Organizational Role Stress among Health Care Professionals in Mumbai (India)

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Abstract: - **Objectives: To determine sources of role stress among Health Care Professionals, examine the stress levels among Male and Female Health Care Professionals working in government hospitals**

Methodology: One hundred and thirty four (134) questionnaires were distributed to the Health Care Professionals(HCP) and one hundred and twenty (120) duly completed questionnaires were received. Non probability (Judgment) sampling method was used to select the sampled units within the government hospital for study. Statistical treatment included Factor analysis and t-test.

Results: The factors causing role stress among Health Care Professionals is: (1) Inter-role distance (2) Role Stagnation (3) Role expectation conflict (4) Role Erosion (5) Role Overload (6) Role Isolation (7) Personal Inadequacy, (8) Self-role distance,(9) Role ambiguity and (10) Role Inadequacy. Inter-role distance shows 50 percent variance which was found to be a significant factor causing stress among the Health Care Professionals. t-test indicated that there was no significant difference between the stress levels among male and female HCP's

Conclusions: The study showed that Inter-role distance is most significant source or factor causing role stress among the Health Care Professionals working in the government hospital.

Keywords : Organizational Role Stress, Government Hospital, Health Care Professionals (HCP), Mumbai

I. INTRODUCTION

Stress is an inevitable part of our life. Academicians, practitioners, administrators, and researchers have always been interested in studying this problem as it directly affects the efficiency of the employee. An optimum amount of stress is required for an optimum performance. The present study was undertaken Government hospital of Mumbai, India which are 50 years old, The hospital has bed strength of 300+ and there are 40+ faculty members and 50+ senior residents/demonstrators.

Job stress has been defined as the non-specific response of the body to any demands made upon it (Selye, 1976)[32]. Robbins (2001)[29] defines stress as a dynamic condition in which the individual is confronted with an opportunity, constraint, or demand related to what he or she desires and for which the outcome is perceived to be both uncertain and important[6].

Organizational based factors have been known to induce job stress for employees at the workplace (Greenhaus and Beutell, 1985) [16]. These factors are termed as organizational stressors since they serve as agents that trigger various stress reactions (Van Onciul, 1996)[35].

Factors making General Practitioners (GPs) more vulnerable to stress can be analyzed from individual and organizational perspective. In the past studies, at the individual level sources of psychosocial stress were mentioned age, gender, and marital status. At organizational level – workplace location, type of practice, job demands, and decision latitude were considered as sources of psychosocial stress.

Work related stress has been implicated as a major contributing factor to growing job dissatisfaction among HCP. It has been found that work 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.

1.1 Conceptual Framework of Role

Role is the position one occupies in the system and is defined by the functions one performs in response to the expectations of the significant members of a social system, and one's own expectations from that position or office.

A role is not defined without the expectations of the role senders, including the role occupant. The position of a Human Resource Manager may be created in an organization,

but his role will be defined by the expectations (stated or unstated) that different persons have from the Human resource manager, and the expectations that he, in turn, has from the role. In this sense, the role gets defined in each system by the role senders, including the role occupant. The concept of role and the two role systems (Role Space and Role set) have built-in potential for conflict and stress (Pareek, 2002) [26].

1.1.1 Role Space Conflicts

Role space is the dynamic relationship between the various roles and individual occupies and his self. It has three main variables; self, the role under question and the other roles he occupies. Any conflict among these is referred to as role space conflict or stress. These conflicts may take several forms.

Self-Role distance: This stress arises out of the conflict between the self-concept and the expectations from the role, as perceived by the role occupant. If a person occupies a role that he may subsequently find to be conflicting with the self-concept, he feels stressed.

Intra-role Conflict: Since an individual learns to develop expectations because of his socializing and identification with significant others, it is quite likely that he sees a certain incompatibility between the different expectations (functions) of his role. For example, a professor may see incompatibility between the expectations of teaching students and of doing research. These may not be inherently conflicting, but the individual may perceive these as incompatible.

Role Stagnation: As an individual grows older, he also grows in the role that he occupies in an organization. With the individual's advancement, the role changes; and with his change in role, the need for taking on a new role becomes crucial. This problem of role growth becomes acute especially when an individual who has occupied a role for a long time enters another role in which he feels less secure. The new role demands that an individual outgrows the previous one and takes charge of new the role effectively. This is bound to produce some stress. In organizations that are fast expanding, and which do not have any systematic strategy of human resource development, managers are likely to experience this stress of role stagnation when they are promoted.

Inter-role distance: When an individual occupies more than one role there are bound to be conflicts between them. For example, a lady executive often faces a conflict between her organizational role as an executive and her familial role as a wife and mother. The demands on her time by husband and children may be incompatible with organizational demands. Such inter-role conflicts are quite frequent in a modern society, where an individual is increasingly occupying multiple roles in various organizations and groups.

1.1.2 Role Set Conflicts

The role set consists of important persons who have varying expectations from the role that an individual occupies. The conflicts which arise because of incompatibility among these expectations by the significant others (and by the individual himself) are referred to as role sets.

Role Ambiguity: When an individual is not clear about the various expectations that people have from his role, he faces role ambiguity. Role ambiguity may be due to lack of information available to a role occupant, or his lack of understanding of the cues available to him. Role ambiguity may be in relation to activities, responsibilities, priorities, norms, or general expectations. Generally, role ambiguity is experienced by persons occupying roles that are newly created in organizations, roles that are undergoing change, or process roles (with less clear and less concrete activities).

Role expectation Conflict: When there are conflicting expectations or demands by different roles senders (persons having expectations from the role), the role occupant experiences this type of stress. The conflicting expectations may be from the boss, subordinates, peers, or clients.

Role Overload: When a role occupant feels that there are too many expectations from the significant others in his role set, he experiences role overload. Role overload has been measured by asking questions about people's feelings on whether they can finish work given to them during a modified workday and whether the amount of work they do interfere with how well it is done. Most executive role occupants experience role overload. Role overload is more likely to occur where role occupants lack power, where there are large variations in the expected output, and when delegation or assistance cannot procure more time.

Role Erosion: A role occupant may feel that the functions he would like to perform are being done by some other role. Role erosion is the individual's subjective feeling that some important expectations that he has from a role are shared by other roles within the role set. Role erosion is likely to be experienced in an organization that is redefining its role and creating new roles. Studies indicate that in several such organizations the stress of role erosion was inevitably felt. In one organization, a particular role was abolished and in its place two were created to cater to executive and planning needs. This led to great erosion, and a feeling that the new roles were less important than the previous role.

Resource Inadequacy: Resource inadequacy stress is experienced when the resources required by a role occupant for performing his role is effectively not available. Resources may include information, people, material, finance, or

facilities.

Personal Inadequacy: When a role occupant feels that he does not have enough knowledge, skills or training to undertake a role effectively, or that he has not had time to prepare for the assigned role he may experience stress. Persons who are assigned new roles without adequate preparation or orientation are likely to experience feelings of personal inadequacy.

7. Role Isolation: In a role set, the role occupant may feel that certain roles are psychologically closer to him, while others are at a much greater distance. The main criterion of distance is the frequency and ease of interaction. When linkages are strong, the isolation will be low and vice versa. Role isolation can therefore be measured in terms of existing and the desired linkages. The gap between them indicates the amount of role isolation.

The present study aims to investigate the factors causing stress among HCP in Government Hospitals of Mumbai, and examines the stress levels among male and female Health Care Professionals working in the hospital.

To the best of our knowledge, there is a paucity of Indian work in this field which is another major reason to undertake this study.

II. REVIEW OF LITERATURE

Work stress is increasingly recognized as one of the most serious occupational health hazards reducing workers satisfaction and productivity, and increasing absenteeism and turnover (Gianakos, 2001) [13]. Hospital staff in particular is subject to work related stress simply because they are severely challenged by their rapidly changing environment. (Al-Aameri, 2005)[2]. Previous studies have revealed positive association between work stress and the number of errors. (Perry et al, 2000) [27]. In UK more GPs experienced poorer mental health, more dissatisfaction and higher stress level in 1993 than 1987 (Kirwan and Armstrong 1995 [19]; Rout and Rout, 1994 [22] [31]). 25 percent to 50 percent of the British National Health Service's staff reported distress suffering (Weinberg and Creek, 2000). Therefore, many reports suggested that stress among physicians, nurses and other health professionals is high (Caplan, 1994[5]; Graham et al, 1996; Al-Aameri and Al-Fawzan, 1998)[1].

The quality of health care can be extremely influenced by the stressed health staff (Firth- Cozens, 1998) [10]. In fact, there is an ongoing concern in the UK, about the mental health of the practitioners (Ramirez et al, 1996)[14] [28]. Such mental problems make health staff in general and doctors susceptible to more physical and emotional morbidity (Gautam, 2001) [12] which in turn needs careful consideration. The World Health Organization (WHO) called

work stress as a "worldwide epidemic". Such important facts about stress show that excessive stress has costs to both the organization and the employees. In fact, stress and burnout are sometimes conceived among the organizational behavior concerns (DuBrin, 1984) [9].

Previous research revealed that there were many causes correlated to work stress found within worker personality and within the work environment (Newman and Beehr, 1979) [24]. A study conducted on 1133 consultants working in the UK, reported that work overload and influenced home life; poor administration and resources; administrative responsibilities assumed; and dealing with patients' pain were perceived as sources of stress. In addition, lack of clear direction concerning the organizational goals was found to be among the significant causes of work stress (Murphy, 1987)[23]. Role ambiguity, role conflict and clarity of organizational roles were also found to be of significant relationship with work stress among 433 employees of seven Kuwaiti governmental sectors (Al-Fadli, 1999)[3]. Role ambiguity and role conflict were also correlated with work stress among 50 emergency doctors working in nine hospitals of the northern areas of Jordan (Nusair and Deibageh, 1997) [25] [30]. A study conducted on 333 doctors in Scotland indicated that higher clinical workloads were related to higher stress (Deary et al 1996) [7][8] Responsibility for others and career development were found to be of significant relationship with work stress among doctors (Nusair and Deibageh, 1997) [25].

It is known that work can be an exciting source of challenge, where potentials and capabilities of the self are discovered and utilized. This positive stress perspective has been termed as "Eustress" (Mesler, 1994)[21]. Yet work is more commonly indicated as one of the most universal and intense kinds of "Distress". Distress is viewed as a malady, needing treatment.

The nature of hospital job was also found to be a source of stress; the fact that the employee may deal with communicable disease patients causes a threat to the employee health.

Based on the review of literature we are of the opinion that stress always affects the efficiency and performance of the Health Care Professionals working in hospitals. Academicians, researchers, administrators, and consultants have identified several factors responsible for role stress among HCP.

III. METHODOLOGY

The methodology includes research design, population and sample, data collection and data analysis process are outlined. Methodology is the total strategy for the study, and it starts from the identification of the problem to the final

plans of for the data collection.

3.1.Need of the Study

In the context of the present study, little research has been conducted to investigate the organizational role stress experienced by Health Care Professionals in a developing country like India. India comprises of about 35% population who are below poverty line, and it is this part of the population who approach government hospitals for their medical treatment because they cannot afford to get the expensive treatment done in a private hospital.

Our study involves 5 government hospitals of Mumbai city. A normal day of a Health Care Professionals in this hospital starts with attending patients in the OPD (in case of physicians) or performing surgery in the operation theatre (in case of a surgeon), then visiting the wards, taking lectures, guidance to doctoral students and research, attending emergency cases and working for long hours. Besides these activities, he/she has administrative duties and family responsibilities to perform as well. Moreover, this govt. job prohibits private practice which may also be a cause of dissatisfaction among the Health Care Professionals.

This proliferation of roles that the HCP must undertake during their everyday educational and clinical practice lead to stress which has become an inherent feature of the work life of the Health Care Professionals s and growing evidence suggest that it may increase in severity. Medical knowledge is increasing exponentially, the disease patterns are changing, the approach to health care delivery and medical education is shifting and professional roles and boundaries are being modified.

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

To the best of our knowledge there is a paucity of Indian work in this field which is another reason to undertake this study.

3.2 Objectives of the Study

To determine the factors causing role stress among Health Care Professionals working in Government Hospitals of Mumbai

To examine the stress levels among male and female Health Care Professionals working in the Government hospital.

In the present study the population consisted of HCP's in all of the units/wards/departments at Government Hospital [15]. The respondents were scattered in all units/ wards/ departments already stated at government hospital. Because

the nature of work of the HCP's it made difficult to conduct face interviews and a questionnaire was ideal as the respondents used their own time and pace to complete the questionnaire. Judgment sampling was used for the selection of the doctors which was found to be a convenient and economical method.

One hundred and thirty-four (134) questionnaires were distributed to the HCPs and one hundred and twenty (120) duly completed questionnaires were received. This means that about 89% of the questionnaires (duly completed) were returned. The respondents comprised of 68 (56.7%) male and 52 (43.3%) female Health Care Professional's.

The Organizational Role Stress scale - ORS (Pareek,2002) [26] was used as a tool to measure 10 role stresses, i.e., self-role distance, inter-role distance, role stagnation, role isolation, role ambiguity, role expectation conflict, role overload, role erosion, resource inadequacy and personal inadequacy. ORS is a 5-point scale (0 to 4), containing five items for each role stress and a total of 50 statements.

IV. Results & Discussion

4.1 Results

It may be mentioned that the data collected has been analyzed by using the software package SPSS (Statistical package for social sciences) with the help of Factor Analysis.

A useful statistic is the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy. This index compares the magnitudes of the observed correlation coefficients to the magnitudes of the partial correlation coefficients. Generally, a value greater than 0.5 is desirable. In this case, the KMO measure is 0.855 (as shown in table 1) which indicates that the correlations between pairs of variables can be explained by other variables and that factor analysis is an appropriate test for the present study.

Table 1:ORS KMO and Barlett's Test

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.855
Bartlett's Test of Sphericity	Approx. Chi-Square	602.165
	df	45
	Sig.	<.001

Once it was determined that factor analysis is an appropriate technique for analyzing the data, the method of - Principal Component Analysis was applied. Principal Component Approach considers the total variance in the data

and the factors are called principal components/Components in this case

Scale Reliability

The reliability statistics, as shown in table 3 gives the value of the Cronbach's alpha coefficient and the number of items selected for the scale.

Table 2: ORS Reliability statistics

Cronbach's Alpha	N of Items
0.88	50

The present study shows a Cronbach's alpha of 0.88 which indicates satisfactory internal consistency of the set of items

forming the ORS scale.

SPSS next shows the table titled Factor matrix/ Component matrix which gives the factor loadings before rotation is carried out. Factor loadings indicate the strength of relationship between a particular variable and a particular factor, in a way like a correlation. For each of the variables, a loading in each of the columns representing factors. The factor loadings in the component matrix are not easily interpretable. Because there are many variables with high loadings on more than one factor in the component matrix. Rotation of the matrix solves this problem as shown in the table 3 below.

Table 3: Showing the Rotated Component Matrix

Component→ Variables ↓	1	2	3	4	5	6	7	8	9	10
1	0.695	0.539	0.713	0.912	0.662	0.532	0.527	0.303	0.343	0.557
2	0.639	0.909	0.509	0.445	0.552	0.366	0.433	0.343	0.231	0.322
3	0.709	0.414	0.889	0.547	0.433	0.362	0.415	0.493	0.206	0.333
4	0.907	0.338	0.301	0.691	0.293	0.435	0.235	-0.303	0.221	0.213
5	-0.635	0.548	0.388	0.337	0.429	0.425	0.337	0.886	0.245	0.294
6	0.519	0.691	0.414	0.773	0.871	0.417	0.464	0.439	0.521	0.243
7	0.715	0.611	0.246	0.446	0.238	0.223	0.239	-0.306	0.831	0.388
8	0.898	0.557	0.317	0.384	0.476	0.331	0.841	0.442	0.223	0.204
9	0.291	0.205	0.212	0.293	0.218	0.305	0.305	0.452	0.264	0.736
10	0.216	0.297	0.281	0.265	0.316	0.851	0.213	0.544	0.215	0.221
Eigenvalues	5.06	1.41	0.72	0.62	0.51	0.47	0.41	0.37	0.22	0.21
% of Variance	50.65	14.08	7.18	6.16	5.14	4.74	4.13	3.65	2.18	2.09
Cumulative %	50.65	64.73	71.91	78.07	83.20	87.95	92.08	95.73	97.91	100.00

Table 3 shows the Rotated Factor/Component Matrix which has rotated loadings, the eigenvalues, % of variance and the cumulative percentages. For a good factor solution, a particular variable should load high on one factor and low on all other factors in the rotated component matrix. A cut off of 0.40 or 4+ to identify high loadings has been used in the

present study.

Frequency of Factor Loadings

The following table (table 4) gives the summary of the loadings, mentioning the frequency of loadings of 8+, 7+, 6+, 5+, 4+, 3+ , and 2+.

Table 4: showing the summary of Loadings of Factors of Role Stress

Factor- loadings→ Factors ↓	2+	3+	4+	5+	6+	7+	8+	9+	%of variance 100
1	2			1	2 (-1)	2	1	1	50.650
2	2	1	1	3	2			1	14.078
3	3	3	1	1		1	1		7.181
4	2	2	2	1	1	1		1	6.158
5	3	1	3	1	1		1		5.136

6	1	4	3	1			1		4.745
7	3	2	3	1			1		4.131
8		2(-2)	4	1			1		3.652
9	7	1		1			1		2.182
10	5	3		1		1			2.087

Factor 8: Self –Role Distance (SRD) 3% variance
Factor 9: Role Ambiguity (RA) 2% variance
Factor 10: Role Isolation (RI) 2% variance

Thus got the following factors for ORS scale:
Factor 1: Inter-role Distance (IRD) 50% variance ,
Factor 2: Role Stagnation (RS) 14%variance
Factor 3: Role Expectation Conflict (REC) 7% Variance
Factor 4: Role Erosion (RE) 6% variance
Factor 5: Role Overload (RO) 5% variance
Factor 6: Role Inadequacy (RI) 4% variance
Factor 7: Personal Inadequacy (PI) 4% variance

Comparison between Stress levels among Male and Female Doctors

The following table (table 6) below shows the means in stress levels among the male and female HCP's working in the hospital.

Table 6: Descriptive Analysis and T test of Male & Female HCP's

Variable	Gender	N	Mean	SD	Std. Error Mean	t Value	Sig
IRD	Female	52	6.44	3.51	0.49	-1.255	0.776
	Male	68	7.29	3.81	0.46		
RS	Female	52	7.90	4.46	0.62	2.585	0.175
	Male	68	6.00	3.61	0.44		
REC	Female	52	5.46	3.32	0.46	2.285	0.62
	Male	68	4.09	3.22	0.39		
RE	Female	52	7.19	3.62	0.50	0.294	0.107
	Male	68	6.97	4.41	0.53		
RO	Female	52	6.42	3.48	0.48	1.384	0.521
	Male	68	5.51	3.62	0.44		
RI	Female	52	5.69	3.42	0.47	0.693	0.717
	Male	68	5.22	3.89	0.47		
PI	Female	52	7.75	4.65	0.65	1.158	0.5
	Male	68	6.79	4.35	0.53		
SRD	Female	52	6.85	3.93	0.55	0.509	0.806
	Male	68	6.49	3.78	0.46		
RA	Female	52	5.81	4.45	0.62	1.106	0.294
	Male	68	4.97	3.83	0.46		
Rin	Female	52	5.75	3.35	0.47	0.144	0.332
	Male	68	5.65	4.25	0.51		
ORS	Female	52	65.27	28.71	3.98	1.245	0.665
	Male	68	58.99	26.35	3.20		

Hypothesis:
H0:   there is no significant difference between the stress levels among male and female HCP's working in the government hospital.

H1   there is a significant difference between the stress levels among male and female HCP's working in the government hospital.

It is evident from table 6 that there is no significant difference between the stress levels among the male and the female HCP's working in the government hospital

V. DISCUSSION

The focus of the present study was to investigate the factors causing stress among HCP's in a govt. hospital and comparison of the stress levels among the male and female HCP's working in the hospital.

Occupational stress is caused by workplace, individual and social factors, and it is recognized as one of the most pervasive and potent health hazards in the work environment. This is true in many workplaces, particularly the health care industry. An occupational stressor may be defined as any demand, physical or psychological, encountered while working. Work stressors are influenced by such personal characteristics as personality, value system, health, educational background, goal orientation and perception of job situation.

Work organization and job stress are topics of growing concern in the occupational safety and health field. The expressions "work organization" or "organization of work" refer to the nature of the work process (the way jobs are designed and performed) and to the organizational practices (e.g., management and production methods and accompanying human resource policies) that influence the design of jobs

The following factors were identified as factors causing role stress among HCP's (1) Inter-role distance (2) Role Stagnation (3) Role expectation conflict (4) Role Erosion (5) Role Overload (6) Role Isolation (7) Personal Inadequacy, (8) Self-role distance ,(9) Role ambiguity and (10) Role Inadequacy.

Inter-role distance was found to be the most significant factor causing role stress among the HCPs working in the government hospital. Inter-role distance describes situations in which employees occupies more than one role there are bound to be conflicts between them. (Pareek, 2002; Fisher, 1994) [11].: Such inter-role conflicts are quite frequent in a modern society, where an individual is increasingly occupying multiple roles in various organizations and groups. The HCP's experience the stress of Inter-role distance because they may not be able to give enough time to their family [34]. There exists a conflict in their organizational role and family role.

A British Medical Association (BMA) report (2000) [4] suggests that many senior HCPs suffer high levels of stress because of their work and that this impairs their health and compromises their ability to provide high quality care to patients[33]. The main sources of work related stress for consultants and GPs are excessive workloads, organizational changes, poor management and insufficient resources, dealing with patient suffering and mistakes, complaints, and litigation (Ramirez1996; McKevitt, Morgan&Simpson, 1995) [20].

Work-related stress has been implicated as a major contributing factor to growing job dissatisfaction among doctors [36]. It has been found that job stress impacts not only on HCP's health but also their abilities to cope with job demands. This will seriously impair the provision of quality care and the efficacy of the health service delivery. Dramatic changes in the health sector have altered doctor's jobs, limited autonomy and reducing morale.

VI. CONCLUSIONS

Based on the data analyzed, we have mainly selected the ten factors which cause stress among HCP's. These factors are: ((1) Inter-role distance (2) Role Stagnation (3) Role expectation conflict (4) Role Erosion (5) Role Overload (6) Role Isolation (7) Personal Inadequacy, (8) Self-role distance, (9) Role ambiguity and (10) Role Inadequacy.

There is no difference between the stress levels among male and female doctors except in case of the factors- Inter-role distance and Role inadequacy.

Since HCPs feel the conflict between the organizational role and the family role, therefore the stress level is significant for the factor of Inter-role distance.

The findings of the study can assist administrators and policymakers to provide an attractive working climate to decrease the side effects and consequences of role stress and increase the productivity of the doctors.

The productivity of the HCP is the most decisive factor as far as the success of the organization is concerned. The productivity in turn is dependent on the psychosocial wellbeing of the doctors. In the age of highly dynamic and competitive world, man is exposed to all kinds of stressors that can affect on all realms of life. The growing importance of interventional strategies is felt more at the hospital level.

Although certain limitations were met with the study, every effort has been made to make it much comprehensive. The researcher expects to draw attention of the administrators, policy makers, researchers, and academicians in related fields to resume further research.

VII. RECOMMENDATIONS/SUGGESTIONS

Based on the data analysis, we can provide the following suggestions for reducing and coping stress among the HCP's working in Mumbai.

It may not be possible to decrease the demands of the job some issues could be addressed in the first instance by providing support and improving working conditions and counseling services after stressful events and stress management training are amongst the approaches that may be beneficial in reducing the stress levels among the doctors working in the hospital.

Adequate resources i.e. material, technical and human should be extended to perform the job effectively. Availability of resources is an important component of working conditions provided to a doctor. Therefore, adequate working conditions can help reduce stress among doctors.

Clarifying the role and performance expectations

Promoting prompt, constructive resolution of conflicts

Psychological counseling and therapy that can recognize stress should be easily accessible and available for troubled staff members. Extent the counseling practices at the family level including dependents and relatives.

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