
A Confirmatory Factor Analysis of Teenage Consumer Styles Inventory: Evidence from India

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The purpose of this paper is to determine the consumer decision making styles of Indian teenagers by testing the validity and reliability of revised Sproles and Kendall's Consumer style inventory scale. Applying multistage cluster sampling responses of 1216 students of 13 to 18 years of age studying in six CBSE schools in NCR were collected. Factors were extracted through exploratory factor analysis. The reliability of the scale was tested through Cronbach's alpha. The unidimensionality and construct validity (convergent and discriminant) of the scale was tested through confirmatory factor analysis. As compared to Sproles and Kendall's (1986) findings, Indian teenagers displayed different characteristics of consumer decision making styles. Although most of the studies across cultures are mere replication of the Sproles and Kendall's (1986) eight factor CSI, none have questioned the validity and reliability in Indian context. This study contributes to the body of literature by testing whether this scale can be applied for measuring the consumer decision making styles of teenagers in India. It has practical implications for marketers who wish to optimise outcome by devising marketing strategies aligned to the decision making styles of teenagers as consumers.

Key words: Consumer decision making styles, Indian teenagers, Consumer Style Inventory, Confirmatory factor analysis, exploratory factor analysis

INTRODUCTION

Globalisation and a fast growing economy have led to the resurgence of the Indian consumer market. The Indian market is flooded with national and international brands and a variety of retail channels. The large number of shopping choices makes it difficult for consumers to exercise option. The study of literature suggests that consumers approach shopping with certain decision making traits that combine to form decision making styles which are more permanent than shopping behaviours.

Teenage shoppers are an emerging age group that is recognized as a meaningful market segment, yet there is lack of extant research explicit to this group especially in India. The teenagers are part of a large young consumer market in India with nearly 243 million (One India News, 2011) individuals aged between 10-19 years. The teenagers are heavy users of mobile phones, restaurant service (for fast food) and branded apparels (Majumdar, 2010). The high acceptability of new products in the fast food category among the younger generation of India is leading to a heightened competition (Goyal and Singh, 2007). In order to succeed in this competitive environment, marketers need to understand decision making orientations of young consumers and segment them accordingly (Lysonski, Durvasula and Zotos, 1996). Age of the consumer has an effect on the consumer decision making styles (Khare, 2012). Thus the mental orientation of

teenagers is completely different from that of adults. A few recent studies conducted on Consumer decision making styles in India have been on young adult consumer segment (Mishra, 2010; Khare, 2012; John and Mohan, 2015) and the teenage segment has not received adequate attention. Marketers of products and services intending to serve this large segment are more likely to succeed if they have a good understanding of the decision making styles of teenagers. Recent studies by the authors show that socialisation agents have an impact on the consumer decision making styles of Indian teenagers (Chaudhary and Dey, 2015). Further these socialisation agents also influence the materialism of teenagers (Chaudhary and Dey, in press). Thus it becomes imperative to establish the consumer decision making styles of Indian teenagers.

Both marketers and researchers have been interested in the consumer decision making styles (CDMS) primarily because they are useful in segmenting the consumers and devising marketing strategies for them. CDMS enable researchers to determine the consumer behaviour of these segments as the styles remain unchanged over time. Researchers (Mokhlis and Salleh, 2009; Chi and Lovett, 2010) across different cultures have studied the decision making styles with the help of the Consumer style inventory devised by Sproles and Kendall (1986). The CDMS have been defined as a “mental orientation characterizing a consumer's approach to making choices” (Sproles and Kendall, 1986). These choices relate to choosing between alternative products. The decision making styles measure the cognitive and affective characteristics of the consumer through the consumer style inventory (CSI), consisting of eight characteristics: (1) “Perfectionist, High quality conscious consumer” – searches for the best quality in products; (2) “Brand conscious, price equals quality consumer”- buys more expensive, well known brands; (3) “Novelty-fashion conscious consumer”- are variety seeking and have the products of latest styles; (4) “Recreational and hedonistic shopping consciousness” –find shopping

pleasant and shop just for the fun of it; (5) “Price conscious and value for money” consumer- look for value for money and are comparison shoppers; (6) “Impulsive, careless consumer”- do not plan their shopping; (7) “Confused by over choice”- have difficulty in making choices from many brands and stores due to information overload; (8) “Habitual and brand-loyal” – stick to favourite brands and stores due to habit.

This paper aims to profile teenagers in India on the basis of CDMS by testing the reliability and validity of the revised consumer style inventory. In the past researchers focused on the decision making styles of Indian young consumers belonging to a higher age group (Narang and Mishra, 2014; Tanksale, Neelam and Venkatachalam, 2013; Singh and Tripathi 2012; Mishra, 2010; Canabal, 2002; Lysonski, [Durvasula](#) and [Zotos](#), 1996). The area of decision making styles of Indian teenagers is still under researched as no systematic study has been conducted to understand them from a decision-making perspective using the CSI.

LITERATURE REVIEW

The teenage segment

Although, researchers denounce the selection of teenagers as qualified respondents for any CDMS study citing the reason that they have limited exposure to markets and hence their CDMS are evolving, the motivations to study teenagers as a segment for consumer research are many. During the transition from teenage to early adult-hood, they evolve their own behaviour patterns, attitudes, and values and form their own consumption patterns (Holbrook and Schindler, 1989; Fannin, 1984); brand loyalty is developed at an early age that lasts well into adulthood, and therefore they constitute a future market (McNeal, 1992) and they influence decision making of family and friends (Kaur and Medury, 2011; Chaudhary and Gupta, 2012; Singh and Agarwal, 2012).

The eight factor CSI

To measure CDMS this study has used the consumer characteristics approach (Sproles and Kendall, 1986) which seems to be the most powerful and explanatory since it focuses on the mental orientation of consumers in making decisions (Lysonksi, Durvasula and Zotos, 1996).

Some researchers confirmed the validity of the eight factor model, even though these were different from the original Sproles and Kendall (1986) (Hafstrom, Chae and Chung, 1992; Durvasula, Lyonski and Andrews, 1993; Leo, Bennett and Hartel, 2005; Mokhlis, 2009). However, other researchers could not confirm the reliability of eight factor model (Lyonski, Durvasula and Zotos, 1996; Fan and Xiao, 1998; Bakewell and Mitchell, 2003; Mokhlis and Salleh, 2009; Chi and Lovett, 2010). Only Siu and Hui (2001) confirmed the same eight factors as the original Sproles and Kendall (1986) in China which was in contrast to the other Chinese studies. In India there were disparities reported in findings of consumer decision making styles for adult consumers. The number of factors extracted varied from the maximum of ten to the minimum of five. Mishra (2010) found ten, Singh and Tripathi (2012) reported nine, Ravindran, Ram and Kumar (2009) identified six while Narang and Mishra (2014) five.

The literature review leads to research questions: Do Indian teenagers display CSI containing eight factors? Will these factors be same as Sproles and Kendall (1986)?

Reliability and validity of the CSI

The CSI as designed by Sproles and Kendall (1986) had low reliability (below 0.6) for four factors out of eight factors.

The reliability and validity of the CSI in measuring the consumer decision making styles had been questioned by a few researchers. Durvasula, Lysonski & Andrews (1993) stated that the scales of

'price-value consciousness' and 'habitual brand loyal' required to be further refined. Fan and Xiao (1998) identified the problem of overlapping in the model of Sproles and Kendall (1986). The overlapping was on account of three parameters: Firstly, price-value consciousness consisted of “Price” and “quality” dimensions & “value” means “paying the lowest price for highest quality”. Secondly, there was overlapping of impulsiveness with habitual, brand – loyal orientation towards shopping. Both were opposite to each other. Impulsive consumers buy different brands without thinking while habitual consumers buy certain types of products according to their liking. Thirdly, the new dimension “time-energy conserving” of Hafstrom, Chae and Chung (1992) was overlapping with the recreational shopping consciousness. Leo, Bennett, & Hartel (2005) stated that the CSI was more skewed towards fashion.

The confirmatory factor analysis (German data) to test the eight factor model proposed by Sproles and Kendall (1986) resulted in lack of identification of model establishing the need for an EFA. The results indicated a seven factor model which was validated with a confirmatory factor analysis (Walsh, Mitchell and Thurau, 2001).

In India, researchers using the CSI also found low reliabilities in the scale. Lyonski, Durvasula and Zotos (1996) established seven factors for the Indian sample (size 73) out of which three (Recreation shopping conscious, Impulsive and Habitual brand loyal) had low Cronbach's alpha (below 0.6). Further they found that an eight factor solution as proposed by Sproles and Kendall (1986) was problematic.

Canabal (2002) in a study of 173 college students in south India found that out of eight consumer decision making styles only five (Brand conscious style, High quality conscious/ Perfectionist style, Confused by over choice style, Impulsive/Brand indifferent style, Recreational shopper style) had

values of Cronbach's alpha above 0.4 while three factors (Time Conscious; Price/Value Conscious; Dissatisfied/Careless) were even below this.

Another study (Tanksale, Neelam and Venkatachalam, 2013) on 254 under graduate college students in Pune, India confirmed only six styles (Recreational, Hedonistic; Perfectionist, high-quality conscious; Novelty fashion conscious; Brand conscious and confused by over choice) with adequate reliability (Cronbach's alpha 0.6 and above) but the new seventh style (shopping avoidance- time saver) had low reliability (Cronbach's alpha= 0.46).

The above review of literature shows that there is a need to determine the CSI with adequately large and homogeneous sample and test its reliability and validity for Indian consumers in general and teenagers in particular. This paper fills the research gap in literature by identifying the CSI as a tool for measuring the CDMS of teenagers. In addition, there was a call for establishing the validity of the scale across populations by Sproles and Kendall (1986). In India there is no study which validates the CSI for measuring the CDMS of the teenage segment. This research also establishes the validity of the instrument.

Review of Methodology

Most of the researchers have used Exploratory Factor Analysis (EFA) for extracting the factors of CDMS (Sproles and Kendall, 1986; Lysonski, Durvasula and Zotos, 1996; Mokhlis and Salleh, 2009; Bae, Pyun and Lee, 2010) but they did not confirm these factors. A few researchers have confirmed the factors through Confirmatory Factor Analysis (CFA) (Durvasula, Lysonski, and Andrews, 1993; Walsh, Mitchell & Tharau, 2001; Potgieter, Wiese, and Strasheim, 2013). So the question emerges: Can the CDMS characteristics be confirmed by CFA?

RESEARCH OBJECTIVES AND HYPOTHESES

The above review of literature, research gaps and corresponding research questions lead us to the objective of this research paper in the context of Indian teenagers:

- To revise the eight factors consumer style inventory of Sproles and Kendall (1986) and test its reliability and validity.
- To identify the Consumer decision making styles of Indian teenagers.

For the segment of Indian teenagers the Hypothesis that can be proposed from this objective is:

H1: The latent constructs of CDMS are different from the original eight factor Sproles and Kendall's (1986) CDMS

METHODOLOGY AND SAMPLING

Instrument

An instrument of 49 items was developed by the researchers consisting of two sections. The first section contained 5 close ended questions that provided data concerning the demographics of the respondents. These demographics included questions on gender, age, product category, Father's education, Mother's education and Father's occupation. The second section contained 44 items, 5 point Likert scale measuring the consumer decision making styles based on the Sproles and Kendall (1986) scale.

Pilot study

A pilot study (sample size 208) was conducted for school children in the age group of 13 to 18 years studying in classes 8 to 12. Students completed the questionnaire in their class rooms under the supervision of the researcher and teacher during the

school hours. Each statement was tested by t test of difference of means to check if it could produce significant differences between responses of people 'who wish to agree' and 'who wish to disagree'. All statements qualified for EFA. This data of the pilot study was not included in the final analysis.

Final study

For the final study, a multi stage cluster sampling was used. Out of 25 short listed schools, permissions were obtained from six schools. The study yielded 1216 (mean age= 16, standard deviation = 1.5) filled responses out of 1286 data set. The teenagers were from educated families and about 50% belonged to business class family. The sample characteristics are presented in Table 1.

Table 1: Summary Statistics on Sample		
Sample Characteristics	Number	Percentage
1. Gender		
Boys	698	57.40
Girls	518	42.60
2. Age		
13 years	241	19.82
14 years	271	22.29
15 years	246	20.23
16 years	195	16.04
17 years	201	16.53
18 years	62	5.10
4. Father's education		
Undergraduate	76	6.25
Graduate	556	45.72
Post graduate	584	48.03
5. Mother's education		
Undergraduate	108	8.88
Graduate	660	54.28
Post graduate	448	36.84
6. Father's occupation		
Business	614	50.49
Service	442	36.35
Professional	160	13.16

Table 2: EFA results of revised CSI	
Factor 1: Recreational/Hedonistic (rec)	
Cronbach's Alpha	0.84
Eigen Value	2.87
Variance Explained	19.11
	Item Loading
5.1 Shopping is not a pleasant activity to me.	0.856
5.2 Shopping wastes my time.	0.887
5.3 Shopping is one of the enjoyable activities of my life.	0.862
Factor 2: Confused by over choice (cboc)	
Cronbach's Alpha	0.68
Eigen Value	2.06
Variance Explained	13.73
	Item Loading
7.1 There are many brands of product to choose that often I feel confused.	0.776
7.2 All the information I get on different product confuses me.	0.803
7.3 The more I learn about product, the harder to choose the best.	0.747
Factor 3: Brand Consciousness (brnd)	
Cronbach's Alpha	0.66
Eigen Value	1.91
Variance Explained	12.72
	Item Loading
1.2 The most expensive brands of product usually are my choice.	0.757
1.3 I prefer buying the best selling brands of product.	0.779
1.4 The well known brands of product are best for me.	0.729
Factor 4: Perfectionist high quality consciousness (phaq)	
Cronbach's Alpha	0.66
Eigen Value	1.31
Variance Explained	8.72
	Item Loading
3.1 When it comes to purchase product, I try to get the best.	0.800
3.2 In general, I usually try to buy the best overall quality of product.	0.870
Factor 5: Price value consciousness (pvc)	
Cronbach's Alpha	0.65
Eigen Value	1.14
Variance Explained	7.61
	Item Loading
4.1 I carefully watch how much I spend.	0.841
4.2 I consider price first.	0.849
Factor 6: Habitual Brand loyal Consumer (hbl)	
Cronbach's Alpha	0.58
Eigen Value	1.10
Variance Explained	7.36
	Item Loading
6.1 I have favourite brands of product I buy over and over.	0.785
6.2 Once I find a product or brand I like I stick with it.	0.864

Tools employed

Factors of consumer decision making style were extracted through exploratory factor analysis. The internal consistency of the factors was checked through Cronbach's alpha. In order to test the hypothesis confirmatory factor analysis was used. The construct validity of the measurement model was tested through convergent and discriminant validity.

RESULTS AND DISCUSSIONS

Exploratory Factor Analysis

Exploratory Factor analysis (EFA) is a statistical method that helps to find a small set of unobserved variables (also called latent variables, constructs or factors) which can account for the covariance among a larger set of observed variables (also called manifest variables). A factor is an unobservable variable that is assumed to influence observed variables. To determine the decision making styles of Indian teenagers Exploratory Factor analysis was conducted on the whole data set.

EFA of CDMS was conducted with the purpose of grouping the 44 items into different factors. The test of factorability and sample adequacy, Kaiser-Meyer-Olkin (KMO) (0.704) and Bartlett's Test (4012.248, significant at $p < 0.000$) proved that factor analysis could be conducted. Principal component factor analysis using varimax rotation was adopted. Factors were extracted based on the Eigen values greater than 1. Items which had factor loadings less than 0.4 and cross loadings were removed. Finally in the rotated component matrix, 15 items loaded onto 6 factors and total variance extracted was 69.23%. The result of the EFA showed that there were six factors of CDMS as compared to the Sproles and Kendall's (1986) eight factor model. A more parsimonious scale was developed with better reliability coefficients as against the original CSI (Table 2).

Factor one: Recreational/Hedonistic (rec) had a high Cronbach's alpha (0.845) and explained 19.11 % of variance with an Eigen value of 2.867. The reliability of the original scale was much lower at (Cronbach's alpha= 0.76). As compared to Sproles and Kendall's CDMS three out of five items loaded on this factor with very high factor loadings (0.8 and above). This factor characterised that the Indian teenagers found "shopping to be a pleasant activity"; "did not waste their time" and "was one of the most enjoyable activities of their lives".

Factor two: Confused by over choice (cboc), explained 13.73% variance with adequate Cronbach's alpha (0.68) and Eigen value (2.06). In contrast to Sproles and Kendall's scale, three out of four factors loaded on this factor. The factor loadings were higher (0.7 and above) than the original study. The reliability of this factor was higher than the one in Sproles and Kendall's study, which had a Cronbach's alpha of 0.55. The characteristics of Indian teenagers were that they "have many brands to choose from and they feel confused"; "all the information they get on different products confuses them"; "the more they learn about products, the harder it is to choose the best".

Factor three: Brand consciousness (brnd) also had adequate reliability with Cronbach's alpha of 0.66, Eigen value of 1.91 and explained variance 12.72%. Three items out of seven items loaded on this factor with factor loadings higher than 0.7 (as compared to the original scale of factor loadings 0.4 and above). This factor was characterised by teenagers "making choice of expensive brands"; "prefer best selling brands" and feel that "well known brands are best for them".

Factor four: Perfectionist high quality consciousness (phq) was characterised by two items with high reliability (Cronbach's alpha =0.66), Eigen value above 1 and 8.72% of the variance explained. The original scale had 8 items with Cronbach's alpha of 0.74. This can be attributed to the large number of items in the factor. This factor explains that Indian

teenagers try to "purchase products which are best" and with "best overall quality".

Factor five: Price value consciousness (pvc) was measured by two items which determined that the teenage consumer "carefully watched how much they spend" and "considered price first". These items were different from the original CSI and better indicator of the factor as the Cronbach's alpha was 0.65 in contrast to 0.48 in the original CSI. This factor had an eigen value of 1.14 and variance explained was 7.61%.

Factor Six: Habitual Brand loyal Consumer (hbl) had a relatively low Cronbach's alpha of 0.58 but it was slightly higher than 0.53 of the original CSI. The Eigen value of 1.10 was above 1 and it explained 7.36% of the variance. Two items were loaded on this factor which explained that the teenagers had "favourite brands they buy repeatedly" and "once they find a product they stick with it".

The Indian teenagers were not found to be "Novelty fashion conscious consumer" and "Impulsive, careless consumer". Thus suggesting that 'H1: The latent constructs of CDMS are different from the original eight factor Sproles and Kendall's (1986) CDMS' could be held true. The factors extracted were given the nomenclature according to their characteristics (Table 2). CFA was carried out to prove the hypothesis.

Scale reliability

The internal consistency reliabilities of the scale were assessed. The scale reliability is concerned with consistency, accuracy and predictability of the scale. Cronbach's Alpha for each of the construct should be at least 0.60 for primary data collection (Hair, Black, Babin and Anderson, 2010).

The results indicated that the internal consistency for all the factors in CDMS were appropriate (0.6 and above), except 'Habitual brand loyal Consumer' (Cronbach's alpha= 0.58). The comparison of the Cronbach's alpha of the revised scale with the Sproles and Kendall's (1986) CSI is presented in Table 3.

However, there are certain limitations associated with using Cronbach's Alpha, the values get inflated as large numbers of items are included in the scale (Sekaran, 2000) and it does not determine the unidimensionality of the scale (Gerbing and Anderson, 1987). Thus confirmatory factor analysis was used to assess the unidimensionality of the scale.

Confirmatory Factor analysis

If investigators wish to explore patterns in the data or to test explicitly stated hypotheses, EFA proves to be helpless. On the other hand Confirmatory factor

Table 3: Comparison of Cronbach's alpha of revised Scale with CSI

Revised CSI			Sproles and Kendall's CSI	
Factor	Number of Items	Cronbach's alpha	Number of Items	Cronbach's alpha
Factor 1: Recreational/Hedonistic	3	0.84	5	0.76
Factor 2: Confused by over choice	3	0.68	4	0.55
Factor 3: Brand Consciousness	3	0.66	7	0.75
Factor 4: Perfectionist high quality consciousness	2	0.66	8	0.74
Factor 5: Price value consciousness	2	0.65	3	0.48
Factor 6: Habitual Brand loyal Consumer	2	0.58	4	0.53

analysis (CFA) is theory or hypothesis driven. With CFA it is possible to place substantively meaningful constraints on the factor model. Researchers can specify the number of factors or set the effect of one latent variable on observed variables to particular values. CFA allows researchers to test hypotheses about a particular factor structure.

In CFA, the planning of the analysis is driven by the theoretical relationships among the observed and unobserved variables. When a CFA is conducted, the researcher uses a hypothesized model to estimate a population covariance matrix that is compared with the observed covariance matrix. Technically, the researcher wants to minimize the difference between the estimated and observed matrices.

Confirmatory factor analysis was conducted using Analysis of Moment Structure (AMOS) software for establishing the consumer decision making styles of Indian teenagers. The measurement model fit with the data was checked with model fit indexes.

Items with loadings of 0.5 and above (Hair, Black, Babin and Anderson, 2010) in the rotated component matrix were carried forward to the CFA stage. CFA was performed to determine the appropriateness of the six factor CDMS EFA result. The model was recursive. The notes for the model indicated that minimum was achieved (Chi Square =155.889, df =75, p =.000). If the appropriate distributional assumptions are met and if the specified model is correct, then the value is the approximate probability of getting a chi-square statistic as large as

the chi-square statistic obtained from the current set of data. The factor loadings are listed as regression weights in the maximum likelihood estimates. Maximum likelihood estimates were calculated from the covariance matrix and model fit indexes were computed.

The measurement model validity was assessed by overall Chi-square, P-value, absolute fit measures-Goodness-of-fit index (GFI), Root mean square error of approximation (RMSEA), Standardised root mean residual (SRMR) and Incremental fit indices-Comparative fit index (CFI). Since this model was not compared with another, the Parsimony Fit indices were not reported (Table 4).

The reliability of the experiment was confirmed by test-retest. The data set was split into two equal halves of 608 respondents each. The CFA model fit indexes of first half and second half were found to be very close (Table 4).

Construct Validity

Based on the final model the construct validity was tested in terms of convergent and discriminant validity (Hair, Black, Babin and Anderson, 2010). The construct validity is the extent to which the measured items reflect the latent constructs that those items are designed to measure. Convergent validity indicates that the items of a particular construct should converge or share a high proportion of variance in common. The convergent validity was tested by several methods, including factor loadings; average variance extracted and

Table 4: CFA Model Fit Parameters

	No. of Respondent s	CMIN/DF	DF	GFI	CFI	RMSEA	SRMR
CDMS	1216	2.079	75	0.983	0.977	0.03	0.031
First Half CDMS	608	1.577	75	0.974	0.976	0.031	0.038
Second Half CDMS	608	2.022	75	0.968	0.958	0.041	0.039
Good Fit criterion: 0.97 CFI 1.00, 0 SRMR 0.05, 0.95 GFI 1.00, 0 RMSEA 0.05							
Acceptable Fit: 0.95 CFI 0.97, 0.5 SRMR 0.1, 0.90 GFI 0.95, 0.5 RMSEA 0.08							

construct reliability. Discriminant validity refers to the extent to which a construct is truly distinct from other constructs. This was tested by comparing the variance extracted values for a construct with the squared inter construct correlation associated with that construct (Fornell and Larcker, 1981). Further if there are no cross loadings between the constructs discriminant validity is established, indicating that one individual measured item should represent only one latent construct (Hair, Black, Babin and Anderson, 2010). Face validity was not tested as this scale is an already well established in other countries.

Factor loadings

The standardised factor loadings for construct validity should be at least 0.5 (Hair, Black, Babin and Anderson, 2010). In the revised scale all the standardised factor loadings were found to be above 0.5 except item 3.2 in perfectionist high quality conscious and item 6.2 in habitual brand loyal consumer were below the accepted level. However the factor loading estimates for 3.2 and 6.2 were significant at 0.01 level. These items were retained in the scale as they were considered to be important indicators. Moreover, further removal of items would lead to too few items (less than two per construct) and model identification problems may arise (Table 5).

Average Variance Extracted and Composite Reliability

The Average Variance Extracted (AVE) and Composite Reliability (CR) were calculated manually by formulas given by Fornell and Lackers (1981) using Microsoft excel. The average variance extracted should be 0.5 and above for adequate convergent validity. The composite reliability should exceed 0.7 for adequate construct/ composite reliability (Hair, Black, Babin and Anderson, 2010). The AVE and CR of all the factors were found to be within range (Table 5). This indicates good reliabilities among the items to measure the constructs or factors.

Discriminant validity

The discriminant validity was determined as the variance extracted value of the constructs exceeded the squared inter-construct correlations associated with other constructs. The correlation estimates were squared and found to be less than the AVE value (Table 6). Moreover the measurement model did not contain any cross loading among the measured variables, thus proving Discriminant validity.

Table 1: Summary Statistics on Sample

Factor and items	Standardised Factor loading	AVE	CR
Factor 1: Recreational/Hedonistic (rec)		0.754	0.901
Item 5.1	0.771		
Item 5.2	0.852		
Item 5.3	0.862		
Factor 2: Confused by over choice		0.601	0.819
Item 7.1	0.613		
Item 7.2	0.704		
Item 7.3	0.613		
Factor 3: Brand Consciousness		0.570	0.799
Item 1.2	0.566		
Item 1.3	0.689		
Item 1.4	0.633		
Factor 4: Perfectionist high quality consciousness		0.698	0.822
Item 3.1	0.652		
Item 3.2	0.137		
Factor 5: Price value consciousness		0.714	0.833
Item 4.1	0.705		
Item 4.2	0.685		
Factor 6: Habitual Brand loyal Consumer		0.681	0.810
Item 6.1	0.818		
Item 6.2	0.497		

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Table 6: Discriminant validity of constructs

Squared inter construct correlations						
	Rec	Cboc	brmd	phq	Pvc	Hbl
rec	1	0.0005	0.0237	0.078	0.0228	0.0114
cboc		1	0.024	0.0441	0.0547	0.0015
brmd			1	0.3588	0.0368	0.119
phq				1	0.0056	0.064
pvc					1	0.077
hbl						1

The results indicate that the measurement model had adequate reliability and validity. This led to proving the hypothesis H1: 'The latent constructs of CDMS of Indian teenagers are different from the original eight factor Sproles and Kendall's (1986) CDMS' to be true. Further the revised and validated CSI has proved to be a better measuring tool for assessing the consumer decision making styles of Indian teenagers.

CONCLUSIONS AND DIRECTIONS FOR FUTURE RESEARCH

To conclude, this research identifies six constructs (Recreational/Hedonistic, Confused by over choice, Brand Consciousness, Perfectionist high quality Consciousness, Price value consciousness, and Habitual Brand loyal Consumer) of consumer decision making styles in the context of Indian teenagers which are different from the eight constructs of original Sproles and Kendall's (1986). Thus proving that generalisation of the consumer decision making styles across different cultures can be misleading. Marketers focusing on this segment would need to devise separate strategies for different segments and countries. Future research should be conducted in identifying CDMS of different product categories.

There is a need to replicate the study in other parts of the country in order to gain an insight into the behaviour of these young consumers. Additional qualitative research may prove to be useful in

exploring other influencers which may not have been anticipated. In this paper EFA, CFA and SEM have been used for analysing the data. Although these methods provide reliable results, other methods could have been explored. The use of AMOS puts a constraint that only reflective constructs can be measured. India is a vast country and to make generalisation on the basis of urban population alone may not be appropriate. A comparative study of urban and rural teenagers would provide useful insights.

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