of impulse purchasing and WOM intention.

Conversely hedonic motivation has a positive impact on WOM intention, impulse buying and buying intention. In the study of Sebayang et al (2019) hedonic motivation has an essential impact on impulse buying. Similarly, Yu et al (2018) has mentioned that hedonic shopping values are impacted by construct of entertainment and utilitarian values of shopping are positively associated to selection, convenience and monetary saving. Lo et al (2016) has stated that sales promotion stimuli facilitate online impulse buying effectively and provides hedonic or utilitarian advantage to customers.
Kathiravan et al (2019) has mentioned in their study that the buying behavior understanding of online consumers as far as their impulsive conduct would be helpful for academicians and advertisers.

The main purpose of this study is to consider a gender at components which strives for internet shopping and to construct a comprehension of variables influencing internet shopping by customers. Kumar and Narayanan (2016) study determines the shoppers impulse buying behavior at clothing multi brand shops using retail categories and socio-economic factors. Similarly, the study of Das et al (2018) aims to set up whether the Facebook users' socio-economic factors has a different impact on their purchasing decisions after exposing to advertisements on it.

Zhou and Gu (2015) has stated that shopping circumstances and personal qualities influence option of customer impulse purchasing behaviour during promotion of sales. When implementing a reduction of cost, retailers tend to favour one practice over the other yet, how varied implementations of a cost promotion impact impulse purchasing behaviour of customer has been learnt inadequately. This study framed a reduction of cost in the money amount versus products percentage to examine how the expected regret impacts likelihood to impulse purchasing. The study of Huang and Esterhammer (2017) found which factors contribute to the regret feeling during impulse buying. Tang and Hao (2017) predicted that promotion of price will essentially impact impulsive purchasing behaviour of customer and utility of transaction had a partial mediating impact between impulsive purchasing and promotion of price.

Triwidisari et al (2017) determined the impact of using Instagram social network and motives of hedonic shopping to impulse purchasing media and to know whether financial literacy is capable to moderate the impact of Instagram social network use and motives of hedonic shopping to impulse purchasing. The motives of hedonic shopping and Instagram social media usage have significant and positive impact to impulse purchasing behavior of students. Financial literacy moderate the impact of Instagram social media use to impulse purchasing while not able to moderate the impact of hedonic shopping motives on impulse purchasing. Ustanti (2018) had mentioned in their research that hedonic shopping essentially impact on impulse purchasing behavior of middle class society in internet shopping. Lins et al (2014) has stated in their research that hedonic shopping is positively associated to impulse buying tendency.

Ling and Yazdanifard (2015) studied the online impulsive purchasing behavior causes which are essential as such research may produce some creative strategies or notions to marketers to enhance profit from online market. In this research the authors uses external and internal factors in studying the impulsive purchasing behavior. The internal factors and external factors which cause impulsive buying are interrelated in some perspectives and are difficult to isolate individually. Sahai et al (2019) has stated that a positive correlation was viewed between psychological perception of customers and their desire to purchase online. Fioretti (2018) examined the internal factors, product category and situational factors within customers than can influence impulse purchase. Amos et al (2014) viewed at the effect of outside events or situations on impulse buying and predicted that positive social impact can enhance impulse purchasing. Khorrami and Esfidani (2015)identified the impact of situational factors on compulsive buying and impulsive buying.

Dinesh and Bhoopathy (2019) have mentioned in their research that marketers are viewing into the behavior to enhance the online sales. Number of users influencing and/or accompanying during impulse buying and huge amount of income at the initial stage of moth are certain factors that impact impulsive purchasing behavior though the effect is not that essential marketers must view into quantifying variables using big data to perceive the factors better. Singh (2018) has mentioned in their research that high-income group involve in much impulse purchasing than low income group. Luniya and Varghese (2015) have mentioned in their study that impulse buying behaviour of people increases with the increase in their income.

The below table shows the impact of social video advertising in influencing the impulsive buying behaviour of consumers:

Table 1: Content Analysis

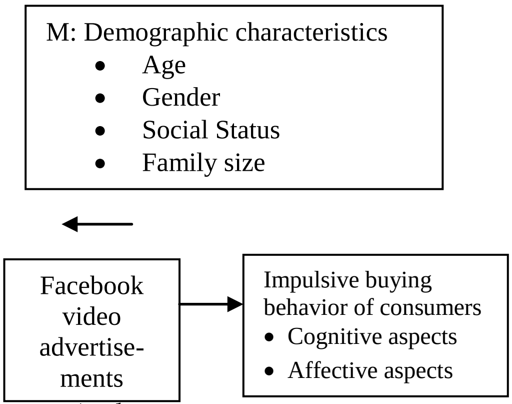
S.No.	Author & Year	Social media factors influencing impulsive buying behavior	Findings of the research
1	Bansal and Kumar2018; Alzyoud, 2018; Kazempour and Lotfizadeh, 2017; Chen et al, 2019	Hedonic motivation, quality of website, ethical and trust values, variety seeking and situational variable	Unplanned buying enhances due to marketing of social media and additional expenses due to factors of social media
2	Sharma, Mishra and Arora, 2018; Chitharanjan, 2016;	Social media community and social media advertisement	Positive impact of social media advertisement and social media community on impulse buying intention
3	Kazi et al, 2019; Husnain et al, 2016; Wahab et al, 2018; Shafique et al, 2015	Social Network Marketing, Hedonic Motivation, Trust, electronic WoM and impulsive purchasing	Online marketers and retailers must perceive the significance of social media for motivating online consumers impulsive

S.No.	Author & Year	Social media factors influencing impulsive buying behavior	Findings of the research
		behavior	purchasing.
4	Kumar and Kaur, 2018; Badgaiyan and Verma, 2014; Chuah and Gan, 2015; Ahmad et al, 2019	Personal Behaviour, circumstance at the time of buying, ethical problems and promotion	Huge advantage to electronic marketers in devising schemes through which they can stimulate customers impulse buying behaviour and enhance the products sales
5	Handayani, 2019; Sebayang et al, 2019; Yu et al, 2018; Lo et al, 2016	Utilitarian motivation and Hedonic Motivation	Utilitarian motivation has a positive impact on buying intention and conversely hedonic motivation has a positive impact on WOM intention, impulse buying and buying intention
6	Kathiravan et al, 2019; Kumar and Narayanan, 2015; Das et al, 2018;	Socio-economic factors	Critical link between supposition of customers about unconstrained purchasing satisfy customers to shop impulsively
7	Zhou and Gu, 2015; Huang and Esterhammer, 2017; Tang and Hao, 2017;	Promotion of price and Anticipated Regret	Presentation of price has an essential effect on customer impulse purchasing behaviour and anticipated regret influences the effect of varied presentation promotion on impulse purchasing behaviour of customers
8	Triwidisari et al, 2017; Ustanti, 2018; Lins et al, 2014	Social media usage, Motives of hedonic shopping and Financial literacy	Motives of hedonic shopping and social media usage of Instagram have significant and positive effect to impulse purchasing of students
9	Lim and Yazdanifard, 2015; Sahai et al, 2019; Fioretti, 2018; Amos et al, 2014;	Internal Factors, Psychological factors, Situational Factors, Characteristics of Product and Website Characteristics	Online impulsive purchasing behaviour is essential in enhancing returns to sellers and experience of shopping to customers
10	Dinesh and Bhoopathy, 2019; Singh, 2018; Luniya and Varghese, 2015	Number of users influencing and huge amount of income	Frequency of buying an online product shows better chances so that marketers could use by enhancing campaigns and advertisements to these demographic characteristics to expand the buying importance of customers

Source: Author's observations

Conceptual Framework

The following figure illustrates the conceptual framework for the role of Facebook video advertisements in influencing the impulsive buying behavior of consumers



Source: Author

Figure 1: The conceptual framework for the role of Facebook video advertisements in influencing the impulsive buying behavior of consumers

Hypothesis:

- Null Hypothesis: The role of Facebook video advertisements does not influence the cognitive aspects of impulsive buying behavior of consumers

  Alternative Hypothesis: The role of Facebook video advertisements influences the cognitive aspects of impulsive buying behavior of consumers

- Null Hypothesis: The role of Facebook video advertisements does not influence the affective aspects of impulsive buying behavior of consumers

  Alternative Hypothesis: The role of Facebook video advertisements influences the affective aspects of impulsive buying behavior of consumers

- Null Hypothesis: The relationship between Facebook video advertisements and impulsive buying behavior of consumers is not moderated by the demographic characteristics

  Alternative Hypothesis: The relationship between Facebook video advertisements and impulsive buying behavior of consumers is moderated by the demographic characteristics

  - The relationship between Facebook video advertisements and impulsive buying behavior of consumers is moderated by age
  - The relationship between Facebook video advertisements and impulsive buying behavior of consumers is moderated by gender
  - The relationship between Facebook video advertisements and impulsive buying behavior of consumers is moderated by social status
  - The relationship between Facebook video advertisements and impulsive buying behavior of consumers is moderated by family size

S. No	Author and Year	Variables	Definition
1	Rook and Hoch, 1985	Cognitive aspects	Customers indicate various attitudes in various circumstances and indicate various pattern for consumption with specific reference to products involvement. Products with low involvement have unique impact on consumption pattern of people instead of products with high involvement
2	Coley and Burgess, 2003	Affective aspects	It is related to moods, feelings and emotions. Consumption of products is processed when a customer feel variance in their actual being state and desired one.
3	Hoch and Loewenstein, 1991	Impulse buying behavior	Open buying of products by peoples without explicit intentions to buy or prior planning is very significant for companies.

RESEARCH METHODOLOGY

Paradigms of the research are categorized into different types namely interpretivism, positivism, pragmatism, critical paradigms, subjectivism (Patel, 2015). In this study, investigator adopts the positivist paradigm, since the proposed work examined the role of Facebook video advertisements in influencing the impulsive buying behavior of consumers. Positivism paradigm was adopted since this research analyzes the quantitative way of approach. Positivist paradigm has tools to gauge the events, facts and information. Design of the research helps investigator to make research effectively by giving more amount of information with lesser quantity of effort, time and money. This research makes use of descriptive research as the design of the research. This research numerically tests the role of Facebook video advertisements in influencing the impulsive buying behavior of consumer. The sampling methodology is generally adopted by investigator to choose desired samples of study. Sampling methods are mostly probability sampling and non-probability sampling methods. This particular research makes use of simple random sampling methods. Each respondent are selected randomly that is they are selected by a chance and it is also named as probability sampling.

The sample size of the study for quantitative approach of the research is 324 consumers. The target population is the group of respondents chosen by the investigator to carry out the investigation to gather primary data. In this research, the selected respondents are consumers to study about their impulsive buying behavior in social media.

Data for this research could be gathered in 2 ways namely secondary and primary data. Primary information of the research are directly gathered from respondents where as the secondary type of data are gathered from prior resources. In this research, survey methods were used for collecting the primary data. In this research, investigator would give closed end questionnaires to collect data from the selected participants. Investigators would give closed ended questionnaires to 324 consumers. Secondary data are collected from external materials such as journals, research papers, internet, articles, and books which are related to research namely role of Facebook or social media video advertisement which influence impulsive buying behavior of the consumers. After acquiring primary data from the respondents, graphical or statistical kind of tools are adopted for analyzing the collected primary data. Hypotheses of the research are tested with the help of Karl Pearson correlation test. Software tools adopted are Microsoft excel and SPSS. Investigator has followed proper and accurate practice for carrying out the research. Information gathered for this research is to be adopted only for academic and research purposes only. In this research, ethics is strictly maintained and followed by the investigator to promise the consumers to keep their answers very secure.

ANALYSIS

This section explains about the analysis of data to measure the role of Facebook video advertisements in influencing the impulsive buying behavior of consumers. This section also describes about statistical techniques adopted in this research namely regression, factor analysis and correlation test.

Reliability

Below table explains about reliability of the constructs. Alpha value for cognitive aspects is 0.922. Alpha value for affective aspects is 0.947.

Table 2: Reliability analysis

S.No	Construct	Items	Alpha
1	Cognitive Aspects	10	.922
2	Affective Aspects	10	.947

Below table explains total variance explained for all components of cognitive and affective aspects. Eigen values for component in cognitive aspects are 1, 2, 3, 4 are 9.302, 3.582, 1.356 and 1.051 respectively. Eigen values for component in affective aspects are 15, 16, 17, 18, 19 and 20 are 3.119E-0.16, 1.612E-016, 3.804E-018, 4.358E-017 and 1.943E-016 respectively.

Table 2: Factor analysis- Variance table

Total Variance Explained

Component	Initial Eigen Values			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	9.302	46.512	46.512	9.302	46.512	46.512	6.847	34.233	34.233
2	3.582	17.912	64.423	3.582	17.912	64.423	6.038	30.190	64.423
3	1.356	6.779	71.203						
4	1.051	5.253	76.456						
5	.922	4.609	81.065						
6	.651	3.255	84.320						
7	.578	2.890	87.209						
8	.479	2.395	89.604						
9	.451	2.254	91.858						
10	.434	2.169	94.026						
11	.378	1.890	95.916						
12	.319	1.595	97.511						
13	.253	1.263	98.775						
14	.245	1.225	100.000						
15	3.119E-016	1.560E-015	100.000						
16	1.612E-016	8.059E-016	100.000						
17	-3.804E-018	-1.902E-017	100.000						
18	-4.358E-017	-2.179E-016	100.000						
19	-4.823E-017	-2.412E-016	100.000						
20	-1.943E-016	-9.716E-016	100.000						
Extraction Method: Principal Component Analysis.									

Below table explains about component transformation matrix for cognitive aspect and affective aspect with respect to impulsive buying behaviour.

Table 3: Factor analysis- Component transformation matrix

Component Transformation Matrix

Component	1	2
1	.755	.655
2	-.655	.755

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

In the regression analysis model summary, the R value is found to be .634,R^2 value is found to be .402 and adjusted R^2 square value is found to be .401.It is found to be the value of .402 that our independent variable explains 40.2% of the dependent variable. From the anova table, it was clear that value is significant.

Below table explains about coefficients and residuals statistics.

Table 4: Coefficients

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.349	.221		1.576	.116
	MEAN	.971	.066	.634	14.705	.000

a. Dependent Variable: FRE

Source: Primary data

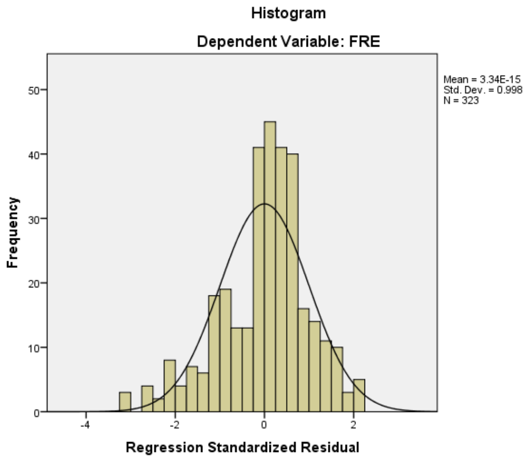


Figure 2: Histogram
Source: Primary data

This chart explains about regression standardized residual.

Discussion, managerial implications and limitations of the study:
The current papermakes an effort to identify that there is a strong association between the attractiveness factors of social media particularly Facebook advertising with impulsive buying behavior processes. The findings of the test of hypothesis is summarized below:

Table 10: Findings of the Test of Hypothesis

S. No	Hypothesis	Accepted/ Rejected
1	There is a relationship between the Facebook, social media advertisement and impulsive buying behaviour	Accepted
2	Family size moderates the relationship between the Facebook, social media advertisement and impulsive buying behaviour	Accepted
3	Social status moderates the relationship between the Facebook, social media advertisement and impulsive buying behaviour	Accepted

Role of Facebook advertisement in impulsive buying behavior
Businesses are changing their marketing techniques and practices towards social media for advertising their products and services. Of these, video advertisements are one of the thriving platforms of social-media marketing (Niazi, et al 2012). As a consumer, employing online medium for several reasons in daily life has become quite normal. Marketers are as well accepting this change and implementing required activities in advertising and promotional strategies. The main goal of company/organization is to get through to potential consumers and creates influence on their purchasing behavior (Ayanwale et al., 2005). According to Adelaar et al. (2003) purchasing behavior is generated by emotional response factors, which include pleasure, arousal and excitement. Accordingly in social media video advertisement, the three abovementioned factors are influencing the purchasing behavior of customers (Niazi, et al 2012) and also emphasized that one of the important reasons of the social media marketing continues to develop is that contrary to other channels of advertising, it brings an opportunity to companies to promote their products & services in a variety of formats tailored to their resources and demands.

Customers who spend a lot of time, effort and money into a buying process might face cognitive element on whether a perfect choice has been made (Kotler and Armstrong, 2014). This makes the customer look for loyal information to lessen the difference, by either confidently authorizing the decision made, or determining that it has been a reckless decision. When the question was asked to respondents whether social media video advertisement influences their purchasing behavior, the majority of respondents reported sometimes and others posited yes and hardly a few respondents said yes. In the current study, respondents were asked to rate their perception in terms of cognitive and affective aspects as well. 43% of respondents disagreed to the point that they think carefully before they buy something. Similarly, the mediating impacts of internal state of both affective and cognitive-based aspects for the impact of stimuli and the buying intention are exhibited in various experiential studies (Chang and Chen, 2008). Regardless of the recognition of the cognitive aspects, customers do not always act so sensibly throughout their consumption activities; moderately, their satisfaction as well is based on a sequence of affective experiences which are partially intuitive and automatically created, and do not necessitate complete information processing. The online stream-video commercials are developing as the most important category of online advertisements. YouTube's True-View in-stream video commercials seem to have been successful in considerably lessening the negative user influences of online advertising without negotiating the value of such commercials to advertisers (Pashkevich et al., 2012). Comparatively, online video advertisements give the advanced level of brand/product recall and congeniality than that of TV commercials. Intrusiveness can be considered as the core of potentially inimical advertising effects. Besides, intrusiveness would have major destructive effects on attitude and buying intention. In the online platform, on account of customers' greater goal-related focus (Goodrich, et al 2015), longer video ads will hold a customer off from his or her aspiration for a longer period, possibly intensifying feelings of intrusiveness and optimistic behaviors toward the ads.

Relationship between income and affective and cognitive aspects

Remarkable growths in individual disposable incomes and access to credit have made impulsive buying in retail contexts. Vohs and Faber, (2007) emphasized that the characteristics of customers and their demographics factors particularly income impact the impulse purchasing. From a socioeconomic perspective, people with comparatively low levels of income are likely to take pleasure in immediate indulgence as against delay-of-satisfaction (Muruganantham and Bhakat 2013) and also emphasized that increased income, lifestyle and easy access to credit have made impulse buying an extensive occurrence across the various retail systems. Only 37% of the respondents agreed that their most of their purchases are planned in advance and 27% of the respondents agreed the term. Most of the consumers make the purchase eventually once they seen the online video advertisement (Alijani et al., 2010). Also, it has been emphasized that subjective variables, such as entertainment and information, has a positive effect on behavior towards online video commercials (Lee et al., 2011). According to (Taylor, et al 2011) video advertising in social media has the positive impact on the purchasing intention of consumers. The findings of the study emphasized that income acts as a moderator on the relationship between affective and cognitive aspects.

Managerial implications

This study has given the academicians, practitioners, marketers with knowledge about online shopping behavior from customer's perspective. Although this study's concentrate were mainly on role of facebook video advertisements in influencing the impulsive buying behavior of consumers, investigator have profoundly focused into cognitive and affective aspects and how they influence consumers through facebook advertisements. This research provides valuable information to companies; marketers like to involve their market inside the platforms of social media. At the same time, this research concentrates on business to customer commercial activities like specialists or marketers in social media for advertising their products. Such findings are could be adopted as basis for set of principles and guidelines when adopting social networking sites more particularly facebook which found to be efficient and effective in the behavior of market.

LIMITATIONS OF THE RESEARCH

Findings of the study are restricted to Facebook video advertisements and this study has been conducted from the perspective of consumers alone. This particular research focuses on the impulsive buying behavior of consumers. Categorically, this study is limited to these demographic aspects namely family size, age, gender and social status. Thus, the outcomes acquired by carried out the survey are constrained by sample size, refer that, our outcomes are not generalized in a large scale.

CONCLUSION AND FUTURE WORK

Most common usage of facebook across the world has made it valuable and significant platform for advertising where marketers place their advertisement for reaching their valuable customers. Facebook permits businesses and marketers for targeting particular customer as well as encouraging their goods or services through efficient advertisement. From the findings of the research, it was clear that facebook allows the service providers, manufacturers and marketers for reaching consumers of particular group of age and interest. Responses from customers are significant for firms, marketers to influence impulsive buying behavior. Based on the expectations of customers, marketers have to develop more impact on impulsive buying behavior of customers.

The descriptions of impulsive purchasing literature were generally focused on the product whilst defining an impulse buying. The existing studies did not integrate the customer and his individual qualities as the factor impacting impulse purchases. At the time of impulse buying, the customer experiences an immediate, overwhelming and persistent desire. The research makes an effort to determine if Facebook advertising or other social media advertising is efficient in influencing the impulsive buying and purchasing intention of customers. Over the past few decades, two well-distinguished research practices could be observed, i.e. cognitive and affective. An extensive range of experience of customers' satisfaction has been developed. The current contribution experiential research carried out under these two insights to define which components are associated with buying intention, the relationships between the two major approaches. The motivation for this occurrence is to determine how to attribute an interest when it takes place, as well as and also how to handle advertisements to attract people, based on what kind of activity they wish to take place. Accordingly, this research pays attention to this call and deals with cognitive attitudes, as these have a major impact on customer behavior. The findings of the study emphasizes the complication of a model in which cognitive–affective factors are present, and improves knowledge on the effects of perceived interactivity. Substantial use of Facebook across the world has made it an effective and significant advertising platform, where companies categorize their advertisements to reach and attract their potential customers. Facebook as the platform for viewers provides information, attractive images, videos, etc. Online video advertising generally has the nature of intruding and attracting a human being at times and as well appears in between their goal-directed task and this type of interruption regarded as the perceived invasiveness. To conclude, the study accepted the hypothesis that there is a relationship between the Facebook, social media advertisement and impulsive buying behavior and as well family size and income moderates the relationship between the Facebook, social media advertisement and impulsive buying behavior.

Further this research exclusively focuses on impulsive buying behavior of consumers. The study therefore could be extended to other social media platforms. It could be examined from the marketer's perspective as well in the future in addition to conducting a qualitative data analysis as well through collection of detailed view of consumers as well as marketers on social media advertisements and their impact on impulsive buying behavior in the future.

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EMPOWERMENT INEQUITY OF MICROFINANCE INTERVENTION: ROLE OF COMMUNICATION IN COMMUNITY PARTICIPATION

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ABSTRACT

It is assumed that microfinance through self-help groups is an accelerator of development and change. A self-help group is a voluntary association of 10 to 20 women from the disadvantaged section of the population who come together to save and avail credit from microfinance institutions and banks through a facilitating agency such as NGO. This paper reviews the scope and limitations of self-help groups in having an impact on the economic and social upliftment of its members by focussing on an empirical research conducted in the state of Jharkhand and review of existing literature. Majority of available literature focuses on the economic empowerment of women through microfinance intervention with miniscule focus on social empowerment through identified social empowerment variables. This study points out that economic empowerment has not translated into desired social empowerment for the beneficiaries of this program. The social empowerment of the marginalized is still a mirage. This paper investigates the reason for the same and the role of communication in gender sensitization and stakeholder participation as communication is a facilitator of social change. It aims towards understanding the linkage of community participation and communication for empowerment and propose suggestions for the same.

Keywords: Microfinance, Self-help Groups, Communication, Social Empowerment, Economic Empowerment, Community

INTRODUCTION

Initiated as a simple effort to keep Bangladeshi underprivileged women out of the clutches of moneylenders, microfinance has evolved as the twentieth century's one of the most radical development intervention. (Chowdhury, Mosley and Simanowitz 2004).

Microfinance is a non-conventional form of banking focusing on the marginalized category of the society. It is based on the concept that the poor are credit worthy and can pull themselves out of poverty if they have access to affordable loans. Access to credit facilities has gained attention in reference to the poverty alleviation and empowerment to women (Swain and Wallentin, 2009).

Over the past years many schemes have been introduced by the policy planners which aim at Financial Inclusion.Rural development has been a function of financial inclusion of the vulnerable resulting in self-dependence.

Microfinance has gained importance as a tool for economic development (Aruna and Jyothirmayi, 2011). Women are a significant proportion of beneficiaries.

Traditionally, women were not allowed to contribute to economic development. Women are more disadvantaged and have fewer entitlements. They are subjected to greater inequities in the access to food, education, healthcare as well as command over productive resources. They have less voice in decision making both in the house as well as the community. As pointed out by Patel and Jha, 2014 women are more likely to utilize their loans for productive purposes hence having a 'trickling down effect'. Poor men in rural areas tend to spend the money on alcohol and other non-necessities. However, the mother always puts her children and family before her and would strive to ensure better food, health, education and standard of living for her children. Hence the impact percolates to the household and community level. Microfinance opens opportunities for women to begin their new ventures (Sarumathi and Mohan, 2011). Additional income for the women is added by providing them training, the supply of raw material, marketing platforms, and investment or credits. There is a common perception among development planners and academia that economic empowerment automatically translates to social empowerment and increased status of women in the household, enhanced decision-making capability, improved access to health facilities, better education of children and so on. Many studies have shown that although women may be empowered in one sphere, it does not translate into empowerment into other areas. (Kishor, 2000; Kumar 2006) There are number of factors like structure inequalities, gender sensitization, patriarchy, communication loopholes to name a few.

From the existing literature it is observed that studies related to social impact of microfinance is skewed towards the southern and western states of India. Neither has the impact of communication on the SHG and the community been explored.

Self Help Groups:

A SelfHelp Group is a voluntary association of 10 to20 members (mostly women from similar background) who pool in their financial resources to avail credit from Microfinance Institutions, NGO's and Banks. The SHG promotes its members to regularly save small amount of money and then lends this money together with money availed from Bank to the needy members. Each week the members typically contribute around Rs 10 towards the group's collection box that represents the group's collective savings. These are known by different names in different regions like Mandal, Samiti, Samooh, Sangha and so on. In India SHG's are mostly concentrated on women and the focus is financial credit and savings. (Kumar, 2006)

Concept of Empowerment

Communities have started looking at the women's empowerment as a prerequisite of economic development. Female participation in the economy has become a primary concern all over the globe (Aruna and Jyothirmayi, 2011). SHG's have emerged as tool of women empowerment. The women who earlier were weak and single entity have gained confidence by being attached to a group. They have obtained relief from evil social customs, traditions, prejudices. It has been observed from various studies that empowerment cannot be enforced from the top; it is essentially a bottom-up approach. However, they have to be some handholding from the top.

Empowerment is a multi-dimensional process and has been defined in a variety of ways. The term may be interpreted situationally and contextually. According to Surekharao and Rajamanamma, 1999, empowerment of women helps them to realize their full identity, potential and power in all spheres of life. It consists of increased command over resources, greater access to information, autonomy in decision making, freedom from sudden financial crisis and ability to plan life in general. Empowerment of women is a process in which women can become organized to increase their reliance, rights to make decisions and controlling the resources in hand and eliminating their subordinates (Varghese, 2011). Kabeer (2005) explored and highlighted that although access to financial services does not make a vital contribution to economic productivity and social well-being, it does automatically empower women. As per the study conducted by Umashankar, 2006, it was asserted that access to credit resulted in women to become independent. The study further reiterated the fact that qualitative methods must be given due importance in understanding the role of SHG in women empowerment. Tripathi, 2015 in her study views empowerment as an approach to enhancing individual's capacity and skills which leads to greater participation, improved decision making and transformative action. She has identified four components of women empowerment, which are psychological, social, cultural and lastly economic and political empowerment.

Communication Approaches by SHG's for Empowerment of Women

Every community project or development program requires effective participation of all stakeholders involved in such project. The communication channels need to open among all participants to keep them abreast of the developments of the program. (Aruma, 2018). Communication is of paramount importance for exchange of ideas and information especially in community projects. Communication is a process whereby people exchange ideas, thoughts, feelings, views with other people individually or in groups using verbal and nonverbal signs and expression to convey their thought.

Communication is the livewire of our society as it connects individuals to one another, individuals to groups, social organizations, community, villages, towns, societies, government and non-government bodies, religious organizations etc. As pointed out by Obono,(2018) in a study in Nigeria that development communication needs to be dynamic and needs to integrate both traditional and modern channels of communication for effective delivery of message in the society. While selecting the approach to communication factors such as target group, participation, interactivity and accessibility needs to be considered. There is a coexistence of formal and informal modes of communication in rural areas. These channels are used to get various social, economic and health related information. A study done by Varma and Verma, (2017) in two rural villages in Rajasthan points out that rural people rely more on informal sources of communication like neighbors, elders, midwives, chaupal etc. as compared to formal modes of communication like radio, newspaper, dialogue with development officials and information by wall paintings related to health. These informal sources are disseminating a lot of information which the rural people believe and act upon.

There have been numerous programs for women empowerment and development by the governments. However, most of these projects have failed to deliver the expected outcome as both the parties involved in the process i.e. the program implementers and beneficiaries have not been prepared for the change. There are two types of approached needed to induce change. First is the externally induced change and the other is the change which is induced from within the individual. (Murthy et. all, 2010). While externally induced change does not yield long term benefits, the change which is from within and internally motivated brings about an overall change in the attitude and behavior of the individual.

John G and Etika D, (2019) have studied the effect and relevance of participatory communication in development projects in Nigeria. Participatory communication is a communication approach that brings all stakeholders together and engages them in discussion to address a common societal problem. It stresses that the people and communities should be agents of social change and not just passive beneficiaries of the development initiatives. This approach has been used to enlighten and sensitize beneficiaries and communities to the need of the program even before it has been initiated. Participatory communication firstly requires the change in the mindset of the communicators and stresses on the need to engage people in the planning, decision making and implementation phase of community projects like empowerment of marginalized through SHG's. This approach of communication leads to internally induced empowerment as all the stakeholders are involved in sharing of information, dialogue, discussion and opinions and can thereby take informed decisions.Unless people themselves are the drivers of social change, no amount of external aid, technology and interventions will bring a change in their standard of living.

Participatory communication has a direct relationship with the access to community media. Community media combines some of the major benefits and strategies of mass media and interpersonal communication. It involves the members from the local community. It is a part of social and behavior change communication (SBCC) approach which involves the art of storytelling with innovative technologies that can empower communities. (Granger et all, 2019). Sharing success stories of SHG members through this medium can yield positive results.

SHG's are of paramount importance in community development and women empowerment as they have been able to accomplish the task of coming together and taking collective action for change and empowerment. Community development takes place when a group of people in a community come together with an aim to bring a desirable and positive change in the lives of its members through the cooperative efforts of these people. The coming together of group members and working towards a common goal requires a precondition of effective communication among them. (Adedokum et all, 2010). When people connect with each other at the same level they develop mutual trust for collective action. As pointed out by Murthy et. all, (2010) there are essentially five approaches of communication in SHG's according to their stage of development. The first is *Two-steps flow of communication*whereby information first flows to the influencing individual or opinion leaders in a community. Next this information is transmitted by the opinion leaders to the individuals in the group in the local dialect. In context of SHG's the leader is extrovert literate member who usually receives the information from the government officials, bankers or department facilitators and disseminates this information to the other group members.

The next approach of communication is a *Dialogue.* A dialogue is an interpersonal communication process between two individuals like two members of a group narrating their personal experience about the membership of SHG in terms of changes in savings habit, credit provision, personal experiences within the family etc. Since it is an informal one to one communication, it carries a lot of important information. Since the SHG members are from similar neighbourhood and economic class there is a common base for dialogues. They most often discuss about loan repayment sources, prospects of their ventures, education of children, illness and the like. *SHG Sammelan* is the third form of communication. It is an annual gathering of all SHG members to discuss about the group's working, the problems encountered, interactions with outside parties like bankers, NGO facilitators, development officials etc. A sammelan is an important community initiative as it encourages the women to come out of their homes and freely interact with women of different neighborhood in that area. There is a feeling of oneness among members and free flow of ideas is facilitated.

An extension of a sammelan is a *Community lunch* which is the fourth approach of communication. Community lunches are arranged during sammelans, trainings for SHG's, orientation programs for new members. During community lunches the marginalized women form connections with each other and discuss common problems and solutions to the same. There is a feeling of oneness and community lunches facilities unity within the group. The members also share responsibilities during the arranging of such gatherings resulting in community participation and communication in informal settings. Rural India faces the structural barriers of caste and class. The caste system is the social stratification of people into different social classes and is defined hereditarily by birth. (Kumar A, 2007). Even among SHG member's caste hierarchy play a predominant role. Community lunches are an effort to break the formal hierarchy. Preparation of lunches, tea, clearing and cleaning the place fosters the feeling of group and not caste.

The last approach of communication is the *Entertainment – Education Programs.* These types of programs have been used by the government for inculcating awareness and educating the rural poor since a long time. The social issues dealt are mostly related to health such as educating about child and maternal health, HIV/ AIDS, small family norms and benefits etc. This approach of communication goes beyond the individual model and affects the community at large. Skits and street plays are organized where the outgoing and extrovert members mostly participate. Social evils such as dowry, alcoholism and domestic violence also form the theme of such plays. The theme of such skits is prepared by the SHG members during the Sammelans. Such programs can be a mobilizer of social change in communities.

These five approaches of communication within a SHG can be adopted simultaneously to strengthen the group, generate ideas and facilitate flow of information. Communication among the members within the SHG is a prerequisite of developing coordination among them. It enhances psychological empowerment within the group as they have a small group to fall back upon in event of crisis.

RESEARCH METHODOLOGY

The Study – In context of state of Jharkhand

Primary data has been collected through structured questionnaires, focussed group discussions and select case studies among 270 women respondents in the state of Jharkhand which happens to be one of the poorest states in the country. The finding of this study is based on both qualitative and quantitative data which tries to explore the linkages between economic empowerment and social empowerment of women SHG members and the role of communication and community participation in empowerment.

Objective of the Study

With the research background in mind, this study was undertaken to determine the functioning of self-help groups in Jharkhand, the channels of communication adopted to strengthen the relationship among members; to determine the economic impact of SHG's on its members and to evaluate the social impact of microfinance on its beneficiary clients in terms of decision making, health, empowerment, social networking and communication and crisis management.

The Study Area, Sample and Methodology

The state of Jharkhand has been selected for the study. Jharkhand state has been carved out of Bihar in the year 2000. The state is touted to be loaded with mineral resources but poor in agricultural production. Greater than as much as 75% of the total working people are engrossed in agriculture but generates only 20% of the total GDP of the state. It has a high percentage of tribal population and the region is characterized by extensive forests. The sex ratio is 948 females per 1000 males. The literacy rate is 66.41% with female literacy at 55.42%. The pattern of society is principally patriarchal with a predominance of issues of class and caste. (Chakravarty et. all 2013, Kumar 2007). State wise Jharkhand ranks third with a whopping 36.96 % of its population below poverty line, considering the bountiful natural resources available to the state this is a matter of concern for the government and other stakeholders.(www.rbi.org)

For including respondents from a vast geographically spread population, multistage judgemental sampling technique was used. The state of Jharkhand has five divisions. Two districts from each division have been chosen basis penetration of microfinance activities and network of well-established NGO's. Two blocks have been chosen from each district basis the large number of SHG's in these blocks. Three SHG's have been chosen from each block considering the age of SHG. Lastly five members have been selected from each SHG. These respondents were picked up on the basis of their position in the group, tenure of membership (minimum two years of SHG membership), willingness to discuss and disclose personal mattersand credit history. Hence 270 respondents formed the sample size for this study. Both quantitative and qualitative data has been used for the study. Qualitative data has been gathered by conducting case studies and focussed group discussions to gain an insight into the member's perception about their roles, status, expectations and achievements post SHG period. Interviews with field level officials, male family members, community members were also conducted to understand their viewpoint. This provided an opportunity to gain access and insight into the community's perception about the efficacy and working of SHG's.

Economic and Social Impact Variables:

Economic indicators are easier to study as these can be quantified and does not depend upon the individual judgement of the respondents. For this study four economic variables such as income, savings, assets and insurance has been considered.A major impact of the microfinance intervention depends on the social change in the lives of its beneficiaries. Social variables are difficult to measure as compared to its economic variables' counterpart. The responses are influenced by personal choices and memory recall method. More studies have focused on the economic empowerment aspect and the social aspect is often considered a spill over effect. Therefore, a study evaluating the social empowerment of women through microfinance intervention is considered imperative. This research tries to investigate the impact upon the five social variables namely decision making, health and immunization, empowerment, social networking and communication and crisis management.

RESULTS AND FINDINGS

Socio Economic profile of Respondents

Majority of the sample in the study belonged to the age group of 31-40 years, and 86.3% were married women. 63% of the respondents were Hindus followed by 16% Christians. Most of the respondents had only a primary level of education, and three percent were illiterate. Agriculture is seen as a significant source of income among the respondents. Monthly household income was around Rs 4500 per month in most of the sample.

Impact of SHG's on Economic Empowerment of Women

The study has examined the assessment variables at the economic and social level. A pre SHG period and post SHG period data comparison has been done. Questionnaire has been distributed only once and pre SHG data has been gathered by memory recall method of respondents.

Income

Table 1- Annual Household Income – Comparison of Pre and Post SHG periods

	Pre SHG-Period		Post SHG Period	
Annual Income	Frequency	Percent	Frequency	Percent
<=25000	26	10	17	6
25001 to 50000	135	50	63	23
50001 to 75000	73	27	104	39
75001 to 100000	32	12	59	22
100001 and above	4	1	27	10
Total	270	100	270	100

Savings

Table 2- Annual Household Savings – Comparison of Pre and Post SHG periods

	Pre SHG-Period		Post SHG Period	
Annual Income	Frequency	Percent	Frequency	Percent
No Saving	68	25	0	0
<=5000	127	47	80	29
5001 to 10000	48	18	90	33
10001 to 15000	13	4	21	8
15001 to 20000	7	3	35	13
20001 & above	7	7	44	17
Total	270	100	270	100

Assets

Table 3 Assets (post joining SHG)

	Frequency	Percent
Increased	151	56
Decreased	17	6
No Change	102	38
Total	270	100

Insurance

Table 4- Insurance– Comparison of Pre and Post SHG periods

	Pre SHG Period		Post SHG Period	
Type of Insurance	Frequency	Percent	Frequency	Percent
No insurance	188	69	126	47
Life Insurance	18	7	23	8
Health insurance	7	3	15	6
Crop Insurance	35	13	60	22
Livestock Insurance	22	8	44	16
Asset Insurance	0	0	2	1
Total	270	100	270	100

A rise in annual household income is noted for the respondents across all income categories in the post SHG period. (Table 1) As evident from Table 2, 25% of the respondents had no savings prior to joining SHG membership followed by 47% respondents having an annual savings of less than Rs 5000. It was observed that savings increased post SHG membership. All respondents developed the habit of savings, as it was mandatory to contribute small amount to the SHG savings fund per month.

33% stated savings more than Rs 5001 and upto Rs 10000 and 30% stated increase in savings to Rs 15,001 and above. 55% of the respondents reported anincrease in their assets and 37% said that there was no change in the assetownership post joining SHG. Majority of the sample stated that they had no insurance before being a member but growth in the crop and livestock insurance is observed post SHG membership.Overall, there has been betterment in the economic status of the members of the SHG. However, it is to be noted that this advancement is for the entire household and not only for the member as many a times the credit is taken for the husband's entrepreneurial venture, for children's education or to meet a family requirement.

Impact of SHG's on Social Empowerment of Women

It is evident from the table 5 that the membership of SHG has not led to the desired level of social empowerment.

Table 5 - Impact of SHG's on Social Empowerment of Women

Social Variables			Total	
			Count	Col %
Decision Making	Use of borrowed money	Improved	61	23
		Decreased	121	45
		No change	88	33
	Education of children	Improved	83	31
		Decreased	13	5
		No change	174	64
	Strength to protest against social evil	Improved	97	36
		Decreased	31	11
		No change	142	53
Healthcare and Immunization	Immunization to children below the age of 10	Improved	161	60
		Deteriorated	4	1
		No Change	105	39
	Improved sanitation	Improved	173	64
		Deteriorated	12	4
		No Change	85	31
	Safe Drinking Water	Improved	55	20
		Decreased	14	5
		No change	201	74
Empowerment	Domestic Violence	Increased	131	49
		Decreased	70	26
		No change	69	26
	Purchase of assets/ household items independently	Improved	79	29
		Decreased	43	16
		No change	148	55
	Respect in society has changed after being part of the group	Improved	139	51
		Decreased	30	11
		No change	101	37
Social Networking and Communication	Interaction with outsiders	Improved	172	64
		Deteriorated	9	3
		No Change	89	33
	Role in community decisions	Improved	81	30
		Deteriorated	2	1
		No Change	187	69
	Use of mobile phones	Improved	183	68
		Deteriorated	23	9
		No Change	64	24
Crisis Management	Confidence to face crisis	Improved	124	46
		Deteriorated	35	13
		No Change	111	41
	In a position to help others during a crisis	Improved	76	28
		Deteriorated	36	13
		No Change	158	59

The extremely important observation is that economicempowerment has not directly translated tosocial empowerment. This contrasts with thestudy by Kumar et all, 2019 which wasconducted across eight districts of five states of central and eastern India. The study states that membership of SHG has a positive outcome on the social variables such as health and nutrition, collective action regarding public entitlements, improved decision-makingsability etc. The present study on Jharkhand states that the decision regarding use of borrowed money still rests with the male member of the family. The poor women do not enjoy the spending rights over their own income too. 64% respondents reported no change in decision making ability with regards to education of children and same was the case with regards to strength to protest social evils (53%). The state of healthcare especially in rural India is still a cause of concern. The awareness related to health and medical facilities remain dismal. There has not been much improvement in terms of improved sanitation, immunization to children below the age of 10 and safe drinking water. The need of privacy and defecation is greater for girls' women than the male family members. The unavailability of proper sanitation facilities for women is the reason for chronic constipation, urinary infections, improper menstrual hygiene and many other health related issues (Pandya and Shukla,2018). Many cases of improved sanitation were an outcome of government's Swaach Bharat Mission and not necessarily as a direct outcome of membership of SHG.However, women do not have much say in installation of sanitation facilities due to power hierarchies existing in the household, socio-cultural constraints and hesitation in communicating personal matters.

Empowerment has been measured by three variables – reduction in domestic violence, purchase of major household items independently, respect in society after being a part of the group. Surprisingly 49% respondents reported a rise in cases of domestic violence by husband/ in-laws post joining SHG. Although gender equality is a basic development goal across countries, however incidences of violence against women is a pandemic affecting nations worldwide. Women are treated as second class citizens and such discrimination can translate into obvious societal and structural norms (Pandya and Shukla, 2018). Similarly, the decision regarding purchase of assets/ household items still vests with the head of the family or the male members of the family. After being a part of the group the interaction of the poor women with outsiders (people other than family members) has improved (64%) They have started interacting with women from the distant neighbourhood, bank officials, facilitators, etc. However, the improvement is noticed in women who are more mostly leaders/ secretary of the group and are more outgoing. It is based on the positive deviance (PD) approach which suggests that in every group or community there are individuals whose strategies and uncommon behaviour help them to find innovative solutions to their problems and stand out among the group/ community while facing the same economic and social conditions (Khalid et all, 2019). The women still do not play an important role in community decision making. 69% of the respondents have mentioned that they still do not play any significant role in community decisions. Contrary to this there is a marked improvement in use of mobile phones post joining the SHG (68%) The members get information regarding the meeting, savings and credit of the SHG on mobile phones. Despite being a member of the SHG for more than two years the members still do not have enough confidence to face personal crisis neither do they have the requisite corpus to help group members in time of emergencies. From these findings it is evident that membership of SHG has resulted in provision of credit and income generating activities but how much this contributed to social well-being and empowerment of women is still a matter of debate and discussion.

Findings from Case Studies and Focussed Group Discussions

Case Studies and Focussed Group Discussions were conducted to get a qualitative view into the lives of the SHG members. As Einstein had rightly remarked "Not everything that can be counted counts, and not everything that counts can be counted". Ten women respondents were selected to study their case history. These respondents were picked up on the basis of ease of contact, tenure of membership (minimum three years of SHG membership), willingness to discuss and disclose personal matters, position in the group and credit history. These methods gave the authors an in-depthinsight into the women's views, perspectives, experiences, family relations etc who otherwise remain silent and docile. Silence is a protective tool enforced by our patriarchal society that hides so many stories of these women. (Umashankar, 2006). Such personal narratives highlight the difference in expression and experiences of women living in the same structural context at the same time. The factors that affect such narratives are literacy levels, interpersonal relationships, power structure within the household, socialisation histories, cultural beliefs and relationships with neighbours and extended families. (Singh S, 2005).Findings from Case Studies and Focussed Group Discussions suggest that SHG membership has benefitted the underprivileged in many ways. A change of attitude and behaviour is apparent among the members. Participation in income generating activities has improved the confidence of the respondents.

There is a remarkable transformation of a local village woman from what she was 10 years back. (Kumar, 2007). There is a desire to excel, to do the best for her family especially children. Although she has a desire to contribute to community development, the existing patriarchy doesn't allow her to contribute significantly. The results from the discussions and case studies make us question the gender power relations within the household and within the community. Western feminism is based on the premise of equality between men and women. The same does not hold true in case of developing countries where women survive in a society and culture which is built on the principle of inequality between men and women. The husband and family continue to be the most reliable source of economic, social and cultural support. (Singh S, 2005).There is clear lack of participatory communication which could have led to a social and behavioural change. Although women are participating in community affairs, the percentage is very small.There is a hesitation to communicate with the opposite sex apart from her males of her own family. Poor level of infrastructure and services prevail in the villages and there is very less use of technology.

There is availability of credit for income generating activities. However, in cases of medical emergencies, social functions, death in the family and other crisis the women often resort to the local moneylender for immediate help. Many a times the credit availed for income generating activity is used for immediate consumption purpose and daily activities like expenses on food, school fees, health etc.

"Earlier when I needed money I had to beg in front of my husband. He works as a casual labour. Some days we didn't have the money to feed our children properly. I borrowed money from local moneylender to pay school fees. I wanted to send my children (2 daughters and 1 son) to school so that they could get midday meal at school. Post joining SHG I availed a loan of Rs 3000 and started selling pickles. Within 6 months I had my own steady source of income. Although it is not enough, now I don't have to ask anyone for money. I plan to join hands with two other members from my group and expand my business" (Respondent 64)

The women are burdened with both economic and non-economic activities. They are concurrently engaged in childbearing, childcare, looking after family, elders as well as participating in income generating activities thus exerting a greater strain on her own health and wellbeing. Non-economic household work is essentially done by the *beti/ bahu*. These are unpaid, tiring and unending duties for which they hardly get any recognition and appreciation. Many of the farm activities which are physically challenging and tedious such as transplanting, weeding, harvesting and protection of crops is also done by the woman. They also need to take care of the cattle.

Clearly there is a disproportionate division of roles and responsibilities. A typical day in the lives of these marginalized women starts as early as 4am/ 5am and ends only at 9 pm with almost no rest in between. This type of physical labour takes a toll on the health of women and there is no relief even during sickness or pregnancy. Many a times the NGO facilitators/ government officials/ bankers do not relate to this type of physical and mental workload. They often categorize the members as non-motivated and indifferent to training programs. In most of the cases there is a clear lack of support from husband/ other family members on days when trainings and orientation programs are held. The selection of training is also influenced by the implementer's thought of what should be taught. There is a clear lack of sensitization of the stakeholders involved.

"These women are only interested in availing credit and not undergoing training. As soon as they get the money, they use it for consumption purposes. Although some of them are self-motivated and attend the training programs, most of them need to be forced to do so. They come late and give excuses. We try to explain to them that theses trainings are for their own benefit." (NGO facilitator)

The empirical data from this study points out that there has been a rise in cases of domestic violence post SHG membership. 49% of women reported an increase in domestic violence whereas 26% reported no change in the current situation. The women have been subjected to domestic violence since time immemorial which has been hidden within the four walls of the house. Mostly violence is accompanied by a threat of desertion due to which the victim feels more helpless and is not willing to share her story with others. The scope for bargaining over power is maximum at the household level and goes on diminishing at the institutional and community level. While the physically bruises and wounds slowly become fainter the emotional wounds destroy the very spirit (Umashankar, 2006). Although the woman is an earning member of the family still, she is quite powerless within her own household. Generally, the woman stays back due to family pressure and for sake of her children. Neither does she have the confidence nor the financial resources to manage on her own.

My husband did not approve of me joining any group. He accused me of shoving my household responsibilities and making merry in name of group meetings. He also questions my character. My mother in law instigates him. He beats me at night after drinking and takes away my day's earnings. I complained to my parents many a times, but they have said that it is the kismat of a woman. They fear that I would leave my husband and become a lifelong burden on them. I don't discuss about this with group members as my husband would lock me up and beat me to death if he comes to know. (Respondent 19)

Although women have collectively become powerful and have combated certain social issues such as alcoholism, lack of electricity, access to *anganwari* services yet many of them are still shy and unwilling to participate in community works. Mutual support among the women is a prerequisite for their empowerment. The effective communication and mentoring of new members by the leader/ veteran SHG member has been extremely helpful.

CONCLUSION

It has been argued by many researchers that women's participation in SHG's has resulted in poverty alleviation and socio-economic empowerment of women. Empowerment gains are not an automatic outcome of availability of credit services to the poor. (Kabeer and Noponen, 2005). Although gains in terms of income, savings, and financial literacy skills are evident, impact on decision making ability and involvement in community matters are far from modest. Microcredit has been regarded to fix social challenges and the results of this study reiterates the fact that SHG and microcredit has not empowered its members socially to the levels expected. The command over resources and decision making still rests with the male member of the family. Although availability of microfinance has reduced the dependence on informal modes of lending, there is slight improvement in social variables like healthcare. One generation of exposure to credit and income generating activities cannot diffuse the centuries old patriarchy, social and cultural conditioning. (Osmani, 1998)

The five approaches to communication mentioned above focuses on flow of information among the SHG members. It boosts the synergy and bonding between the group members and encourages potential members to join the group. However, it failed to look at the broader picture. SHG operates in a community and the family members, community members, local leaders have not been adequately sensitized on the issue.Sustained improvement in gender relations can be achieved through repeated communication with regards to behaviour centred change communication. (Granger et all, 2019)

Participatory communication is a salient aspect or approach of communication that fast-tracks development projects. To achieve success requires that priority should be given to the component of participatory communication when undertaking community projects. Development agencies and change agents should as a matter of fact allocate enormous attention to community involvement/ participation as this is key to the successful completion and realisation of set goals. Effective communication will help the marginalized to break out of the age-old culture of silence and discuss issues and challenges faced by them (Aruma, 2018). They need to be more assertive and vocal in a community forum. The important tool of communication should be explored adequately to reach the different sections of the community. A regular and direct communication with the community leadership is necessary.

The social impact of microfinance goes beyond the individual beneficiary of the program and percolates to the household and then the society. Hence the development planners and stakeholders can focus on strengthening the social aspect of the program. It depends upon the societal structure, existing gender relations and flow of communication to the indirect beneficiaries of the program. The community at large needs to be sensitized towards the poor women. The women have been burdened with the dual responsibility of income generation, childcare and household responsibilities. The men especially need to be sensitised on gender equality issues. Here community participation is extremely important for real advancement and empowerment. Development communication needs to address the social and cultural complexities and include all groups within the community to address the problem at the grass root level (Obono, 2018)

The microfinance intervention rarely addresses the gender specific issues and lack of mentoring and communication on the same. There are major inequalities and power imbalances between both the genders in society. By advocating a top down approach, the program implementers miss out on the actuality of women's lives and the existing power roles in the society. Improper communication leads to absence of participatory planning and total information regarding the program benefits does not percolate to each member of the group. An examination of the existing gender roles, command over resources, free flow of communication, gender-based division of labour is of paramount importance prior to the implementation of such interventions. The need of the hour is a gender transformative policy and sensitisation and counselling of all family members and community involved.

The communication approaches of SHG's such as two flow communication, dialogue, sammelan many a times lack community participation. Trainings are imparted to SHG members for skill development, financial literacy, accounting etc. However, it can also be the male trainer who firstly needs to be mentored to change his preconceived notions regarding the poor women. There is also a need to sensitize the facilitators, policy implementers, local leaders and male family member on gender specific issues. This can be a highly sensitive task and can hurt the ego of the male stakeholders involved. Hence the communication needs to flow in the appropriate manner and from a person who is looked upon by others. There needs to be a change in behaviour of not only the male member but also other elderly women in society who support such patriarchal structure in society. Public perceptions and awareness need to be altered to provide a supportive environment at the community level.

This study concludes that solutions such as microfinance and SHG's which emerge from international policy circles need to consider the local structural issues to maximise their results. This study has focused on certain specific social impact variables of microfinance; future work can be conducted on a set of comprehensive variables. Also, it is suggested to conduct a similar study on the other tribal areas of India and compare its impact.

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RELIGIOUS COMMUNITIES IN SIMULATED SACRED SPACES: A STUDY OF PILGRIMAGES IN DIGITAL MEDIA

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ABSTRACT

Virtually real spaces are emerging as an alternative to the physical spaces. Cyberspace is not entirely new to the world of entertainment, but its entry into sacred spaces, where sheer rules control the community, is inviting the concerns of the priestly communities. The virtual world created with the help of technology has begun to affect the approaches towards pilgrimages. The impact may be perceived to be adverse or favourable depending upon the varied perspectives. This simulacrum of pilgrimages allows enormous freedom to the pilgrims presenting them with a customized to be more real pictures of the houses of worship. The virtual world is more persuasive in comparison to the world we live in, as this cyberworld, unlike the world of restrictions and virtues, discourages the self-denial and persuades the subject to be more indulged into it considering it a replacement. It can prevail on the subject only through its more appealing truth-like imaginary (but not in all cases) pictures. Thisresearcharticle is intended to discuss and assess the impact of the entry of the cyberspace into the sacred space over the religiosity of the communities in India. The paper further examines the complementarity offered by these two spaces for each other.

Keywords: Virtual Reality, Religious Communities, Cyberspace, Digital Content.

INTRODUCTION

A simulated world, no doubt, has an appeal for millions of people around the globe, especially forentertainment in leisure and specific mental exercises, but whether these simulacra of sacred spaces are complementing the pilgrimages or substituting them, will be discussed in the article. The discussion in the article encompasses assessing the influence of the computer-interceded environment over the religiosity of people in India. It not only focuses on the 'virtual reality,' in terms of computer-mediated environment, but also refers to the simulation of reality created with the help of technology other than computer, and fictionality. Patrick Maxwell, talking about online religious possibilities, says, "Imagination, visualisation, magic, and metaphor can be interwoven in the experience of today's cyberspace traveller, and all of them are obviously relevant to religious possibilities online" (2002:345).

Simulation of religious space is not strictly confined to the immersive experience instead, it encompasses a wide range of contents that have been helping the pilgrimages in enlightening and attracting the prospective pilgrims through sophisticated picture galleries, historical accounts, and some other tourist attractions nearby.JurajSkačan, talking about this phenomenon, notes, "The issue of virtual reality has been playing an ever more existential role in the lives of individual people and society as such. Bearing in mind Jean Baudrillard's theory of simulacra, we do not want to be limited to viewing virtual reality as defined in most dictionaries and encyclopaedias, i.e., as an alternative three-dimensional world generated by computers. Instead, our broader concept based on media theories includes any depiction of reality by the media." (2017:20). This phenomenon of immersive experience in terms of religious places is comparatively new that somehow is creating prospects and challenges both to the pilgrimages.

Talking about the impact of cyberpilgrimages, Hill-Smith says, "The online 'virtual world' game Second Life offers numerous cyberpilgrimages, allowing users to broaden their knowledge and experience of religious traditions virtually; and public panorama technologies such as Google Street View are also embracing pilgrimage 'markets'. This highly contemporary expression of the pilgrimage tradition is attracting interest from diverse traditions, increasingly altering the way that faith communities express and experience religiosity." (2011:236). This computer-mediated simulation of pilgrimages grants enormous freedom to the pilgrims by customizing spaces as per their needs. Saied Reza, in this regard, notes, "The virtual space overcomes the limitation of time and place, and makes parallel interaction possible, since religiosity in different places and times comes true for religious people, and the noted limitation would be minimized or removed." (2009:221). The article further argues how this alternate intercession of a virtual world may initially attract people towards it as a substitution to the actuals. Subsequently, it cannot sustain to serve the purpose of religion in the lives of people, particularly in the case of a country like India, where the religio-cultural identity secures a primal place.

RESEARCH METHODOLOGY

The methodology followed in conducting research for this article includes certain sub-genres of qualitative content analysis, like analysing media content, netnographic analysis, and the analysis of the previous literature available. Further, the research was executed through secondary research mixed interpretative methods through the use of scholarly literature to ascertain the main themes that present themselves in the article. For evaluating contents available on the websites, this research will depend on 'netnography', a naturalistic method for interpretation with a combination of elicited and non-elicited data available online without being visible to cultural members (Kozinets et al., 2014:263). This article being interpretative is grounded, as stated earlier, in qualitative research, which seeks to bring forth affective intensities permeating through contemporary houses of worship and their functions.

Virtual Religious Spaces: Virtually Real or Truly Real

Discussing about the virtual pilgrimage MacWilliamscites Shawn Wilbur, "What is a 'virtual pilgrimage'? Shawn Wilbur has noted that 'virtual' typically means something that appears to be but is not real, authentic, or proper. It is important to note that some virtual pilgrimage sites fit this definition. They are informational only, designed to provide clever simulations or representations for instructional purposes." (2002:317). Here, MacWilliams primarily refers to those websites and webpages that are used for promotional purposes. But if we talk exclusively about the immersive virtual space, in some cases, tampering with the recordings of the actual space for creating simulation is considered to be a violation and may cause the loss of faith of pilgrims in this platform.

To understand it further, let us examine 'virtual reality' from the point the word 'virtual' was used for the first time. It was primarily used in the context of imitation of reality on stage, a theatrical performance, which essentially is an amalgamation of fact and fictionality. Literary productions take an audience/spectator with its flow to live in the world created by it, which is neither virtual nor real but a concomitance of the two. However, the audience knows that the film/drama being shown is not real, yet he suspends his disbelief to enjoy the world that resembles his and laughs and cries with pleasures and pains of that world during the time he is involved with the performance.

Talking about the attainment of the enormous popularity of virtual reality, Robin Kabha cites Jurgenson (2011), "The concept of virtual reality reached enormous popularity with the advent of a science fiction movie called "The Matrix," in which the characters resided in a completely virtual world simulated to such precise levels that it was identical to the real world and the character being totally unaware of this. This movie introduced the concept of virtual reality to a massive audience and had a significant cultural impact which still resonates in the contemporary world." (2019:42-43). Virtual reality or VR is widely known as a computer-mediated simulation of reality that projects fictional and physical environments as if real. When a spectator wears the VR headset, he, with the projected environment, gets transported to a supra-real world that he finds in front of his eyes being projected through that machine. And, to enjoy, or to be involved with this supra-real projection, one has to estrange one's cognitive critical faculty and start believing without any kind of doubt in what is being shown. Here Coleridge's conception of "willing suspension of disbelief" becomes more relevant and meaningful to enjoy this virtual world. Questioning the entity of this world may spoil all its attraction and purpose. So, immersing in this virtually real world, one should forget the actual, and enjoy its created beauty.

This paper not only concentrates on computer-mediated virtual reality but also takes into consideration the reality that is virtual in a literal sense and is produced with the help of technology and imagination. Here, the focus is also centered on an aspect of simulation of reality where virtual reality is presented to be more real than the truly real by adding creativity.

The term 'Virtual Reality' came into existence or in vogue only after it was used in the context of literature or fiction. Antonin Artaud, a French dramatist, poet, and theatre director, used this term in the context of characters and other objects used in theatre, which are unreal. Hereafter, the term was frequently used in the context of fiction, from where it rolled down to its present area, identity, and meaning. Virtual reality works on the principle of exclusion from the source environment. This exclusion sometimes is mere exclusion, and sometimes a replacement of harsh by mild, or sour by sweet though false to please the audience because its success very much depends on the liking and disliking of the people viewing it. And, it is for the sake of pleasing the spectator; therefore, in VR contents, all kinds of things which are more appealing are added.

About virtual, Gilles Deleuze, who is also known as the philosopher of virtual, in one of his most famous books, '*Bergsonism*' writes, "A philosophy like this assumes that the notion of the virtual stops being vague and indeterminate. In itself, it needs to have the highest degree of precision" (1988:94). The point being made here is that virtual doesn't mean unreal, only it is not actual. Deleuze's explanation of virtual goes along with Bergson's understanding of the term. Bergson sees virtual as a part and real as the whole. Today's meaning of the term has deviated a lot from Deleuze's idea of the word, which he expounded in his books. Keith Ansell Pearson in this context writes—

Today, however, the notion is widely treated in imprecise and ill-defined terms, namely, as all the other stuff that is not actual, something like the Universe in its totality and unfathomable complexity. It requires a pluralist ontology since one can speak of diverse modalities of the virtual, even though one is, in fact, speaking of a being of the virtual: for example, one can speak of the virtual or partial object, of the virtual image, virtual memory, and so on (2005:1113).

So, the digression in meaning of the term is criticized by Pearson keeping in view the propositions of Deleuze and Bergson. This term, outside the periphery of Philosophy, loses its philosophical specification and gets explained/defined in terms of literal and current usage that more or less becomes its identity. Deleuze, following Marcel Proust, attempts to explicate the term 'virtuality' in his*Difference and Repetition*, and says, "We opposed the virtual and the real: although it could not have been more precise before now, this terminology must be corrected. The virtual is opposed not to the real but the actual. *The virtual is fully real in so far as it is virtual*. Exactly what Proust said of states of resonance must be said of the virtual: 'Real without being actual, ideal without being abstract'" (1968:208). Here Deleuze's idea of the term is very explicitly put forth. He doesn't consider virtual as unreal, but he also doesn't recognize it as actual as the actual is the source for this virtual to be created.

If we focus our attention on the role of technology apart from virtual reality in deluding and disillusioning people from religion, we'll find that it plays an immense role. It was with the invention of the printing press that religious treatises, scriptures, and simultaneously religion became accessible to common men. After the printing press becamefunctional, the very first significant things published were religious materials. Similarly, if we talk about other scientific inventions that played crucial roles in making religion instilled more in the lives of people, we will find that these inventions, by making God and religion easily accessible to common men, created a big market.This market is simultaneously available for the benefits of even those who are less religious, or, for that matter, consider themselves more rational, who moving beyond the blessings and curses of God uses the market to the fullest for their benefits. These technological advancements take physical places (site) as raw materials for creating the new version of the same effecting desired changes to produce a more fascinating and enticing virtual world. In various games, many of the places of religious importance having been taken as a raw material of physical places are used, and the creator of Augmented Reality games having the freedom to usurp the sanctity, violates/may violate the norms leading to conflicts and tussles among people.

In VR, the viewer is given the power to navigate through which he can feel like he is walking through the streets. The VR headset bars the viewer from viewing anything else other than the thing being viewed. In the current technological world, two terms are in vogue for the simulation of reality, namely, Virtual Reality (VR) and Augmented Reality (AR). Both were initially created for recreational purposes with the help of technology. Still, now they have headed towards the various other phases of human lives, particularly religion, which is being influenced by these in both the ways – positively and negatively. Augmented Reality is not the concern of this paper, but it would add to the clarity in understanding VR if it gets explained to be differentiated with similarities and contrasts. VR is entirely a simulation of real-life environments created with the help of a computer and imagination, sometimes excluding things from the real world.

In contrast, Augmented Reality uses the virtual as well as real images for the purpose. The fundamental difference identified is that VR is immersive; with it, the viewer gets immersed in the created environment and feels as if he is in the actual world. Augmented reality (AR) is not immersive like VR, it also is not viewed through any headset like VR headset, and instead it is used through mobile apps and computers/laptops for a similar purpose. It is primarily used for playing games. 'Pokémon Go' is one of the top-rated augmented reality games. Augmented reality creates a totally artificial environment. In it, some juxtaposition is made on the existing physical environment with information, graphics, sound, etc.

VR and AR, in a way, attempt to create a situation where the harsh reality of the physical world/environment is overcome and provides a world more than it exists. The world of virtual reality is bound to be different from the world of harsh realities as its existence depends on its difference from its source. It can persuade the subject only through its more appealing truth-like imaginary figures. Talking about Mark Zuckerberg's vision of new technologies put forth at 'F8 Annual Global Developer Conference' where he expressed his desire to create augmented reality to spice-up the everyday reality of our existing world, SundarSarukkai writes, "It begins with dissatisfaction with the way the world appears before us. It panders to the worst of our human desires when it creates a world which is special to each one of us as if the world should be amenable to our desires rather than the other way around." He continues saying, "Like religion, this new technology begins with a suspicion of the real physical world, always searching for something more than the world outside us. Both technology and religion do so by choosing the physical body as the fulcrum of all problems of the physical. They use selective ideas of liberation and freedom as an escape from the physical." These technological products are gaining popularity more due to the approach of today's world, as we believe that escape is the easiest and the safest thing to accommodate us.

I feel, seeing virtual spaces in contrast to the truly real spaces may not be a correct approach in all cases. I agree with David J. Chalmers's views in this regard, which says, "Virtual reality is a sort of genuine reality, virtual objects are real objects, and what goes on in virtual reality is truly real." (2017:309). As some VR platforms, being true to their profession, do not tamper with the actual scenario of the religious spaces maintaining their sacredity, and provide the pilgrim undertaking this virtual journey to the pilgrimage a real-life experience true to the physical one. In this regard, Hill-Smith observes, "Some cyberpilgrimages, such as the *Second Life hajj* can be undertaken on real-life hajj dates to enhance the experience." (2011:238). He further adds, In Second Life's hajj, cyberpilgrims can 'journey' together in pilgrimage garb via their avatars, an undertaking that can attract large numbers during real-life hajj. Using chat-windows, pilgrims can discuss personal experiences, motivations, thoughts and problems, with other pilgrims, who form visible 'presences' onscreen. Such interconnections, though lacking the depth of real-life face-to-face communication, can certainly help to foster a genuine sense of community, camaraderie, and common purpose, and imply a desire to build closer and more meaningful social interactions online, a point Lorne Dawson explores in 'Religion and the Quest for Virtual Community' (2004, pp. 75–89)." (Hill-Smith, 2011:239-40).

Simulated Space and Religion: Analysis and Examples

These days, a shift in approach can very well be observed that religious places are also using these technological developments for their promotions and other purposes. Many of the holy places provide the opportunity to the whole world to havea virtual tour of those sacred places. The website of the national Tamil daily 'Dinamalar'offers a 360degree view (a virtual tour) to most of the temples situated in Tamilnadulike Minakshi temple, Madurai; Parthsarthy Temple, Chennai; ViyakulaAnnai Church, Madurai; Santhome Church, Chennai; Kazimar Big Mosque, Madurai; JummahPalliVasalPanikulam, Ayyappa temple Sabrimala etc. under the head 'V-Darshana', which present exquisite instances of highly advanced architecture of South India, and are simultaneously promoting, satisfying, and invigorating at least partially the feeling of involvement with the religion. The official website of TamilnaduTourism offers a virtual tour to almost all the temples, churches, mosques, museums, and beautiful and enchanting places like Ootyand Kodaikanal to attract tourists for actual visits. Likewise, Kerala Tourism and some other Indian states are making use of this technology for promoting tourism in the states.

Talking about the virtual church Rev. Dr. Christopher J. Benek, a techno-theologian,and Pastor at the First Presbyterian Church, Floridatold *Hypergrid Business* Magazine, "Numerous persons and groups have developed churches in the virtual world, mainly Second Life," and "I would venture to say that the most have been less concerned with true evangelical success and more focused on what their technological exploratory experience may yield in the future."Dr. Benek goes to the extent of saying in his article titled, 'Virtual Reality is the Future of Religion' published in *h*+Magazinethat we won't even be able to imagine our existence without VR in next 25 years. He, talking about VR and Christianity, says—

One of the largest beneficiaries of this technological development could be the global church because VR is going to change the way that Christians participate in worship. The main impact that VR is going to have on the global church is that it is going to, one-day, enable Christians to easily gather from a variety of places without being in the same physical location. This will enable persons who are homebound, sick, caregivers, without transportation, on vacation, or severely disabled to participate in worship with the larger community of faith without needing to leave the place where they are physically residing.

The move of virtual reality in religion is very swift. In Indian religious spaces, Virtual reality is making its place at a breakneck pace, sensing an immense scope of business for the developers. A news article published in the Indian Express dated April 8, 2016, makes mention of this new shift in the approach of Indian pilgrims who removing their 'chappals or shoes' were entering the small temple-themed stall to experience the virtual as real replacing the actual. The news article depicts people of all ages wearing the VR headsets with the folded hands and reverent hearts overcoming their inability to visit the exact place of KumbhaMela and lord Mahakaal of Ujjain in Madhya Pradesh. Here, the center of attention for developing VR content was the visit of 75 million people to the pilgrimage facing all sorts of difficulty. To enable people to avoid the journey, and to replace the actual with the virtual, the content developers worked on the project and spent substantial time in developing the content. They received tremendous response from people because physically visiting Ujjain during this Kumbha period is almost impossible for many, but their reverence for lord Mahakaal and Kumbha is unfathomable. So, utilising the most appropriate time with the thing in the highest demand, i.e., Darshan and Mahakaal Bhasma Aarti though simulated, was quite satisfying for people who could not visit the place actually due to one or the other reasons. Religious tourism space has been identified as the potential place for work for VR and AR industry, which positively will affect India's approach to religion.

The virtual world created by technology affecting the religion will eventually change the culture, society, and ethnicity of a nation. This effect may be measured in both ways depending upon the perception of the evaluator. This VR is a byproduct of simulation and simulacra both; here, some images, ideas, and environment don't have their originals in the existing world, and some are simulated from the actual world only. The terms, 'Simulation, and simulacra' have been used here with their literal meanings to convey the ideas in a better manner.

The virtual world, in comparison to the actual one, is more persuasive as here we have scope to create, include, and exclude based on our choices, but in the world where we live, we have no choice but to live and face whatever comes before. Benson Rajan says, "The religious institutions believe that the digital cannot make up for the physical, as they see digital interactions as a cold form of interaction. It is unlike face-to-face interactions, which are seen as a more desirable means of attaining religious objectives as the individual is emotionally charged in physical encounters." (2019:101-102). However, this world of virtual reality is competent enough to create a Utopian society, which is not possible in reality. A spectator can enjoy the freedom and pleasure of being in Utopia through it and can also feel the awe of being in a dystopian world. However, the feeling would be momentary yetit is possible.

CONCLUSION

It is apparent that technological advancements are directly interfering in the lives of people. Though they are virtually easing the journey of life yet actually depriving us of many things which we may not be noticing. Like God, technology demands complete surrender to it for working efficiently as VR can serve the purpose when and only when you are not able to see anything other than what is being shown. But, simultaneously, speaking strictly about VR, it is going to serve for a better cause to an extent by providing a chance of a virtual visit to those who are not able to visit certain religious places physically. Therefore, we can see and say that the future of this virtual reality is very bright; now, we have to see whether it brightens and expands the feelings and attraction for religious places or darkens by confining them to the VR headsets and screens.

If attention be paid, it can easily be observed that virtual reality, being a product of actual and fictionalenvironment, affects the real in the way the creator wishes. As happens in the case of Sociological criticism, society produces/affects the writer, and in turn, the writer and his writings affect/change the thinking and approach of society. This influence leading to a change in society may be perceived as positive or negative, depending upon the perspective of the perceiver. This VR environment may also create a lot of positive changes in affirming the faith of religious creed by enabling them to overcome the physical obstacles in worshipping their gods in a more peaceful and harmonious (as per their comfort) environment. Enquiring about the difference between virtual and actual Darshan, some responded that in both the cases the God is seen through eyes, feeling a touch, in most of the cases is not allowed or possible due to the place being overcrowded.

Thus, the virtual darshan seems to be more fruitful from the monetary point of view too. But some, who have already visited the temple for quite some time and did the virtual darshan just for the sake of comparison, could explain the difference in a better manner. They believed that in the virtual darshan, some unexplored aspects make them interested in it and also in the actual darshan time for a devotee for being in the temple is a significantconstraint, but here darshan is more thorough. The only difference that dominates is that the virtual darshan is not able to give the feeling that one finds being in the temple actually after facing a lot of hurdles for darshan. But it can be concluded from the foregoing discussion that virtual reality platforms are facilitating darshan, worship, prayer, Aarti etc. to them who are not able to do all this physically due to some reasons and may produce in days to come more religious and culturally abided persons. The findings noted by Foltz in his article also go similar, “The study found that most people using the Internet for religious purposes use it wisely, well aware of the limitations of electronic communities. It isthe media that islimited, not the participants. Most participants realize the poor and hungry are not found in cyberspace, especially not in customized disembodied communities. Most warn against using the Internet as an escape from the real needsof real people. Most are aware that we have more to say to one another than can be conveyed in binarystructured sentences.” (Foltz, 2003:329).

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CHAOTIC MODERN MEDIA: THE NEED FOR GANDHIAN ETHICS

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ABSTRACT

Value orientation and wider awareness for betterment of humanity were basic principles of journalism and media for Mahatma Gandhi. These principles provide strength to Indian democracy through modern media or fourth estate. The modern satellite and telecommunication have increased the speed of media activities, communication and dissemination of information. Hence, modern media has become more impact creating than ever earlier. The paradox here is to see how values and morals of Mahatma Gandhi are affecting modern media and mediapersons in an age of speed and satellite communication. This age of media and modern technology was not there in the India at the time of Mahatma Gandhi. The paper aims to discuss the relevanceof Gandhian journalistic approach in modern media business in general and electronic media in particular.

Keywords: Electronic, Media, Mahatma Gandhi, Sting Operations, Investigation, Journalism, Values, Morals, Telecommunication, Dissemination, Knowledge Age

Introduction

"Pen is mightier than sword" old proverb seems to be true even in today's context as the media appears to have gained more strength in the modern society through electronic information dissemination. In this context Chatterjee (2016) pointed out Communication systems are shifting their modes from a mere means of getting information to a platform for marketing.Moreover, earlier forms of modern communication the telegraph, telephone and wireless were strictly under the control of the British government in India before 1947. Even under the independent Government of India, what the British government did with the media during the pre-independence days, continued. Radio was no exceptionmaybe due to this governmental control over media inDoordarshan, TV Networks and All India Radio, the concerned mediapersons were demanding more autonomy.

The relevant bill, in this context received assent of President of India on September 12, 1990 after being unanimously passed by the Parliament. It was finally implemented in November 1997. It was called the PrasarBharti Act. According to this Act, all the property, assets, debt, liabilities, payments of money dues, all legal proceedings involving Akashvani (All India Radio) and Doordarshan were transferred to PrasarBharti to manage their affairs independently. (Government of India, 1997)

Moreover, on International plane, guarantee of freedom of expression and information was recognized as a basic human right in the Universal Declaration of Human Rights adopted by the United Nations (UN) in 1948, the European Convention on Human Rights, the American Convention on Human Rights, and the African Charter on Human and Peoples' Rights. In particular, Article 19 of the 1948 Universal Declaration of Human Rights states: "Everyone has the right to freedom of opinion and expression; this right includes freedom to hold opinions without interference and to seek, receive and impart information and ideas through any media and regardless of frontiers".(United Nations Universal Declaration of Human Rights, 1948). Gandhi has been fighting for all above mentioned rights and freedoms since the beginning of twentieth century

While discussingGandhian perspective on electronic media, quite a few questions and contexts arise here. First, what is the relevance of Gandhian Perspective concerning modern electronic media? Despite Mahatma Gandhi's vast expanse of work in the field of print media journalism through his tabloids namely *Indian Opinion, Young India and Harijan*, Gandhi lived and functioned apparently in a different age and era. It was mainly the teleprinter, telegram, telephone and radio which could be regarded as expressions of electronic communication during Gandhi's time.

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For Gandhi, regularity, authenticity, selfless service, purposeful information dissemination for social upliftment and national independence were major principles and values underneath his journalism. Profiteering and aims of business were never the priority of journalism for Gandhi. Indeed, he practiced his ideals in journalism. He has, therefore, clearly laid down value orientation and moral bases of journalism extended to modern electronic means of media.(Gandhi, M.K., 1931).In this context Miike (2016) pointed out the importance of dialogue exchange. Therefore this paper aims to discuss the relevance of Gandhian journalistic approach in modern media business in general and electronic media in particular.

Electronic Media after Gandhi

Electronic media comprises TV channels, blogging and social networking. The old style newspapers and broadcasting has also become electronic in nature as they are equally available on Internet. In others words, almost all journalism, newspapers, telephoning have transformed into electronic media. Projectors, CD Players, Video Players, recorders have all transformed into electronic media. Even Projectors, CD Players, Video Players recorders have all become part of old state technology. The electronic media works its ways in a few seconds only. Distance has little significance in affecting the efficiency of electronic media. The consequences of electronic media communication and information are almost instantaneous. This is why this era of electronic media is also known as knowledge age.

This is an age much beyond the time of Mahatma Gandhi. He could not foresee such rapid changes today. Despite this limitation, Gandhian thought, idea and vision have a touch of timelessness in them because they are highly relevant for setting standard of fundamental policy making to show the path of balanced media operations and performance in this age of social networking.*Entertainment, education and information dissemination* are three main formats of electronic media in the world today. These three formats are available in the form of movies, videos, slides, specialised lectures and programmes, news exchanges on social networking sites and diversified applications available on mobile network etc. All these processes work through satellite communication. This is a complex network of electronic technology and knowledge dissemination. There are also value added features in electronic media available currently. Instruments of cameras and spy cameras and also hidden form of long distance satellite focussing and videography/ photography are also there.

All these formats and modes of electronic media have made quest for knowledge a very quick affair. Almost every topic of research and its related material becomes available for study in a jiffy with the push of a button. Thousands of books, encyclopaedia, research journals and topical articles from authentic genuine sources become instantly available for study purposes while sitting at one place. A researcher can do such studies and collect plethora of material from any corner of the world without going anywhere. Similarly, all news and entertainment from all over the world with great details are available to a researcher sitting at home.

Gandhian Views on Automation and Press Freedom

Descending of knowledge age from late Twentieth century onwards is a highly heartening feature of human life. It is generally understood that Mahatma Gandhi would never approve of such massive technology and automation not only in electronic media but also in modern human life style. Adhikari (2017) echoed the field of communication theory has been witnessing a paradigm shift thereby promoting multicultural and multidisciplinary theorization of communication.Yes, this is true but this truth is far from reality of Gandhian philosophy of life, politics, economics and journalism. Here it is well to see deeper aspects of the Gandhian way of life and the manner in which he used his journalism and communication techniques for the welfare and awareness of the common people of India.

It will be pertinent here to see Gandhi's ideas on mechanisation, automation, journalism and awareness of masses not only in India but also in the world. However, Gandhi did not oppose all machinery or machinery as such. He has stated this position very clearly and categorically. Thus, as early as 1926, he wrote:

> "I am uncompromisingly against all *destructivemachinery*.But simply tools and instruments and such machinery as saves individual labour and lightens the burden of the million of cottages, I should welcome. He has also stated that he was opposed only to such machinery which was meant to enrich the few at the expense of the many or to displace the useful labour of many".(Young India1926)

The electronic media technology and quick global reach was not there at the time of Mahatma Gandhi's life time. But one thing is clear. It is that Mahatma Gandhi was not against the present form of erstwhile journalism transforming into electronic media. The above mentioned quotation of Mahatma Gandhi and his other writings also prove this. Various views that Gandhi has given in his writings in My *Experiments with Truth:An AutoBiography,Collected Works of Mahatma Gandhi, Indian Opinion, Harijan, Young India,Nonviolence in Peace and War* and his *Hind Swaraj or Indian Home Rule*futher show his fundamental principles about journalism and journalists. These principles can be applied to the functioning of modern electronic media and media persons. In this regard a few quotations from the writings of Mahatma Gandhi are presented here:

> "Freedom of the press is a precious privilege that no country can forego".(Gandhi Mahatma, 1958)

> "The sole aim of journalism should be service" .(Young India, 1926)

> "The newspaper man has become a walking plague. He spreads the contagion of lies". (Gandhi,MK.,Rao, U.R,1963)

> "A Journalist'speculiar function is to read the minds of the country and to give definite and fearless expression to that mind". (Gandhi, M.K., 1967)

> "Journalism should ever be prosecuted for selfish ends or for the sake of merely earning livelihood or worse still for amassing money". (Gandhi, M.K.,1967)

There is also a well known UNESCO aphorism that says quite like quotation of MahatmaGandhi:

> "Since war begins in the minds of men, it is in the minds of men, defence of peace must be constructed". (UNESCO Preamble)

According to article 19(1)(a) all citizens, Press Council of India, Editors Guild of India and Supreme Court of India, and of constitution of India(COI) press and media shall have the right to speech and expression. These fundamental rights are also applicable to electronic media. However, this freedom is not absolute as the article 19(2) also speaks of power of the state to frame law for imposing reasonable restrictions so as to preserve decency, privacy of citizens and integrity and sovereignty of India. The Indian Constitution also provides for certain relevant corresponding duties for all those enjoying fundamental rights and other freedoms in the country (Part1V, Article 51a). These restrictions and freedoms are much more necessary for media in general and electronic media in particular. Security of the State , friendly relations with foreign states, public order, decency, morality and in relation to contempt of court ,defamation or incitement to an offence etc all require these restrictions and reasonable freedoms. Electronic media becomes a significant means to streamline such aspects and dynamics of national importance.(Orissa.gov.in/e-Magazine/orissarevier/Nov-2006/eng.Pdf/87-96.Pdf.)

Gandhi anent Electronic Media

Miglani and Brar (2017) remarked media organizations are so busy meeting their operational costs and safeguarding profitability, that well-being of employees has become a secondary concern. The cut throat competition has made performance inevitable while concerns like quality of work life of employees and their work place well-being has taken a back seat. But For Gandhi electronic media must serve as an instrument to bring about peaceful conflict resolution and development especially of the downtrodden and poor.During Mahatma Gandhi's time,in order to understand the aims and goals of journalism for Gandhi, media is considered as fourth estate in democratic setup alongwith legislature, executive and judiciary. It has been influencing every aspect of human beings life irrespective of place, religion, caste and creed. Its aim to unfold underlying realities of life, media has to work in legally and socially permissible limits in contemporary times. Mahatma Gandhi's ideas continue to evoke interest not only in every human being but also on larger governmental, national and international levels even several decades after his death in 1948.

Gandhi always set high standards for printing words and was of the view that it was the only platform where you can address the mass society in one go and educate them for their multifarious rights. In his Autobiography, he wrote that the sole aimof journalism should be *service* of Nation and people. The newspaper and media, according to him, has a great power, just as an unchained torrent of water submerges whole countryside and devastates crops even so uncontrolled pen serves to destroy. If the control is from without, it proves more poisonous. It can be profitable only when experienced from within. Hence, highly responsibleform of media coverage is necessary. (Gandhi, M.K., 1956).

His approach to journalism was totally devoid of any self-interest. None of his contemporaries or others afterward used the media so forcefully to ponder over the general issues that concerned the society as he did. He knew the importance of communication and used it to shape the opinion and mobilisation of people. Gandhi was not only a journalist himself as editor of his three tabloid's namely*IndianOpinion,Young India* and *Harijan* but he also had good networking with the national and global community of journalists.Being the fourth pillar of democracy, it is its responsibility to work in the best possible way, to help the nation in adhering to the norms of effective welfare and development of society.(Battacharya, SN., 1998). In this context Chanda (2017) pressed the need of media literacy. The electronic media has progressed from its preliminary stage to the one it has achieved now. From being an alien *product*, it went on becoming the *means* adopted by the freedom fighters to realise the dream of a free India. It was the press that went on hand in hand with Raja Ram Mohan Rai, RabindndraNath Tagore, Mahatma Gandhi and Subhash Chandra Bose to voice their call for independence. It was media that conveyed the message of the young revolutionaries to the Britishers. In the present age of knowledge, the most powerful extension and expression of erstwhile traditional media is the electronic media.

Press/Media as Guiding Light

The might of the press can be understood from the fact that the Father of the Nation called the Press the guiding light which he believed was an excellent means to unite country for strengthening the foundation of the movement against the British.In the contemporary India, Mahatma Gandhi was a great communicator. He adopted 'Mass Line' approach to educate and mobilise millions of people for freedom struggle. In certain places and situations folk form of entertainment and communication facilitated the process of bringing home the concept of national freedom even to simple village folks. His salt Satyagraha was an excellent example of communicating effectively with masses in an age when media was not having existing technology advancement. His methods of fast and vows of silence were also a means of communication with people and masses alongwith a source of self purification. In other words, he aimed to target with one stone, the two birds of communication and self-purification both, successfully and non-violently. Mahatma Gandhi reached millions of people across the world through his communication skills and journalistic approach. He put an ever-lasting impact on Indian national movement through waging a number of nonviolent battles almost single handily. It must be said that that despite being an idealist, Gandhi was not a utopian communicator. His apparently idealism has mostly led to practical success in his experiments with truth, communication and journalism.

Gandhian Criticism of Electronic Media

He was critical of the tendency of journalists to pick up the bit from here and there and dish them for the purpose of creating sensation. Gandhi regarded this as 'back door journalism'. (Gandhi, M.K., 1972).

Gandhi practised what he preached. Gandhi's tabloids published *no advertisement.* His approach to journalism was totally devoid of business and profit oriented ambitions. However, with the invention of new technology in the field of communication such as TV, Internet, the concept of news reporting was not only limited to newspapers only. Initially there was only one channel, but then with the liberalisationpolicy, there came a wave of private channelswhich also brought in*cut throat competition*. Media started to control the minds of people. It could make people believe what they wanted to state. With the rising competition, the standard of journalism and media started to fall. Media that was a mission before independence grew as a profession after independence and of late, it is being criticised for becoming a *business without ethics* and without a genuine sense of social responsibility. Gandhi gives utmost priority to public interest for public advantage and benefit.(DuttaSoumya, 2011).

Gandhi was highly critical of journalists and media persons who used their profession as a source of minting money and building finances through advertisement in newspapers and TV channels. For him, journalists should not writeat the back of advertisement. Moreover, the owners of print media and private channels are the owners of either a business establishment or an industrial house or a financial institute. Newsin the hands of these businessmen becomes a commodity. Thereby news which shall be a fair fact becomes"angled" or marketable news. It is widely known that Teleprinter, Telephone and Telegraph were a few electronic media for communication and information exchange in Gandhi's time. These were totally different from what we have today. There is great difference between electronic media during Gandhi's time and media today .Yet, there are the fundamental Gandhian principles for modern media to follow and observe practically.

Modern electronic media is also suffering from rampant corrupt practises in the form of planted stories, politically slanted coverage, working through personal loyalties, paid features and interviews and blackmailing through sting operations. Gandhi does not approve of such activities by media persons. (Coronel, Sheilas, 1991)Thispaid electronic media concomitant with resulting respective loyalty to different political parties and corporate houses necessitates a growing levelling of electronic media in relation to Gandhain ethics and moral values of broadcasting, telecasting and journalism. The electronic media in Indian democracy is avowedly following the Gandhian values which were earlier applied to journalism. Yet, as evidences show especially different TVchannels for news and entertainment are committed with loyalty to one or another corporate house on one hand and different political parties on the other hand. Accordingly, they are following the interest, goals and values of concerned corporate houses, political parties and cultural organisations. For example in India, N18 Network safeguards the interest of MukeshAmbani,while Zee news and India TV are trying to be loyal to B.J.P. and RashtriyaSwavamSevakSangh(RSS). Such loyalties also lead to material benefits to media persons. As such, Rajat Sharma of India TV has been nominated as President of DDCA. None of the electronic media in Indian democracy is following Gandhian principles of impartiality, objectivity and non-profitability in their acts of dissemination of information. For example Doordarshan mainly protects and promotes the interest of mainly ruling party, NDTV mostly criticises the BJP and NDA. while serving the interest of Indian National Congress and leftist parties. India Today on the other hand favours Indian National Congress.

Election Commission of India while expressing concern for paid news has implemented for the first time the 'Voluntary Code of Ethics for Social Media' and found 1,297 such instances of paid news throughout the country by experts and nodal officials deployed in all constituencies for the purpose. The trend of presenting the advertising content in the guise of news and vice-versa has the potential of damaging the established norms thereby affecting not only the gullible audience but also the financial real estate, stock market, health and industrybesides undermining the democratic process. (Election Commission of India document 2019) Thus ethics have always remained a mainstay when reference to the traditional mass media in India is made. However, the recent technological and business developments have led to deviation from established norms especially under pressure from market forces. The influence is so evident that the explicit distinction between 'News' and 'Advertisement' is very difficult to make out.

Gandhi does not approve of such activities by media persons. On the other hand the Gandhian perspective on media and journalism rests on following principles put in a nutshell:

a. Objectivity
b. Truth must prevail because truth has no fear
c. Fearlessness
d. Social optimal information dissemination
e. Value orientation or ethical journalism
f. Against the concept of paid news
g. Journalists and mediapersons*ipso facto* in electronic media also must *not* have the right to perform on the back of advertisement posters and electronic commercial
h. Media persons therefore must be dedicated to thewelfare of the poor and for the nation and also for the world
i. Media and journalism must run on no profit no loss basis
j. Come what may, regularityin journalism, newspapers and media programmes must be maintained. Resource crunch cannot be a pretext to postpone the regular publication or filming of news stories and programmes

Purity of Means and Ends

Gandhi always believed that media should educate and inspire the masses for a greater cause. According to him, media should follow high ethical and moral standards by following value based journalism. However, the TRP based craze in rating has rendered media into a huge challenge to face for Indian democracy. Gandhianideas of purity of means and ends when applied to media set the narrative for media. Media free from business vendetta can only enjoy the freedom as well as its 'sanity'. In order to have fair and objective reporting of electronic media, the Press Council of India, and Editors Guild of India, seemingly on Gandhian lines, have prescribed norms of Code of Conduct for press and media in India:

a. Accuracy
b. Pre-publication verification
c. Caution against defamatory writings
d. Paramount National interest
e. Norms of investigating journalism
f. Fearlessness and social responsibility
g. Keeping away from exaggeration, distortion and sensationalism
h. All creeds and communities must be shown equal respect. (Sachindananda, K.S.,2007)

Although, the Press Council of India and Editor Guild of India have laid down distinctive yardsticks of news writings, these 'Canons of Journalism' have come under serious threat in recent times. Various news organisations and reporters forget the 'Code of Ethics' in the acquisition as well as dissemination of information to the public. There can be various reasons for such non-objective reporting like sensationalism, increasing readership and viewship, pressure from proprietors, coercion from powerful and useful news sources and selective diffusion and retention of news items by journalists due to one or several reasons. For instance, 'the principle of limitation of harm' is a rule set for the journalistic code of ethics which involves deletion of certain details from news reports like withholding the names of minor children, crime victims as well as certain informative details which are irrelevant or crucial and its exposure might harm someone's reputation or create hurdles in the process of investigation. In theAarushi murder case of 2008 the media intensely scrutinisedthe case with its elaborate coverage. This forced the CBI to seek the help of Supreme Court in order to curtail media from sensationalizing. Justice AltamasKabir stated,"We are asking the press not to sensationalise something which affects reputations". (ibnlive.com/news/aarushi-HemrajMurder)This case became sensational on Internet and private television channels as well. As a result the masses attentiontowards the case widened and it became a topic of public interest in general. Thus, the need aroused to differentiate between 'public interest' and "interest of the public". They both are relatively two different things as the first is concerned with the issues relating to the benefit of the public and the second is concerned with the issues which the public may find interesting. Thus, the issues which belong to the second category should be taken care of judiciously so that they might not harm the privacy of the concerned or impair thereputation. It is therefore the primary responsibility of the mass media to be highly alert and vigilant

The Gandhian 'ends and means' relates to another example of electronic media today

'Sting Operation' is another secret weapon often used by press as well as television media. There is no denying to the fact that though sting operations have often exposed the truth by making startling revelations which may be beneficial for the society but certain critics have put forth an interrogative mark on the ethical veracity of such operations by mediapersons. Though these sting operations bring the truth to forefront by exposing certain individuals and such exposure may make the masses aware and alert but some other vices like falsehood, biased and prejudiced exposure are associated with sting operations which provide little opportunity to the victims to defend themselves in public. Certain questions on ethical propriety are associated with sting operations.These operations are indeed one sided affairs. In this way, they are a major scar on journalistic code of fairness and impartiality. For instance, "Operation West End" organised by Tehelka and numerous other instances their revelations created quite a stir regarding the ethical issues associated with such exposures, but failed to give way an alternative to investigative journalism.

Conclusion

Despite various pejorative aspects of modern electronic media, the strength of democracy is drawn to a large extent from journalism and electronic media and the extent of freedom of expression available to media persons. The more the exposure, the deeper and longer lastingis democracy. There is mutuality between democracy, journalism and electronic media. None can go alone. They are mutually interdependent. This is evertruer in this age of information and knowledge dissemination. It is truth that prevails for Mahatma Gandhi. It means objective reporting and dissemination of news and knowledge.This necessity of objectivity is bound by freedom of expression within given ambit of social cohesion and ethics. Therefore, the Gandhian journalism and its basic principles observe rule of law and established social, political traditions and norms of propriety. Gandhian ethics are very clear on journalistic practices extendable to electronic media and media persons. Thus, without the observance of the basic principles or Gandhian perspective on electronic media, the purpose of democracy cannot be fulfilled.

Real power to citizens in a democracy can percolate down mainly through the Gandhian principles of journalism .Gandhi believed that it is sincerity, sympathy and charity that touch the heart more than anything else. Gandhi as a developmental journalist showed an example to the present day media of how to practice ethics based on developmental journalism.

The basic principles of Gandhian journalism applied to modern electronic media are being challenged by corporatisation of media houses and globalised structures in the market placesIn this atmosphere paid news and propaganda have been realthreat for ethical journalism. For a few apparent exceptions like sting operations etc., media in India is going quite in opposite direction of what Gandhi considers to be ethics of media and journalism. Most of the media and TV channels are owned by the corporate giants like MukeshAmbani and Subash Chandra and these giants are titled towards one or the other politicalparty or regime. Accordingly, news and other programmes clandestinely(become mouth pieces of ideology and acts of political party) pose a great threat to credibility and objectivity of electronic media The real question is about the practical possibility of applying Gandhian ethics of journalism to modern media. Is it really possible? Will modern media be able tosustain itself if it really goes in the direction of Gandhian way?

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Young India, 17 June 1926.

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CINEMATIC REPRESENTATION OF THE BHOPAL GAS TRAGEDY – EXPLORING THE HEALTH COMMUNICATION NARRATIVE

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ABSTRACT

With increase in interest in health communication, there has been a significant rise in mass media campaigns which not only address a wide variety of needs defined by policymakers but also helps them to expand their reach and spread health messages globally. Cinema as an effective form of media constructs and reconstructs discourses on health communication. However, in terms of the quantum of work in this space, the output is meagre. This study uses social construction of reality as the theoretical basis and narrative analysis as the research method to examine the cinematic representation of the Bhopal Gas tragedy, which left an extremely destructive impact on the city of Bhopal (India). It explores how cinema builds narratives around health communication and establishes how a real-world disaster was explored from different angles. The research paper positions the critical need to engage in deeper conversations on health ecosystems through films and locates how other dramatic elements overshadowed the serious engagement with the narrative of health communication.

Keywords- Health Communication, Bhopal Gas Tragedy, Environment, Cinematic Representation, Indian Cinema

Introduction
Communication is central to our everyday functioning and can be the very essence of the human condition (Berry, 2006).Communication "not only fulfils the social need but also fulfils various physiological and survival needs of society."(Verma & Verma, 2017)Mass-mediated communication is one of the key dimensions of the meta-narratives that explain the scholarly and practical expanse of communication. Multiple directional, disciplinary and domain-specific paradigms further create more focal points to understand the impact of mass-mediated communication on individuals, society, culture and processes related to them. Health Communication is one such domain that has strongly integrated itself to the mediated context both structurally and functionally. "The objective of health communication is to disseminate health information and knowledge among individuals as well as society by improving health literacy." (Sharma, Nahak, & Kanojia, 2019)The Centers for Disease Control and Prevention (CDC) define Health Communication as "the study and use of communication strategies to inform and influence individual and community decisions that enhance health" (Schiavo, 2011; Thomas, 2006).It is also one of the most vibrant, complex, and significant areas of research and practice in contemporary society. It influences persons throughout their lives, whether through interpersonal conversations about health, exposure to health images and information through the media, or involvement in the healthcare system. As health issues have become more pressing in society, the interest in health communication and the roles for health communication scholars and practitioners are certain to increase(Harrington, 2014).

With this increase in interest, health communication campaigns have been developed to address a wide variety of needs defined by policymakers, constituent groups, activists, and stakeholders, among others. Good communication is the key and is also pervasive in creating, gathering and sharing health information. It is a central human process that enables individuals and collective adaptation to health risks at many different levels (Berry, 2006).

Exploring the interrelationship between Media and Health Communication

"The media is an important ally in any public health situation. It serves the role of being a source of correct information as well as an advocate for correct health behaviours" (Module 5: The Role of Media in Health Promotion, n. d.). Mass media helps health workers to expand their reach and spread messages on health to all corners of the world. With the help of radio and television,overly critical information can be shared to the local audience, while making them aware. A study done in Swaziland shows us how radio broadcasts were used to train health professionals and the mothers of the ailing children about how to make the medicine for diarrhoea. It prevented the deaths of many infants. "Given a similar level of staff effort but the far greater coverage achieved by radio, it was found that more than twice the number of mothers learned the correct procedure for mixing SSS (the medication) from the radio than did those who learned it from face-to-face communication" (n. d.).

Mass media not only helps the message to reach the local audience but also plays an important role in gaining the attention of opinion makers, politicians, government regulators and community leaders. Mass media also recognized as a gatekeeper plays its role in, "alerting the public to what is important with a focus on accuracy and relevancy. This is done through media framing, by which mass media sets the tone through which the public will view the message." (Villar & Marsh, 2020)For example, between 1982 and 1987, several members of the U.S. Congress placed AIDS on the political agenda by holding hearings on the growing numbers of people afflicted by it and research into its causes and prevention. Celebrity activists and spokespersons covered by the media also increased the visibility of AIDS on the political agenda. However, it was not until 1987 that President Ronald Reagan gave his first public speech about AIDS. During that year,Congress also passed legislation that considered the larger societal implications of the epidemic and that went beyond funding for AIDS prevention, research, and treatment efforts. The AIDS Federal Policy Act of 1987 prevented discrimination against individuals with disabilities—including those with HIV/AIDS (Century, 2003).

With expansion and reach made possible by the Internet, people can now access health-related information on their devices, regardless of the location. Social media and its widespread users are the target audience for many health campaigns. However, with access to resources, the concern is also towards the consumption of right and accurate information. "For health communication programs, the Internet may become a countervailing factor and an obstacle as a source of misinformation and myth, particularly in the areas of infectious diseases and HIV/AIDS" (n. d.).According to a study conducted on the implications of social media useon health communication in the United States, "Recent growth of social media is not uniformly distributed across age groups; therefore, health communication programs utilizing social media must first consider the age of the targeted population to help ensure that messages reach the intended audience. While racial/ethnic and health status-related disparities exist in Internet access, among those with Internet access, these characteristics do not affect social media use. This finding suggests that the new technologies, represented by social media, maybe changing the communication pattern throughout the United States"(Chou, Hunt, Hesse, Beckjord, & Moser, 2009).

Contextualizing Health Communication Messages in Cinematic Texts and Contexts

Cinema is one of the most fundamental and effective forms of media, which presents as well as represents society and culture. In the process, it also constructs and reconstructs discourses on society and culture. Negotiation, appropriation and re-appropriation of ideologies are central to how cinema creates these representations. The cinematic texts, i.e., films, draw from as well contribute back to the discourse of society and culture.Films, also as a medium, have been adopted by individuals, companies, and independent groups for the purposes of entertaining, informing and educating others in an entirely unique form(Nwokedi, 2018).A study done by Yonsei University, Seoul, Republic of Korea, discusses how "films can be more effective than text in eliciting consumer responses such as emotions and a positive attitude to an identified disabled personality as well as to the employer brand."(Chang, 2020)

As a strong medium that weaves the discourse on important subjects, films have also been instrumental in mainstreaming the discussion on various taboos and stigmas related to health issues. Center for Disease Control (CDC) established the 'Sentinel for Health Award for Daytime Drama' (CDC, 2002b) for dramas that inform, educate, and motivate viewers to make choices for healthier and safer lives. Similarly, the Sexual Health IN Entertainment Awards (SHINE) honour those who do an exemplary job of incorporating accurate and honest portrayals of sexuality into their television, film, and music video programming (The Media Project, 2002). The Entertainment Industries Council, Inc., in partnership with the Robert Wood Johnson Foundation and the National Institute on Drug Abuse of the National Institutes of Health, sponsors the PRISM Awards which honour the correct depiction of drug, alcohol, and tobacco use in television and feature films, music, and comic books.

In the words of Dana March, Columbia University Mailman School of Public Health, "Television and film are powerful tools to disseminate health information, promote health, and construct health-related narratives" (Communicating to Advance the Public's Health: Workshop Summary, 2015). Indian cinema has addressedhealth issues in its storylines for long.However, in terms of the quantum of work in this space, the output is meagre. While numbers do not present a very favourable relationship between films and issues related to health; there has been a paradigm shift in the representations. Protagonists in contemporary, commercial Indian cinema now play characters with health problems. The discussion on the health issue and a consequent message, therefore, has amplified significant conversations about the potential of films to influence effective health communication.

The first Indian film which can be discussed in this category is *Dushman* (1939). *Dushman* (Hindi for 'enemy'), is a love story where Tuberculosis is portrayed as the enemy. This film clearly carried a social message of spreading awareness about the disease.(Kumbhar, 2019). *Doctor* (1941) was another film which discussed cholera, infant and maternal death, poor public hygiene and absent public healthcare infrastructure.(Kumbhar, 2019). Few recent films that have focused on subjects related to health are-*Black* (2005)by. Sanjay Leela Bhansali, which dwelled on a rarely discussed health condition of 'Alzheimer's' in geriatric patients; *TaareZameen Par* (2007) produced and directed by Aamir Khan which discussed dyslexia and effectively campaigned for holistically empowering patients, caregivers, parents, teachers and the society at large. Another recent film, *Udta Punjab* (2016), systematically handled a controversial subject of drug abuse in Punjab's youth and gave direct references to its severe impact on physical and mental. Some contemporary films like *Vicky donor*(2012) have successfully addressed the stigma attached to subjects like sperm donation and further mainstreamed the acknowledgement of these health issues. *Munna Bhai MBBS*(2003) spoke about the humanitarian element in the doctor-patient relationship and stressedupon an empathetic healthcare system, albeit cinematically. There have been other films like *My Brother Nikhil*(2005) which addressed AIDS, and more recently, *Margarita with a Straw* (2014) that addressed and cerebral palsy. While a longitudinal and rigorous investigation is required to measure and understand the impact of these films, the aforementioned examples are indicative of the integrated framework of films and health communication. Desk (2018) argues that positive and human portrayals in cinema provide strength to patients and caregivers to not tire in their pursuits.

Disasters, Health Crisis and Cinematic Intervention

The film, as an art form, is often critical of the reality that surrounds the social system.It discusses, compares, contrasts and brings forward the reflection of thesociety. Hence as one of the most influential medium, films also bear the responsibility to represent reality.Films "can shed light on political and spiritual matters too and can provide catharsis and perspective and may open our eyes to new ways of thinking, feeling and pursuing our lives. It is not only a visual treat to its audience but is also an account of societal, economic and political set up in which a person is living" (Mahmood, 2013). Films also create debate, they create conversation, they create an atmosphere… made by film-makers who want to take a position on a topic" (Shah, 2011).

With the advancements in digital technology and the plethora of information available, films related to health disasterstake on gigantic proportions (Treloar, 2005). However, as films address real-world catastrophes by inserting cinematic elements of genre, technique and aesthetics, they do not only shed light on a situation and its ramifications; but also humanize sensitive subjects thus creating more a more humanized discourse on even issues related to health. There are many films which represent disasters caused by human error which lead to health hazards. Some aspects of such films "do not mirror the reality of disasters. By terrifying and establishing blame, disaster films create a sense of moral order. This supports the belief that disasters are avoidable rather than an expectable outcome of the failure of complex systems over which human control is very imperfect" (Ursano, McCaughey, & Ful, 1995). Films intervene by building narratives and content around hazardous disasters created by human error, thus creating awareness as well as offering critical reflection.

The Bhopal Gas Tragedy – A Factual Overview

This study discusses the cinematic representation ofthe Bhopal Gas tragedy. The Bhopal gas tragedy is one of the biggest industrial disasters which left an extremely destructive impact on the city of Bhopal (India) and its citizens. The disastrous event has marked its thirty-five years in December 2019, and even now people are suffering from the adverse effects of the poisonous gas which resulted in the death of innumerable people living in Bhopal on the night of 2-3rd December 1984. The massive tragedy and disaster shook the entire country and lead to a huge health hazard.

"A government affidavit in 2006 stated that the leak caused 558,125 injuries, including 38,478 temporary partial injuries and approximately 3,900 severely and permanently disabling injuries" (Dubey, 2010). "Others estimate that 8,000 died within two weeks, and another 8,000 or more have since died from gas-related diseases" (Eckerman, 2004). The cause of the disaster remains under debate. The Indian government and local activists argue that slack management and deferred maintenance created a situation where routine pipe maintenance caused a backflow of water into a MIC tank, triggering the disaster. The Union Carbide Corporation (UCC) argues water entered the tank through an act of sabotage. About 500,000 more people suffered from agonizing injuries with disastrous effects of the massive poisoning. The hospitals were full of the dying victims and doctors did not know how to treat them because they did not know which gas or gases had leaked, and Union Carbide would not release the information, claiming it was a "trade secret"(Swamy, 2014).

After the night of the incident, the factory was locked up. Thousands of tons of pesticides and waste remained inside and was never cleaned. The chemicals were abandoned in warehouses exposed to wind and rain. Thirty-four monsoons have rusted and rotted the factory and washed the poison deep into the soil. The poison has entered the groundwater and seeped into wells and bore pipes, gushed from taps and entered people's bodies and burned stomachs, corroded skin, damaged organs and flowed into wombs.

According to a January 2013 report of the Indian Institute of Toxicology Research, Lucknow, the soil and groundwater within 3.5 kilometres from the UCC factory site is contaminated with cancer- and birth defect-causing chemicals. From 1969 to 1977, the Union Carbide used to dump its toxic wastes at 21 spots, most of them unlined pits, inside the 68-acre factory premises. Despite 17 agencies, including government and non-governmental organizations, carrying out studies over the past two decades, a comprehensive plan for remediation of the soil and groundwater has not been prepared(The Hindu, 2014).

The death of Warren Anderson, Chairman and CEO of the Union Carbide Corporation, five years back had marked anuproar in the city due to the anger for the judicial system which failed to deliver justice for millions of people who lost their family and are still suffering from the harmful and poisonous gas leak effects. Survivors are unhappy with the court proceedings and compensation. The primary reasons for such disasters: “The indifferent attitude of the management towards safety, the lax enforcement of the existing regulations by the regulatory bodies as well as unusual delays in the judicial systems.” (J.P.Gupta, 2002) Out of 25000 casualties, the government has paid compensation for only 5,295. Rashida Bee, President of Bhopal Gas PeeditMahila Stationery Karmachari Sangh complains,“three generations of gas leak victims have suffered from their children being born with disabilities but little was done by the government to help victims and to give medical assistance to their families”(The Hindu, 2014).

Films act as mirrors of our society and health communication is now one of the major themes of film narratives in India and the rest of the world. “Among public health researchers, there is growing interest in film methods due to their ability to highlight subtleties in practices, capture emotions, engage hard-to-reach populations, and advocate for social change.”(Baumann, Merante, Folb, & Burke, 2020) They help in bringing out all different facets of the health issue and communicate with the audience at a deeper level. In a study where films were used as drug-resistant strategies, the results show that “films were effective in decreasing self-reported use of drugs other than alcohol over 1 month.” (Hecht, Corman, & Miller, 2009) Even so, it can be said that the effectiveness is not same with all health issues and this study will further focus on the other stronger aspects of the society which play their role in defining the wide reach and acceptance of this medium.

Needfor the Study and Research Objective/Questions:

Considering the impact of Indian media and Indian cinema onour society, the representation of health communication in the countrypoints us towards the gap which gets established from the review of literature, focusing on the lack of efficient and competent representation of real-life health disaster. This study aims to examine the representation of the Bhopal Gas Tragedy in the cinematic medium.This study instigates the social construction of Health Communication and attempts to answer the following question: To what extent does the cinematic medium helps to develop an effective narrative on health communication through the cinematic representation of health hazards?

Data and Sample

The study examines two of the only films made on the disastrous event of Bhopal Gas Tragedy in India:

1. ***Bhopal Express***-a 1999 Hindi film directed by Mahesh Mathai
2. ***Bhopal – a Prayer for Rain*** -a 2013 film directed by Ravi Kumar

A tragedy of this magnitude which caused a massive health hazard has not been adequately addressed in mainstream Indian cinema. There are many humanized narratives of the event with survivors’ testimonies, but only two films till date have addressed this issue. It is said that films “depicting disasters and catastrophes have been much talked about, but little-studied” (Quarantelli, 2009). While talking about films depicting catastrophes, Gershenson questions, “Why we don’t know these films? Of course, they exist-on archival shelves, on illegal websites, and in the memory of those who saw them years ago. And yet they don’t exist- they have no physical presence, either as widely distributed DVD’s or web-streams today, or at festivals and movie theatres at the time of their release” (Gershenson, 2013).This study looks for answers to the same question.

Theoretical and Epistemological Underpinnings

This work is based in the interpretative paradigm. Understanding the power of the media in the social construction of reality is important, particularly when we have such a wealth of evidence describing how films, television and other media sources continue to somewhat rigidly define roles and expectations for less powerful groups in society (Eschholz, Bufkin, & Long, 2002). Peter Berger and Thomas Luckmann, in their publication, *The Social Construction of Reality*, coined the notion of “social construction”. They used this term to refer to what they consider as the process of actively constructing one’s social world rather than having such meaning imposed. It relates to the meaning that humans give to their world from a social context (Beeton, 2006). Quoting Berger and Luckmann (1967), Adoni and Mane (1984, p.325) discuss the concept of sociology of knowledge. They state that everything in society, and not just intellectual articulations, constructs social knowledge and therefore media play a significant role in the social construction of knowledge. To explain the concept of media and social construction of reality, the authors discuss three kinds of social reality – objective, symbolic and subjective. Objective reality refers to information accessed by people and even though they can doubt it, they suspend these doubts to be able to think routine thoughts and perform routine actions (p.Adoni& Mane, pp. 325-326). Media content, art, literature among other things constitute symbolic reality (p.326). The objective and symbolic reality fuse to provide inputs to individuals to form theirnotions of subjective reality, which may further be based on two factors – 'zones of relevance' and 'here & now' (p.326). Media content is constructed based on objective and symbolic reality while its consumption constructs subjective reality for the audience. Hence,the media's role in the social construction of reality is inherent and critical. This perspective can help for the systematic examination of the contribution of the media to the social construction of reality.

This research paper focuses on an issue which has proximity to Indian cinema, with the zone of the relevance of the present situation where children are born deformed even today in the affected areas of Bhopal.

The reality gets constructed through a medium like cinema, with its narrative and perspective around the event. The impact of this reality on people is disastrous. For generations diseases caused due to the gas leak, have been passed on in families. It is very unfortunate even after thirty-five years, people have not received compensation from the government organizations.In his book *The Cinema of the Precariat: The Exploited, Underemployed, and Temp Workers of the World*, Thomas Zaneillo discusses how the story of a precariat is lost under the heavy and big names of the industrialist. The ironic use of the term "accident" during such industrial hazardous reflects the entire event to be "unexpected, genuinely surprising, the unknown quantity in a discovered planetary habitat… The death and injury toll of the precariat and other workers in the surrounding neighbourhoods in all these "accidents" is always staggering." (Zaniello, 2020)Hence, it is critical to reflect on the fact a disaster of such extreme magnitude has hardly received any cinematic attention. In terms of popular cinema, the attention given to this subjecthas not achieved any success as the audience isnot even aware of the existence of these films because of poor production values and no commercial success.Another significant critique that emerges is the absence of any attempt to create consistent discourse around the disaster. The narrative is lost and so is the reality that these two films tried to create around the subject.

Exploring the Representation of Bhopal Gas Tragedy - Narrative Analysis of *Bhopal Express* and *Bhopal – a Prayer for Rain*

The study of cinematic storytelling focuses on the story structure and how the film affects our perception, cognition, and emotions. Narrative analysis is hence the effective methodology to be used. Narrative analysis (Gee, 1991; Kirkman, 1997; Riessman, 1993,&2001) focuses on the way individuals present their accounts of themselves and views self-narrations both as to constructions and claims of identity(Burck, 2005). Narrative analysis is a strategy that recognizes the extent to which the stories we tell provide insights about our lived experiences (Sandelowski, 1994). Also, narrative methods can be considered "real world measures" that are appropriate when "real-life problems" are investigated.

By applying narrative analysis on two films – *Bhopal Express* (1999) *and Bhopal – a Prayer for Rain* (2013),one can endeavour to understand the portrayal of the same issue from different perspectives. Also, narrative analysis helps us to interpret and conclude by focusing on different elements. These elements include, but are not limited to, how the story is structured, what functions the story serves, what is the substance of the story, and how the story is performed.

Discussion

***Bhopal Express* - 1999 film directed by Mahesh Mathai**

*Bhopal Express*narrates the entire incident from the eyes of a newlywedcouple, Verma and Tara. The very first scene shows a man running on the railway tracks trying to stop the trains to enter the city. Later, we get to know the reason why he is trying to do so. With the progress of the plot, we understand that Tara is observing *KarvaChauth*which is undertaken by Hindu women for their husband's good health. Hindu tradition also dictates that the wife should spend some time with her mother during certain months of the year to avoid giving birth to a child at inauspicious times; hence she leaves for her mother's home.(Nadar, n.d.) That very night there is a leak in the factory which leads to a major disaster.

The use of music is highly effective as it invokes the sensation of the tragedy and supports the visuals. The visuals are very emotionally arousing as people drop dead like flies. The amount of loss of life and the rise of the death toll by the next morning leaves you in shock.

***Bhopal: a prayer for rain*- 2013 film directed by Ravi Kumar**

In *Bhopal: a prayer for rain*, the plot revolves around the same incident. Dilip (Rajpal Yadav), a rickshaw driver, loses his pay source and gets a job in the plant as a labourer, and is happy since his daily wage is restored. The plant witnesses a drop in its revenue due to lower sales of pesticides, and to reduce the loss the officials neglect safety and maintenance. Questioning the chemicals used in the plant, Motwani (Kal Penn) a tabloid reporter publishes reports in his makeshift printing press which are disregarded by most of the officials and workers. Roy, the in-charge for the safety of the plant expresses his concerns. The officials, however, ignore his warnings, and a worker is killed when methyl isocyanate leaking from a pipeline drips off on his hand. The officials deem the worker's irresponsibility as the cause of the accident and the plant continues to function. Dilip is given a better-paying vacant job in the plant despite lacking the skill to operate machinery. A gas leak is prevented by Roy when water is mixed with methyl isocyanate, and to stop people from panicking, the official in the plant sabotages the warning siren.

Warren Anderson, the CEO of the Union Carbide, visits the plant to inspect its functionality, where he is briefed about a plan to connect two additional tanks for storage of methyl isocyanate to increase the output of the plant, ignoring the deteriorated condition of the tanks.To overcome the increasing revenue loss, the officials shut down the plant, firing most of the workers, including Dilip.

One night the safety measures fail, and a runaway reaction follows. The faulty tanks cause the gas to start leaking. The gas is exposed to the surroundings and is carried east by the wind. Motwani rushes to alert the people in the vicinity of the plant to vacate and head west since the warning sirens were previously sabotaged. As the gas shows its effects, a nearby hospital is filled with hundreds of patients reporting cyanide poisoning, and the lack of antidote results in most of the patients' death. Dilip, in the last of his energy, throws away his Union Carbide identity badge, rests his son on the ground and succumbs to the toxic gas. The story jumps to the present day, where a blind boy is holding Dilip's identity badge, and the film ends with Dilip narrating the words "Whatever may be the cause of the disaster, Carbide never left Bhopal. A photo montage depicts the aftermath of the disaster(Kumar, 2014)

Both the films depict the tragedy and sensitize the viewers about this human-made tragedy three decades ago which lead to the death of over ten thousand people. They also portray the huge insensitivity on the part the political fraternity and the corporate breed that led to the entire tragedy. *Bhopal Express* focuses on the event and the day after, whereas *Bhopal-A prayer for rain* discusses various other issues like the ethical dimension of the political and industrial sectors. It also shows the warnings which the Union Carbide was given about the safety measures that were not undertaken and hence led to the disaster.

Conclusion and Recommendations

The narrative analysis of both films establishes that a real-world disaster was explored from different angles. While the health hazard discourse was central to the storylines, other more dramatic elements overshadowed the attention and engagement with the narrative of health communication.

However, a critical insight that emerges from the study is that health communication is understood in an interpretative ecosystem which includes several social, political, cultural, ideological and even economic codes. Hence, when films focus on health disasters, they cannot represent monolithic narratives which will only create awareness about a health problem. This study demonstrates that a more nuanced and complex investigation of cinematic representations of health communication should be taken up as a long-term study.

It will only then be possible to make recommendations that can impact not just the responsibility of cinema to address societal issues, but also influence policymakers in certain ways. An audience impact study as the next step can shape a holistic understanding of this subject.

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GUIDELINES FOR THE CONTRIBUTORS

GENERAL

- *Language:* **Contributions can be submitted in English.**
- *Preferred* **Length** *of paper:* **3000 – 5000 words.**

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Title page is a separate page before the text begins. The title page must include:

- *Title:* **Concise and informative. Avoid abbreviations and formulae where possible.**
- *Author names and affiliations:* **Please indicate the given name and family name clearly. Present the authors' affiliation addresses (where the actual work was done) below the names. Indicate all affiliations with a lower-case superscript immediately after the author's name and in front of the appropriate address. Provide the full postal address of each affiliation, including the country name, and, if available, the e-mail address, and telephone number of each author.**
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Use the following rules for the text, including abstract, keywords, heading and references.

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- **Heading 1: Times New Roman; Size- 12; Non-Italic&Bold; for example,**

  INTRODUCTION
- **Heading 2: Times New Roman; Size- 12; Italic; for example,** ***1.1 Research Methods***
- **Heading 3: Times New Roman; Size- 12; Non-Italic; for example, 1.1.1 Analysis Result**
- *Subdivision of the article:* **Divide your article into clearly defined and numbered sections. Subsections should be numbered 1., 2., (then 1.1, 1.1.1, 1.1.2), 1.2, etc. (the abstract is not included in section numbering). Use this numbering also for internal cross-referencing: do not just refer to 'the text.' Any subsection, ideally, should not be more than 600 words. Authors are urged to write as concisely as possible, but not at the expense of clarity.**

MANUSCRIPT PREPARATION

All manuscripts should be prepared in Microsoft Word format, in Times New Roman, font size 12 for English, typed in double space and one-inch margins on single-sided A 4 paper. In case of quantitative/ experimental work, the author (s) must specify the purpose of the study. The text of observational and experimental articles should usually be divided into the following sections with the headings, such as Introduction, Methods, Results, and Discussion to clarify their content. All pages of the manuscript should be numbered consecutively at the right corner of the page.

The Title page (page-1 must contain title of the article, name (s) of the corresponding author (s) telephone, and email address of the author responsible for correspondence. It must also contain the source (s) of support if any received in the form of grants, equipment, drugs. The word count should include text of the article only (excluding abstract, acknowledgements, figure legends, and references). This page should also indicate the number of figures used in the article. Page-2, must contain only title of the article, abstract and keywords. Page-3 onwards must contain the actual article beginning with the Title and ending with References.

Abstract: An abstract is a succinct (one paragraph) summary of the entire paper. A concise and factual abstract is required (maximum length of 250 words). The abstract should state briefly the aims, methods, results and major conclusion of the research. From the abstract, a reader should be able to make out the content of the article. Hence, it requires special attention of the author. An abstract is often presented as separate from the article, so it must be able to stand alone. References should be avoided.

Keywords: Immediately after the abstract, provide a maximum of 8 keywords, avoiding general and plural terms and multiple concepts (avoid, for example, 'and', 'of').

Introduction: The main purpose of the introduction is to provide the necessary background or context of the study (i.e the nature of the problem and its significance). State the specific purpose or objective of the study. Provide a brief but appropriate historical backdrop and the contemporary context in which the proposed research question occupies the central stage.

Methods: Methods section must succinctly describe what was done. Describe the source population and the selection criteria for study participants. Identify the methods, apparatus, and procedures in sufficient detail to allow other workers to reproduce the results. Authors submitting review manuscripts should describe the methods used for locating, selecting, extracting and synthesizing data. Describe statistical methods with enough detail to enable a knowledgeable reader with access to the original data to verify the reported results.

Results: Authors must avoid repeating in the text, all the data provided in the tables or illustrations and graphs as an alternative to tables with many entries or duplicate data in graphs and tables. This section must focus on scientifically appropriate analyses of the salient data.

Discussion: This section must emphasize the new and important aspects of the study and the conclusions that follow from them. For experimental studies it is useful to begin the discussion by summarizing the main findings, and then explore possible mechanisms or explanations for these findings. Compare the results with other relevant studies, state the limitations of the study, and explore the implications of the findings for future research and clinical practice.

References: References must be written according to the guidelines of Publication Manual of the American Psychological Association (6th edition). Responsibility for the accuracy of bibliographic citations lies entirely with the authors.

- *Citations in the text:* **Please ensure that every reference cited in the text is also present in the reference list (and vice versa). Avoid citation in the abstract. Unpublished results and personal communications should not be in the reference list but may be mentioned in the text. Citation of a reference as 'in press' implies that the item has been accepted for publication.**

- *Citing and listing of web references:* **As a minimum, the full URL should be given. Any further information, if known (author names, dates, reference to a source publication, etc.), should also be given. Web references can be listed separately (e.g., after the reference list) under a different heading if desired or can be included in the reference list.**

- *Text:* **Citations in the text must follow the referencing style used by the American Psychological Association. You can refer to the Publication Manual of the American Psychological Association (Sixth Edition).**

- *List:* **References must be arranged first alphabetically and then further sorted chronologically if necessary. More than one reference from the same author (s) in the same year must be identified by the letters "a", " b", " c", etc., placed after the year of publication.**

Use the author/ date system of reference in the text (e.g., Chomsky, 1997). Gather the references alphabetically after the text, using last names and first initials.

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Note

- **Please avoid using footnotes.**
- **Please do not use any colour other than white and black in paper. The layout of paper is only in white and black.**
- **Research work must be related to Indigenous Knowledge (specially related to ancient Indian knowledge).**
- **Quality work will be preferred.**
- **No fee for publication.**

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SUBMISSION PROCEDURE

The final version of the manuscript must meet the JCCC Guidelines as noted. The manuscripts must be typed clearly in Microsoft Word format. Soft copy of the research article will be submitted by mail. Each article will be considered for review only after receiving, the soft and hard copies of the same. Upon completion of the review process, the first author will be informed of acceptance or rejection of the article within three months of the submission date. After review, the accepted articles will be sent back to the concerned authors for final revision and submission and the first author will be sent a formal letter of acceptance along with the registration form for publication of papers in the JCCC.

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2. Research work must be related to all subjects related to social sciences.

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