

# Sources of Occupational Stress among Doctors in Government Hospital: A Study of District Kota, Rajasthan

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To examine the prevalence of occupational stress and to determine the sources of occupational stress among the Doctors working at Government Hospitals in Kota City, Rajasthan. The study is largely empirical in approach in which descriptive analytical research design was used to answer the research questions. A random sample of 111 registered doctors practicing allopath was collected using a self-administered questionnaire from Government Hospitals of Kota City. The analysis consists of demographic variables of the respondents, averages, percentage analysis, Sandler's A-Test and Rank Sum Order method. The significance level used for the inferential statistics was 0.05. The analysis indicated that about 70% of Government doctors were agreed that they feel occupational stress. However the result showed that there was no significant difference in the perception of doctors regarding prevalence of stress due to gender, age and experience. Results also revealed that doctors expressed high degree of agreement for the presence of sources of stress especially Role Overload, Resource Inadequacy, Role Expectation Conflict, Self Role Distance, Inter Role Distance and Role Stagnation. The prevalence of occupational-stress among the doctors belonging Government hospitals seems to be high. This was due to the sources especially Role Overload, Resource Inadequacy, Role Expectation Conflict, Self Role Distance, Inter Role Distance and Role Stagnation.

**Keywords:** occupational stress, sources of stress, role stressors, doctors

## Introduction

Stress, in general, and occupational role stress, in particular, is a fact of modern day life that seems to have been on the increase. The topic is, therefore, still popular, academicians, practitioners, administrators and researchers have always been interested in studying this problem as it directly affects the efficiency of the employee.

Today, health sector is one of the most stressful professions and pointed out the necessity of considering and investigating occupational stress, since performance declines under stressful situations. The current turbulent environment in the health care field requires doctors and organizations to reexamine their practices. Medicine is an inherently stressful profession with long working hours, ethical dilemmas, difficult patients and conflicting demands. Professionally, in true sense the doctors are on 24 hours duty. In addition to the issues of increased accountability and decreased

autonomy, authority, and control, the overall enlarged complexity of the healthcare environment is affecting doctors' ability to manage the art and practice of providing patient care.

The physical and psychological demands of the profession often make physicians more vulnerable to high levels of stress. All of these factors contribute to increasing levels of frustration, burnout, anger and stress. The effects of stress on practice are evidenced as increased errors in prescribing, limited team working, more patients' complaints and sickness absence.

Work related stress has been implicated as a major contributing factor to growing job dissatisfaction among doctors. It has been found that occupational stress impacts not only on doctor's health but also their abilities to cope with job demands. This will seriously impair the provision of quality health care and the efficacy of health service delivery.

So, an effort is needed for analyzing and removing these issues on humanitarian grounds. This study is an attempt in this direction.

Accordingly this paper aims at achieving the following objectives:

- (1) Determine the sources of occupational stress in the Government hospitals in order to deal with the sources effectively.

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- (2) Determine the prevalence of occupational stress and influence of demographic variables (age, gender and experience) on it.
- (3) Develop appropriate recommendations to deal with Occupational -stress.

## Research Questions

This study aims at answering the following questions:

- (1) What are the significant sources of occupational stress in Government hospitals?
- (2) To what extent the level of occupational stress is influenced by the respondents' demographic variables (age, gender and experience)?

## Significance of the study

Over the years, a lot of research has been carried out in the realm of work place stress and it has been emphatically proven that intense or prolonged stress leads to a negative impact on one's mental and physical well being (Health & Safety Executive, 2001; Cooper et al, 2001). Even though a fair degree of stress may be felt in all occupations, some work places have been known to experience more stress compared to others.

Researchers have demonstrated the direct and indirect costs of stress (Matteson and Ivancevich, 1987). Due to its cost, the grave importance of a stress-free work life for an organization for creating and sustaining competitive advantage cannot be underestimated and the fact that employees are susceptible to high levels of stress cannot be overlooked. According to Kalia (2002), an estimate of The World Health Organization (WHO) Global Burden of Disease Survey shows that mental health disease, including stress-related disorders, will be the second leading cause of disabilities by the year 2020. A survey in 2007 by Associated Chamber of Commerce and Industry of India also revealed that job stress and mental fatigue is affecting the Indian employees ([www.assocham.org](http://www.assocham.org)). In such an environment, it becomes the responsibility of the employing organizations and the individual to identify the causes of stress at the workplace and make efforts to reduce them for the effectiveness and efficiency of the individual and the organization itself.

Doctors have been shown to have relatively high levels of occupational stress in comparison with other professionals. The fraction of doctors and other health professionals showing above threshold

levels of stress has stayed at around 28%, compared to 18% in the general working population (Firth-Cozens, 2003). Arguably, stress in medical professionals has potentially most serious consequences for the individual and the community. The doctor's role in the community is central, being the 'gatekeeper' to a wide range of medical provisions and services. The stress and strain in medical professionals is likely to affect their work performance, including the quality of patient consultations and prescribing, as well as adversely affect their own personal and family life.

Challenges like patient overload, loss of autonomy, loss of respect, lower reimbursements, and bureaucratic red tape create a hostile environment for medical professionals that are so intense that three-fourths of doctors report having stress-related problems. Symptoms like fatigue, emotional burnout, marital and family discord, and even clinical depression regularly afflict more than half of doctors. The problems are so pervasive that 60% of doctors report having considered leaving the medical profession (Grenmy 2006).

The significance of this study emerges from the fact that the quality of health care can be extremely influenced by the stressed health staff (Firth-Cozens, 1998:1335). The World Health Organization (WHO) called work stress as "world -wide epidemic". Such important facts about stress show that excessive stress has costs to both the organization and the employees. This reflects the significance of conducting this study.

## Literature Review

### *The concept and definition of stress*

Stress is a complex phenomenon. It is very subjective experience. A situation may be a challenge for one will be a stressor for another. It depends largely on background experiences, temperament and environmental conditions. Stress is a part of life and is generated by constantly changing situations that a person has to face. It refers to an internal state, which results from frustrating or unsatisfying conditions. A certain level of stress is unavoidable. Because of its complex nature stress has been studied for many years by researchers in psychology, sociology and medicine.

Defining stress is indeed a complex matter, which is the subject of different analyses and continuous debate among experts. Beyond the details of this debate, a general consensus can be reached about a definition of stress, which is



centered on the idea of a perceived imbalance in the interface between an individual, the environment and other individuals. When people are faced with demands from others or demands from the physical or psycho-social environment to which they feel unable to adequately respond, a reaction of the organism is activated to cope with the situation. The nature of this response depends upon a combination of different elements, including the extent of the demand, the personal characteristics and coping resources of the person, the constraints on the person in trying to cope and the support received from others.

Occupational stress can be defined as the harmful physical and emotional responses that occur when the requirements of the job do not match the capabilities, resources, or needs of the worker. Job stress can lead to poor health and even injury.

Stress is a part of fabric of life. Nothing can separate stress from human beings as is evident from various researches and studies. Stress can be managed but not be avoided. However, it is true that not all stress is negative; there is the positive side of stress (eustress) as well as the negative side of it (distress). Therefore, there is the reasonable degree of stress, which motivates some people to high performance, and there is the too much stress which causes low performance; the situation of no stress is impossible (Morgan, 1994:307-309).

## Sources of Occupational -stress

Previous researches revealed that there are many causes associated with Occupational -stress. The causes of Occupational stress are many and diverse for each individual. In addition, the causes of stress are difficult to analyze. Many studies on Occupational stress have shown that there is a diversity of organizational factors that are active in causing stress (Sutherland & Cooper, 2000). Copper et al. (1988 in Lu et al., 2003) identified six sources of stress at work: factors intrinsic to the job, management role, relationship with others, career and achievement, organizational structure and climate, and home/work interface. More simply, Antoniou et al. (2006) point that specific conditions that make jobs stressful can be categorized either as exogenous (i.e. unfavorable occupational conditions, excessive workload, lack of collaboration, etc.) or endogenous pressures (i.e. individual personality characteristics, etc.). When we add the complexity and turbulence of contemporary business environment and organizational life, altogether, causes of occupational stress can be grouped into two main groups: (1) occupational stressors, with three major subgroups environment specific, organization specific, and job specific stressors, and (2) individual-related stressors, which can be due to individual characteristics or a consequence of individual life circumstances. Further, Role stress can also be termed as a significant source of stress.

### Occupational stressors

Environment specific	Organization specific	Job specific
Economic conditions	Changes within organization	Poor fit between abilities and skills needed to perform job effectively
Increased levels of competition	Reorganizations	Work overload
Market changes	Layoffs	Work pace
Technological development	Organizational structure	Pressure to work longer hours
Changes in production and products	Organizational culture/climate	Job characteristics
New forms of organization and product development	Mergers, acquisitions and similar changes of company ownership	Conflicting job demands
Drive for greater cost-effectiveness	Workforce diversity	Unclear job expectations
Multinationals	Reward systems	Pressures of responsibility
General public concern for the environment, etc.	Promotion policies	Time pressures
	Job security	Lack of resources to perform job
	Leadership style	Lack of information
	Fear of redundancy, early retirement and short term contracts	Lack of collaboration
	Concern about knowledge and/or skills becoming obsolete	Relations with subordinates, coworkers and superiors
	More training needed, etc.	Working conditions
		Physical danger
		Shift work, repetitive work, unsocial hours
		Insufficient training, etc.

## Individual-related stressors

Individual characteristics	Individual life circumstances
Personality traits	Work/life conflict
Demographic characteristics like age, gender, marital status, etc.	Family problems
Coping skills, etc.	Personal problems
	Social problems
	Financial crisis, etc.

## Role Stressors

The ten variables of role stressors taken for research are as follows:

1. **Inter-Role Distance (IRD):** It is experienced when there is conflict between Organizational and non-organizational roles.
2. **Role Stagnation (RS):** It is feeling of being trapped in the same role.
3. **Role Expectation Conflict (REC):** It is generated due to expectations of different significant persons such as superiors, subordinates and peers about the same role and the role occupant's ambivalence as to whom to please.
4. **Role Erosion (RE):** It arises due to the role occupant's feeling that some functions, which should properly belong to his/her role, are transferred to/or performed by some other role occupants.
5. **Role Overload (RO):** When the role occupant feels that there are too many expectations from his/her role.
6. **Role Isolation (RI):** It arises due to the psychological distant between the occupant's Role and other roles in the same role set.
7. **Personal Inadequacy (PI):** It arises when the role occupant feels that he/she does not have the necessary skills and training for effectively performing the functions expected from his/her role.
8. **Self-role Distance (SRD):** When the role the person occupies goes against his/her self-concept.
9. **Role Ambiguity (RA):** It refers to the lack of clarity about the expectations of the role.
10. **Resource Inadequacy (RIn):** It is evident when the role occupant feels that he/she is not facilitated with adequate resources for performing the functions expected from his/her role.

According to some researchers, causes of work-stress may be found both within worker's

personality and within the work environment (Newman and Beehr, 1979:1-44; and Ratliff, 1988:148).

A British Medical Audit Advisory Group conducted a survey in 1993 on the 'Causes of Stress in GPs'. The causes identified were rank ordered as emergency calls during surgery hours, night calls, time pressure, working after a sleepless night, dealing with problem patients, worrying about patient complaints, interruption of family life, 24-hour responsibility for patients lives and unrealistically high expectations by others of the doctors role and partner on a holiday.

Porter et al. (1985), Rout & Rout (1993) found that the main sources of stress for doctors are: time pressure, interruptions, practice administration, dealing with problem patients and work/home conflict.

Pestonjee and Mishra (1999) revealed in their study on "Role Stress and Job Satisfaction amongst Doctors" that job satisfaction variables correlated negatively with all the dimensions of role stress in the case of both the groups i.e. seniors and juniors.

Therefore, revealing the sources of occupational stress will help reducing the undesirable effects of occupational-stress.

## Impact of stress on doctors

Several studies have shown that occupational stress can lead to various negative consequences for the individual and the workplace (Oginska-Bulik, 2006) in healthcare sector. Stress produces a range of undesirable, expensive, and debilitating consequences (Ross, 2005), which affect both individuals and hospitals. Early individual behavioral reactions may include onset or increased smoking and alcohol use. Individuals may tend to keep late nights in clinics/offices without accompanying increased productivity. While others might become irritable, some will tend to intense seclusion and individualism.



Many studies deal with the topic area sleep loss tiredness exhaustion work stress stress burnout. They mostly come to the same conclusion, that stress has a major influence in doctors working lives but also their personal lives. Stress and fatigue may result in increased insecurity in clinical decisions and may therefore negatively affect the ability to practice medicine adequately, responsibly, and without error. Firth-Cozens and Greenhalgh investigated in an anonymous survey among hospital doctors and general practitioners how important this association is in the participants' view. Of 225 doctors, 82 reported incidents in which they perceived stress symptoms as the cause for the incident. 50% of such incidents resulted in a loss in treatment standards; 7.4% were expressed in serious treatment errors, although actual death had been avoided.

The 'burnt out phenomenon', a terminology made popular by Felton consists of a triad of emotional exhaustion, depersonalization (treating patients and other people as if they were objects) and low productivity/achievements. It is particularly common in health professionals under stress. These invariably lead to 'impairment of health, grief and suffering'. It compromises the quality of care which may lead to litigation and a vicious cycle. In some cases it may lead to premature retirement due to physical and/or mental health. Premature death, even by suicide is a distinct possibility.

In view of the deleterious effects of uncontrolled stress on the physician, the patient and the public at large, definite steps are required to stem this tide and proffer solutions.

In summary, the extensive review of the literature done on causes and effects of occupational stress clearly indicates that the occupational stress, if not managed well and on time, can produce

devastating results both for the organization as well as for the employee, as it may lead to lower job satisfactions, low level of organizational commitment, absenteeism and high turnover.

## Methods

### Participants

This Survey was conducted in Government hospitals as well as Government dispensaries at Kota city. The study is largely empirical in approach in which scientific methodology was used to answer the research questions. A random sample of 111 registered doctors practicing allopath was collected from Government Hospitals of Kota City. The chosen hospitals were in different areas of Kota city and named as follows: MBS hospital, Medical College, JK Loan hospital, ESI hospital, Dispensaries at Rampura, Dadabari and Talwandi.

### The instrument

For the purpose of this study following instruments and methodology were used.

- Self administered questionnaires, both scale and open-ended questions.
- Five-point Likert type numerical scale ranging from Strongly Disagree to Strongly Agree.
- A variety of statistical analyses has been applied to the data, including Percentage analysis, Averages, Rank Sum Order method, Sandler's A-Test.

### Data Analysis

This section of the study focuses on data analysis. The analysis consists of demographic variables of the respondents, averages, percentage analysis, Sandler's A-Test and Rank Sum Order method.

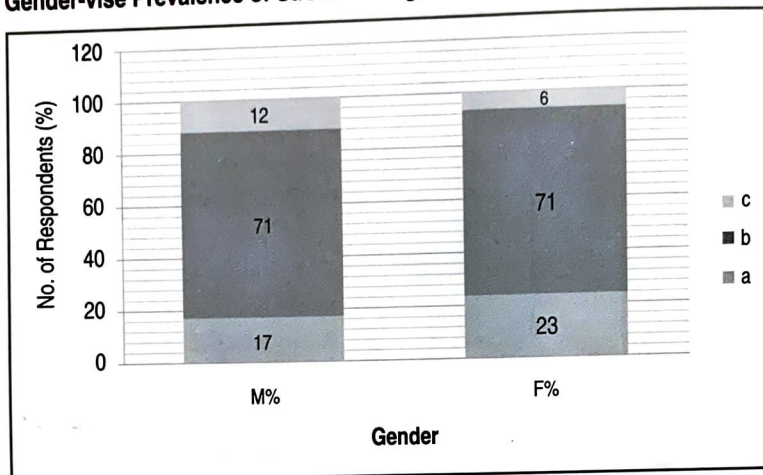
**Table 1 : Profile of respondents**

Variable	Structure (%)
Gender	Male (68.47%), Female (31.53%)
Age	Below 30 years (27.02%), 30-35 years (22.52%), 36-40 years (17.12%), 41-45 years (13.51%), 46-50 years (9.91%), 51-55 years (6.31), over 55 years (3.61%)
Marital status	Unmarried (18.02%), Married (81.98%)
Experience	Less than 5 years (35.13%), 5 to 10 years (20.72%), 11-15 years (19.82%), 16-20 years (9.01%), 21-25 years (6.31%), more than 25 years (9.01%)

**Table-2 : Gender-wise responses of doctors towards prevalence of stress (in percentage)**

Option	Male	Female
Often	17	23
Sometimes	71	71
Never	12	6

**Gender-wise Prevalence of Stress among Doctors (in %)**



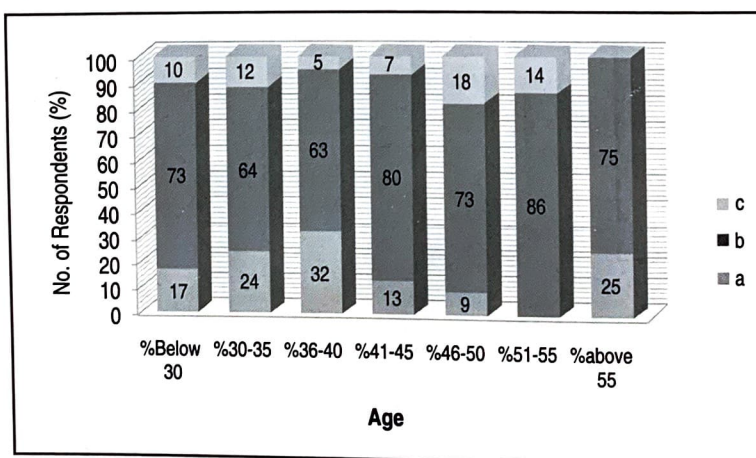
**Figure-1**

From the above figure it could be interpreted that the doctors feeling stress often are more of female doctors as compared to male doctors. However there is no such significant difference in the prevalence of stress between both the groups.

**Table-3 : Age-wise responses of doctors towards prevalence of stress (in percentage)**

Option	Below 30yrs	30-35 yrs	36-40 yrs	41-45 yrs	46-50 yrs	51-55 yrs	above 55 yrs
Often	17	24	32	13	9		25
Sometimes	73	64	63	80	73	86	75
Never	10	12	5	7	18	14	

**Age-wise prevalence of stress among doctors (in %)**



**Figure-2**

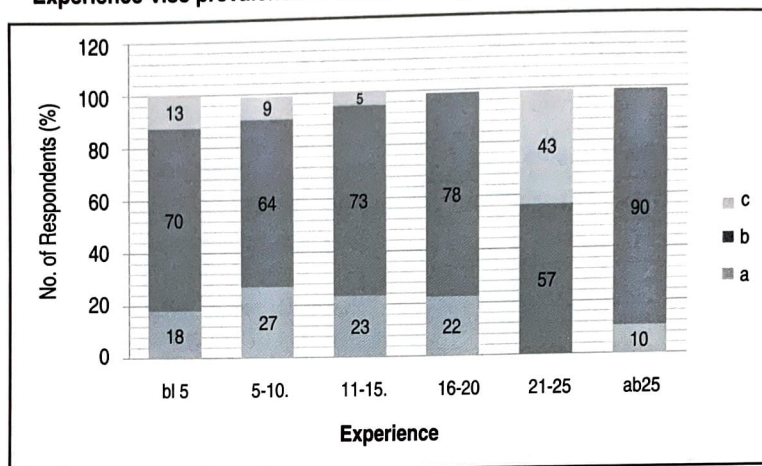
This figure revealed that 32% doctors in age group 36-40 years feel stress often which is the maximum among all age groups. However, here also there is no such significant difference in the perception regarding prevalence of stress among doctors belonging to different age groups.



**Table-4 : Experience-wise responses of doctors towards prevalence of stress in percentage**

Option	below 5yrs	5-10yrs	11-15yrs	16-20 yrs	21-25yrs	Above 25yrs
Often	18	27	23	22		10
Sometimes	70	64	73	78	57	90
Never	13	9	5		43	

**Experience-wise prevalence of stress among doctors (in %)**



**Figure-3**

This figure showed that 43% doctors having experience of 21-25 years never feel stress which is the maximum among all age groups but that may be due to random sampling because only 6.31% doctors fall in this group. Therefore, here also there is no such significant difference in the perception regarding prevalence of stress among doctors belonging to different experience groups.

**Table-5 : Responses of doctors towards prevalence of stress**

	No. of Doctors and Total Score Points						Avg. Score Points		Difference D=P1-P2	D2
	Male		Female		Total		Male P1	Female P2		
Often(3)	13	39	8	24	21	63	0.51	0.69	-0.18	0.0324
Sometimes(2)	54	108	25	50	79	158	1.42	1.43	-0.01	0.0001
Never(1)	9	9	2	2	11	11	0.12	0.06	0.06	0.0036
<b>Total</b>	76	156	35	76	111	232	2.05	2.18	-0.13	0.0361

The average score of all the doctors for their agreement to the prevalence of stress was 2.09 on a three point scale which denoted approximately 70% agreement for their feeling of stress.

$$\text{Sandler's A-Statistics} = 0.0361 / (-0.13)^2 = 2.14$$

Table Value f A-Statistics=0.369 at 5% level of significance for 2 degree of freedom (3-1). The calculated value is much more than the table value which implied that there has been no difference between the perception regarding prevalence of stress among male and female doctors. In the same way it could also be inferred that there were no difference among the level of stress on the basis of different age groups and experience groups.

**Table-6 : Responses of Government Doctors towards Role Stressors on a five point scale**

Level of agreement	IRD	RS	REC	RE	RO	RI	PI	SRD	RA	RIn
SA(5)	240	235	180	135	290	58	61	150	115	146
A(4)	500	460	588	336	520	336	238	560	416	378
UD(3)	78	72	138	141	93	93	78	168	162	156
DA(2)	192	216	174	266	190	200	242	174	256	294
SDA(1)	38	39	17	42	19	21	99	20	24	130
<b>Total</b>	<b>1048</b>	<b>1022</b>	<b>1097</b>	<b>920</b>	<b>1112</b>	<b>708</b>	<b>718</b>	<b>1072</b>	<b>973</b>	<b>1104</b>

**Table-7 : Relative ranks of all the ten stressors**

Role Stressors	Average Scores	Relative Ranks
IRD	3.15	5
RS	3.07	6
REC	3.29	3
RE	2.76	8
RO	3.34	1
RI	2.13	10
PI	2.16	9
SRD	3.22	4
RA	2.92	7
RIn	3.32	2
<b>Total</b>	<b>29.36</b>	

$$\begin{aligned} \text{Overall Average Score} &= \text{Average Score}/10 \\ &= 29.36/10 \\ &= 2.94 \end{aligned}$$

It indicates 58.8% degree of agreement of Government Doctors. The average score of stressors RE, RI, PI and RA recorded less than 2.94 while other stressors recorded above 2.94. From this analysis, it could be inferred that Government doctors expressed high degree of agreement especially for RO, RIn, REC, SRD, IRD and RS and these stressors were found relevant for planning stress prevention strategies in hospitals.

## Conclusion

Overall, the main finding is that majority of Government Doctors agree significantly that they experienced occupational-stress. It also supports the assumption that health sector employees are among the highest groups subjected to work stress. Results also indicated that prevalence of occupational-stress was not influenced by gender,

age and experience of the employee. From this analysis, it could also be inferred that Government doctors expressed high degree of agreement especially for RO, RIn, REC, SRD, IRD and RS and these stressors were found relevant for planning stress prevention strategies in hospitals. Thus the policy makers must pay the attention towards the issue of occupational stress through problem recognition and problem-solving activities to deal with the sources of stress so that effective and efficient performance can be made ensured.

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