

Organizational Role Stress and Its Contribution to Job Burnout Among Physicians

David Martin*¹, Lucy Evans¹

Doctorate Scholar, Aligarh Muslim University

Abstract:

Objective: the objective of the study is to examine the level of organizational role stress and job burnout among doctors in private hospitals.

Methodology: data were collected from 100 doctors working in private hospitals in northern India. Maslach burnout inventory (MBI) and Pareek's organizational role stress (ORS) scale were used to measure the levels of burnout and role stress. Correlation and multiple regression analysis were conducted to analyze the results.

Results: the results of the study indicate that organizational role stress is highly correlated with job burnout. Doctors have shown low level of role stress and burnout. Stepwise multiple regression analyses suggested that Total ORS, Role Erosion, Role Overload, Resource Inadequacy,, Role Isolation, and Role Ambiguity are common Significant predictors of job burnout among doctors working in private hospitals.

Key words: Role stress, burnout, doctors

1. Introduction

Over the last few years, burnout has become a “buzzword” used to convey an almost unlimited variety of social and personal problems. Burnout refers to the loss of enthusiasm, excitement, and essence of mission in one's work. It also causes a feeling of helplessness, hopelessness, depression, meaninglessness, negative self-concept and attitude toward work, life and other people. Burnout was first used by Freudenberger in 1974 to describe the state of exhaustion observed among volunteer. The consequences of burnout were described in terms of physical outcomes (e.g. frequent headaches, sleeplessness, gastrointestinal disturbances, and shortness of breath) and in behavioral outcomes (e.g. frustration, irritation, difficult to hold in feeling and cynicism).

Most discussion of burnout emphasizes contact with people and the factors that made contact particularly difficult or emotionally stressful. The primary focus of burnout attention has been on people-helping job and professions (Human services, health care, and education). Those in people-helping jobs or professions as Maslach and Jackson explain (1981), “they are often required to spend considerable time in intense involvement with troubled people, and these exchanges commonly become charged with a feeling of anger, embarrassment, frustration, fear or despair”. The resulting chronic tension and stress can be emotionally training, which leaves the professional “empty” and “burnout”.

On the other hand work-related stress has been implicated as a major contributing factor to growing job dissatisfaction among doctors. 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 healthcare and the efficacy of health service delivery.

There are many definitions of burnout exist but for the purpose of this study the definition of Pines and Maslach (1978) "a syndrome of emotional exhaustion involving the development of negative self-concept, negative job attitudes and loss of concerns and feelings for clients" is used to understand the concept of burnout.

The primary causes of burnout, according to Maslach and Jackson (1981) are emotional exhaustion, depersonalization and a diminished personal accomplishment.

Emotional exhaustion:

It is characterized by a lack of energy and feeling that one's emotional resources are used. This "compassion fatigue" may coexist with feelings of frustration and tension.

Depersonalization:

It is marked by treatment of subordinates and colleagues as objects rather than people. Individuals may display a detached and an emotional callousness and may be cynical toward colleagues, subordinates, and organization.

Diminished personal accomplishment:

It is characterized by a tendency to evaluate oneself negatively. Individuals experience a decline in the feeling of job competence and successful achievement in their work or interactions with people.

Pareek (1983) states, the role can be defined as position one occupies in a social system, as defined by the functions he/she performs in response to the expectations of the significant members of the social system and his/her own expectation from that position or office. The very nature of role has an inbuilt potential for stress. Pareek identified ten different role stress dimensions:

Inter-Role Distance: When an individual occupies more than one role there are chances of conflicts between the different roles that he or she occupies.

Role Stagnation: When there is no growth with respect to the role one has occupied in the organization.

Self-Role Distance: The underlying stress arises out of the conflict between the self-concept and the expectations from the role, as perceived by the role occupant.

Role Ambiguity: When the individual is not clear about the various expectations that people have from his or her role, the conflict that he or she faces is known as role ambiguity.

Role Expectation Conflict: When there are conflicting expectations or demands by different role senders (persons having expectations from the role).

Role overload: In this case when the role occupant feels that there are too many expectations from the significant others in his role set, he experiences role overload.

Role Erosion: When a role occupant may feel that the functions, which he would like to perform, are being performed by some other role.

Resource Inadequacy: Resource inadequacy stress is experienced when the resources are required by the role occupant for performing the role effectively are not available.

Personal Inadequacy: In this case of personal Inadequacy a role occupant feels that he is not prepared to undertake the role effectively.

Role Isolation: In this case of role isolation the role occupant may feel that certain roles are psychologically closer to him, while others are at a much greater distance.

Doctors are prone to stress that may eventually lead to burnout due to several demands their roles have from different people they interact with. A lot of research has been carried out in the west to explore the level of stress and burnout among doctors and found that there is an increased psychological morbidity, for example, depression, anxiety and substance abuse among doctors (Firth-Cozens, 2003). The adverse effect of stress may affect not only the individual doctor but also his/her family life, marriage and social life (Maslach et.al 2001, McManus et.al 2002). Furthermore, stress is associated with burnout in which 'what started out as important, meaningful and challenging work becomes unpleasant, unfulfilling and meaningless. Energy turns into exhaustion, involvement turns into cynicism and efficacy turns into ineffectiveness'. Emotional exhaustion and detachment can fundamentally change a doctor's perception of the doctor-patient relationship, and can also affect interactions with family members. Stress also leads to increased rates of minor and major psychiatric illness, including mood disorders, anxiety disorders, substance abuse. As a result of stress, quality of patient care may be compromised and medical errors may increase (Firth-Cozens, 2001).

Still, research on doctors' stress and burnout are quite limited, contradictory and incomplete, especially in Indian context. Therefore, present investigation is aimed to observe the influence of organizational role stress on job burnout among doctors working in private hospitals. Some demographic variables likewise age and job tenure are also taken into good consideration in order to widen up the scope of the present investigation.

Purpose:

As mentioned above that research on stress and burnout among doctors in India is very limited, the purpose of this study is to explore the level of stress and burnout among doctors in private hospitals in the Indian context. Therefore, the present study is intended to answer following questions:

1. Are doctors in private hospitals experiencing role stress?
2. Are doctors in private hospitals burned out?
3. Is there any relation between role stress and burnout?
4. What predicts burnout among the doctors in the sample?

2. Literature review

Burnout is not a new phenomenon among the psychological concepts. A lot of studies have been carried out to understand the concept of burnout especially in human services profession and the results reveal that burnout appears to be a response to interpersonal stressors on the job, in which an overload of contact with people result in changes in attitudes and behaviors towards them.

There are very limited studies which have been carried out especially on medical doctors. Few of them are mentioned in this section of the paper.

The impact of burnout permeates several aspects of an individual's life. Professionally, it can result in low morale, impaired performance and decision-making skills, absenteeism, high turnover, a decrease in attention and concentration, and difficulties building relationships with clients and colleagues (Maslach, 1978; Shapiro, Brown, and Biegel, 2007; Soderfeldt et al., 1995).

Scheitzer (1994) reported that doctors had experienced symptoms that are consistent with burnout since graduating. The Incidence of burnout was found to be related to an inability to communicate freely with patients. Doctors who saw more than forty patients a day reported more burnout. Pradhan et al. (1996) investigated the greater difference in type A behavior pattern and its relationship with burnout among dual-career medical professional couples. Results reveal moderate levels of type A behavior pattern but low levels of burnout among the subjects. No significant gender differences were found in the experience of burnout. Furthermore, findings reveal that there is a significant gender difference in the in the relationship between type A behaviour pattern and burnout, the relationship being stronger in case of female than male.

Hosomi et al. (1998) studied the incidence and types of psychiatric illness among medical personnel and personnel in support services. Subjects were male and female Japanese adults (doctors, nurses, dieticians, hospital aides, case workers, pharmacists, radiation therapists, laboratory technicians, office workers, cooks, drivers and cleaning staff of public and private hospitals and other types of health care facilities). They have found that burnout and psychiatric disorders and suicidal behavior were prevalent.

Wei et.al (2006) found higher burnout among surgeon and doctors working in the internal medicine wards. Tziporah and Pace (2006) used the Maslach Burnout Inventory and found that individuals who worked in private practice reported significantly higher scores on the Personal Accomplishment subscale than their counterparts working in medical and academic settings. The private practice respondents also reported significantly lower scores than individuals in community mental health agencies, pastoral counselling centres, and health maintenance organizations on the Emotional Exhaustion subscale. Hours worked per week was a significant predictor of both depersonalization and emotional exhaustion.

In a study on family physician in Canada Lee et.al (2008) reported high level of burnout and almost half of the respondents had high levels of emotional exhaustion

and depersonalization (47.9% and 46.3%, respectively). No demographic factors were associated with high scores on these components. Bhugra et.al (2008) studied burnout on doctors and found very low rate of burnout. There was little evidence of burnout being related to changes of job characteristics. They concluded that private practice gives professionals more control over their job style and may be responsible for low levels of burnout.

Stress is associated with impaired individual functioning in the workplace. A number of aspects of working life have been linked to stress. the demands on the physical, psychological and emotional well-being of the employees as stressors may lead to ill health, anxiety, dissatisfaction, irritation and depression amongst employees (Caplan,1985). Not only health, stress at workplace also impacts capability to solve problems and subsequent satisfaction with the job (Elfering et al., 2005; Jonge et al., 2001).

Deary et al (1996) studied stress on 333 doctors in Scotland the findings indicate that higher clinical workloads were related to higher stress responsibility for others and career development were found to be of significant relationship with work stress among doctors.

Nusair and Deibageh,(1997) found in a study that role ambiguity and role conflict were correlated with work stress among 50 emergency doctors working in nine hospitals of the northern areas of Jordan. Researchers have applied role-theory to understand stress problems at work and to examine how role pressures contribute to occupational stress (Gupta and Adhikari, 2008). Cardoso and Fernandis (2011) found that the top stressors in doctors are emergency calls, night calls, time pressure, working after a sleepless night, dealing with problem patients, worrying about patient complaints and litigation, interruption of family life and unrealistically high expectation by others as well as bureaucratic red tape.

3. Methods and Materials

The purpose of the present research is to study role stress and burnout among doctors. The study also aims at finding out the relationship between some personal characteristics of doctors which could also contribute to the level of burnout they experienced, for example, age and tenure of services.

In the present study the sample was randomly selected from the private hospitals in India. It consisted of 100 doctors from different private hospitals in northern India. The gender of the sample was not taken into consideration. Mean and Range of Age and Tenure are given in the table below:

Group	<i>Mean age</i>	Range	Mean tenure	Range
DOCTORS	28.13	26 – 48	9.47	1 – 21

Tools used

Burnout inventory: The Maslach Burnout Inventory-Human Service Survey (MBI-HSS; Maslach & Jackson, 1996) was used in order to measure the burnout among teachers in the present study. The MBI-HSS consists of 22 statements describing the feelings an individual might have as a result of being over-stressed or burnout. Respondents were asked to indicate the frequency at which they experienced these feelings by selecting from six response choices that ranged from 0 (Never) to 6 (Everyday). The MBI-HSS measures burnout on three sub-scales:

Emotional exhaustion (EE):-A feeling of being unable to give of oneself at a psychological level due to a depletion of emotional resources.

Depersonalization (DP): -The development of impersonal, cynical feelings toward recipients of one’s services.

Personal accomplishment (PA): -A diminished feeling of competence and achievement in working with others.

Maslach and Jackson (1996) provided criteria for categorization of MBI-HSS scores into low, average, and high degrees of experienced burnout. For emotional exhaustion, scores ≤ 13 represent a low degree of burnout; scores 14-23 represent an average degree of burnout, and scores ≥ 24 represent a high degree of burnout. Scores of ≤ 2 , 3-8, and ≥ 9 in depersonalization represent, respectively, low, average, and high degrees of burnout. Scores of ≥ 43 , 36-42, and ≤ 35 in personal accomplishment represent low, average, and high degrees of burnout respectively as revealed in table below.

Response categories for Emotional Exhaustion, Depersonalization and Personal Accomplishment on the Maslach Burnout Inventory-Human Services Survey

Response Category	Emotional Exhaustion	Depersonalization	Personal Accomplishment
High	24 or over	9 or over	0-35
Moderate	14-23	3-8	36-42
Low	0-13	0-2	43 or over

Note. The numerical values for the personal accomplishment sub-scale are revised. A score of less than 32 on the personal accomplishment sub-scale indicates a high degree of personal accomplishment.

Organizational role stress: Udai Pareek’s (1982) Organisational Role Stress scale (ORS) was used to measure individuals’ “role stress” within an organisation. This scale is comprised of the following role stress dimensions.

1. Inter Role Distance (IRD)
2. Role Stagnation (RS)
3. Role expectation conflict (REC)
4. Role Erosion (RE)
5. Role Overload (RO)
6. Role Isolation (RI)
7. Personal Inadequacy (PI)
8. Self Role Distance (SRD)

9.Role Ambiguity (RA)

10. Resource Inadequacy (RIn)

The Organizational Role Stress scale is 5 point rating scale:

0	If you never or rarely feel that way
1	If you occasionally feel that way
2	If you sometimes feel that way
3	If you frequently feel that way
4	If you frequently or always feel that way

Thus the scores for each role stress dimension range from a minimum of 0 to a maximum of 20 and total scores range from 0 to 200,as this scale has 10 dimensions and each dimension has five items. For 5 point scale of ORS, scoring was done as 0,1,2,3 and 4 for the responses categories, if you never or scarily feel that way, if you occasionally feel that way, if you frequently feel that way or if you very frequently or always feel that way, respectively. On the ORS scale individual could get minimum score of 0 and maximum score of 200.

4. Results and Discussion

Table.1 Mean and Standard Deviation of Variables Used (n= 100)

SR.No.	VARIABLES	MEAN	SD
1	Age	37.13	5.75
2	Tenure	8.47	4.62
3	Inter role distance(IRD)	5.20	3.07
4	Role stagnation(RS)	5.10	3.74
5	Role expectation conflict(REC)	4.18	3.20
6	Role erosion(RE)	4.14	3.54
7	Role over load(RO)	7.80	3.43
8	Role isolation(RI)	5.50	3.23
9	Personal inadequacy(PI)	5.15	3.07
10	Self-role distance(SRD)	5.93	3.77
11	Role ambiguity(RA)	2.97	3.22
12	Resource inadequacy(Rin)	9.67	3.83
13	Total ORS	52.91	22.45
14	Emotional exhaustion	11.05	8.53
15	Depersonalization	3.99	4.12
16	Personal accomplishment	39.48	11.49

The mean score for Role Stress (Total) is 52.9. Further, the obtained mean of Role Stress dimensions show that doctors have highest mean (9.67) for resource inadequacy factor of Role Stress and the second highest mean is (7.80) for role

overload. Other factors on which the mean scores are higher are 5.93 for self-role distance (SRD), 5.50 for role isolation (RI), 5.20 for inter role distance (IRD) and 4.14 for role erosion. In other words doctors experience highest amount of stress with regard to resource inadequacy, role overload, self role distance and role isolation and comparatively low stress with regard to role ambiguity and role expectation conflict. The standard deviation of role stress (total) is 22.45 and for factors of role stress standard deviation are 3.07 (IRD), 3.74 (RS), 3.43 (REC), 3.54 (RE), 3.54 (RO), 3.43 (RI), 3.07 (PI), 3.77 (SRD), 3.22 (RA), and 3.83 for RIn. These standard deviation scores indicate the homogeneity of the sample.

When we look at the means of burnout dimensions, we find that mean scores of the three components of Job Burnout are, 11.05 for emotional exhaustion (EE), 3.99 for depersonalization (DP) and 39.48 for personal accomplishment (PA). Here it is worth mentioning that for personal accomplishment low score is indicative of high burnout and high scores show low burnout. The standard deviation of emotional exhaustion (EE) is 8.53, 4.12 for depersonalization and 11.49 for personal accomplishment.

As table.1 reveals that doctors experience low burnout as the arithmetic mean is found much below the average. While in many other studies on other human service professionals indicate that high burnout experienced by human service professionals or individuals who are doing people oriented work (Maslach & Pines, 1977, 1977, Pines,1981, 1982, Pines & Aronson, 1980, 1981, Pines & Kafry, 1978, 1981, Pines & Maslach, 1978, 1980). Jain (1991) found in her study on male doctors that they have experienced below than average level of Burnout. Bhugra et.al (2008) reported very low level of burnout among doctors and dentists in north India.

Low level of stress was also experienced by doctors in present investigation. Total Role Stress and other stress related dimensions have been found in less than moderate degree (see table.1). Results indicate that doctors have their major role related problems with regard to resource inadequacy and role overload as their scores are comparatively higher on these two dimensions (M=9.67 and 7.80), other factors have very low mean scores. Some times in the organization it happens that man and material related resources are inadequate to meet the demands of the role. Jain (1991) also found that low level of organizational role stress was experienced by doctors (50.87).

Table.2 Correlation between various independent variables and dependent variables (n= 100)

VARIABLES	EE	DP	PA
Age	-.07	-.02	.05
Tenure	-.09	.03	-.02
Inter role distance(IRD)	.31**	.26*	-.15

Role stagnation(RS)	.44**	.30**	-.09
Role expectation conflict(REC)	.46**	.44**	-.23*
Role erosion(RE)	.07	-.07	.31**
Role over load(RO)	.59**	.40**	.01
Role isolation(RI)	.59**	.43**	.02
Personal inadequacy(PI)	.42**	.39**	.06
Self-role distance(SRD)	.48**	.25*	.09
Role ambiguity(RA)	.45**	.37**	-.21*
Resource inadequacy(Rin)	.36**	.37**	.01
Total ORS	.62**	.44**	-.02

(**Significant at .01 and * significant at .05 level)

Table.2 shows that tenure and age have no significant correlation with any job burnout component. It means that age does not affect the burnout level in the sample. Similarly tenure has the same effect on burnout among doctors. Correlation between various role stress and total role stress and dimensions of job burnout are shown in the above table. The table reveals that a significant and positive relationship exists between inter role-distance and emotional exhaustion (0.31) and depersonalization (0.26). Inter role distance is not significantly related with personal accomplishment.

It can be observed from the table that role stagnation (0.44), role overload (0.59), role isolation (0.59), personal inadequacy (0.42), self-role distance (0.48), resource inadequacy (0.42) and total ORS (0.62) are positively and significantly correlated with emotional exhaustion and depersonalization. Role expectation conflict shows a significant and positive correlation with emotional exhaustion and depersonalization (0.46 and 0.44). This role stress shows negative and significant correlation with personal accomplishment (-0.23). The results also show that role ambiguity is associated positively and significantly with emotional exhaustion and depersonalization. This role stress dimension also shows negative and significant correlation with personal accomplishment of job burnout.

Role erosion reveals a positive and significant correlation with personal accomplishment. This role stress dimension shows no significant relationship with emotional exhaustion and depersonalization. Table.2 shows that role stress is significantly and positively related with two components of burnout, namely, emotional exhaustion and depersonalization, but not related to personal accomplishment, thus these results particularly support the hypothesis no.1 that is “burnout will be positively related to role stress”.

The observed stronger relationship of role stress with emotional exhaustion suggest that It results from extensive emotionally involving activities related to the job of treating the patients and the organization they work for. When demands are incompatible and continuously attempt to meet these demands will be frustrating and emotionally distressful. Condition of heavy workload role expectation conflict may in turn cause exhaustion among doctors. The conditions of exhaustion place heavy demands on emotional resources and that

make the employees feel that they embedded in an impersonal dehumanising system.

A possible reason for no significant relationship between role stress and personal accomplishment can be extended in terms of the meaning of personal accomplishment for the respondents (doctors), that is, how doctors define personal accomplishment. It is quite possible that doctors do not define personal accomplishment only in terms of effective dealing with patients. It can be interpreted in highly varied manner by different subjects, experiencing role stress to same and almost some extent and there by many things can be specified in different ways and therefore, responded differently.

Table.3 Stepwise multiple regression analysis: (N=100) Summary table (DV-EE)

PREDICTORS	MULTIPLE R	R- SQUARE	F	P
TOTAL ORS	.62	.38	62.31	.0000**
RO	.67	.45	12.41	.0006**
RI	.72	.53	14.86	.0002**
RE	.75	.56	8.56	.0043**
SRD	.77	.60	3.13	.0800
AGE	.79	.62	2.45	.1209
TENURE	.80	.64	3.94	.0500

(** Significant at .01 and * at .05 level)

The obtained results for emotional exhaustion (EE), component of burnout, are described in Table.3 In order of the highest to lowest variance. The table reveals that total ORS has the strongest contribution to emotional exhaustion (F= 62.31,P<.0000).It means that because of the combination of different organizational role stresses in their role, doctors experienced the feeling of emotional exhaustion. The second most contributing predictor is role overload, a dimension of role stress. F value for this variable is found to be 12.41 (P,.0002) which denotes that the feeling of emotional exhaustion among doctors depends on the load(work) assigned to them. Role isolation, another dimension of role stress is found to be the next factor, which enters into the regression equation. This indicates that role isolation also influences the emotional exhaustion. The F value is 14.86 (P<.0002). It means that emotional exhaustion depends upon role isolation. Role erosion, another role dimension predicted emotional exhaustion. The F value is 8.56(P<.004). Thus it describes that emotional exhaustion is dependent on role erosion experienced by doctors. Other variables entered into the regression equation but do not significantly influencing the criterion variable (emotional exhaustion).

Table.4 Stepwise multiple regression analysis: (n=100) Summary table (DV-DP)

PREDICTORS	MULTIPLE R	R- SQUARE	F	P
Rin	.74	.55	21.29	.0000**
RE	.78	.61	13.80	.0004**

RO	.81	.66	13.31	.0004**
PI	.81	.66	1.91	.1698
SRD	.82	.67	2.48	.1184
REC	.82	.68	1.99	.1613

(** Significant at .01 and * at .05 level)

Table.4 indicates that resource inadequacy, a dimension of role stress is found to be the factor which contributing the depersonalization. This indicates that lack of resources influences the feeling of depersonalization. The F value is 21.29 (p<.0001). Other role factors role erosion and role overload are found to be significant predictors of depersonalization. F values are found to be 13.80 P<.0004) and 13,31 (P<.0004).It means that role erosion and role overload influences the depersonalization.

Other variables, which enter into the regression equation, are PI, SRD, REC. These predictor variables are regressing the criterion variable but not significantly.

Table.5 Stepwise multiple regression analysis:(n=100) Summary table (DV-PA)

PREDICTORS	MULTIPLE R	R- SQUARE	F	P
RE	.31	.09	10.42	.0017*
RA	.41	.16	8.44	.0046*
REC	.50	.25	1.16	.2829
RI	.51	.26	1.8	.1745

(* Significant at .05 level)

From the above table it is obvious that role erosion is significantly regressing the criterion variable that is the personal accomplishment. F value is found to be 10.42 (P.0017). It means that role erosion has an influence upon the personal accomplishment.

The second variable, which is contributing to personal accomplishment, is role ambiguity among doctors. F value is found to be 8.44 (P<.0046).

5. Conclusion

The findings of the present study show that doctors in private hospitals have a lower level of stress and burnout. They have low feeling of emotional exhaustion and depersonalization and high feeling of personal accomplishment, which reflects a low burnout in them. They have a stronger feeling of being capable of attaining their goals and therefore, not becoming much depersonalized and emotionally exhausted. We can say that these doctors have lower burnout because of their ability to deal with the multifarious problems of patients and other type of problems effectively and efficiently. Due to these feelings they do not feel bad about themselves and about others and about the job they have. Thus the feeling of competence and self-worth are high enabling them to counteract burnout. Role stress is also experienced in low amount among these doctors. This is natural to have low amount of stress and burnout score among doctors as they are bound to

deal with patients with varied problems with high expectations from the patients as well as the organization they work with. The reputation of the hospital is much more dependent on the quality of doctors. Therefore, these demands are causing a little amount of stress among doctors. As discussed, the multiple dimensions of role stress are dominant cause of stress and burnout among the respondents of this study. Results of the study clearly answered to the questions raised in the beginning of the study.

Reference

- Caplan, Robbert D (1985). Psychological Stress in Work. Management and labour Studies, Vol.10(2), 63-76.
- Cardoso PM, Fernandes FV (2011). A Review of the Causes and Effects of Organisational Role Stress in Doctors. International Bulletin of Business Administration, Issue 11 EuroJournals, Inc.<http://www.eurojournals.com>
- Deary, IJ., Blenkin, H, Agius, RM, Endler, NS, Zeally, Helen and Wood, R. (1996). Models of job related stress and personal achievement among consultant doctors. Br J Psychology, 87:3-29.
- Elfering, Achim, Grebner, Simone, Semmer, Norbert K., Kaiser-Freiburghaus, Dora, Ponte, Sandra Lauper-Del, witschi, Isabella (2005). Chronic Job stressors and Job Control: effects on event-related Coping Success and Well Being. Journal of Occupational and organizational Psychology, Vol.78(2).237-252.
- Firth-Cozens J (2001). Intervention to improve physicians' wellbeing, and patients care. Social Science and Medicine; 52:215-22.
- Firth-Cozens J (2003). Doctors, their wellbeing, and their stress. BMJ, Mar 29; 326:670-671.
- Freudenberger, H.J. (1974). Staff Burnout. Journal of social Issues, 30, 159-165.
- Gupta, Palas R. and Adhikari, Ajoy (2008). Role Stress in Nurses. The ICFAI Journal of organizational Behavior, Vol. VII(1).49-56.
- Hirak Dasgupta and Suresh Kumar (2009). Role Stress Among Doctors Working in a Government Hospital in Shimla (India). *European Journal of Social Sciences – Volume 9, Number 3 (2009), 356-37*
- Hosomi, J., Nakano, M., Ikeda, M., Fuji, M., & Yoko. Mental health of medical staff. (Japanese) Seishin Igaku (Clinical Psychology), 1998 (Jan) vol 40(1), 83-91.
- Jain, N. (1991). Social support and coping as moderators of stress-burnout relationship in allopathic doctors. *Unpublished Doctoral thesis* University of Lucknow, Lucknow.
- Jonge, Jan de, Dormann, Christian, Janssen, peter M.M., Dollard, Maureen F. (2001). Testing reciprocal relationships Between Job Characteristics and Psychological

- Well-Being: A Cross-Lagged Structural Equation Model. *Journal of Occupational and Organizational Psychology*, Vol.74, 29-46.
- Lee FJ, Steward M, Brown JB (2008). Stress, burnout, and strategies for reducing them: what's the situation among Canadian family physicians?. *Can Fam Physician*, feb; 54 (2): 234-5.
- Maslach, C. & Jackson, S.E. (1981). The measurement of experienced burnout. *Journal of occupational Behaviour*, 2, 99-113.
- Maslach, C., & Jackson, S. E. (1996). *Maslach burnout inventory-Human services survey*. Palo Alto, CA: Consulting Psychologists Press.
- Maslach C, Schaufeli WB, Leiter MP. Job burnout. *Annual Review Psychology* 2001;52:397-422.
- McManus IC, Winder BC, Gordon D.(2002). The causal links between stress and burnout in a longitudinal study of UK doctors. *The Lancet* 2002; 359: 2089-2090.
- Nusair, N & Deilbagh, F.(1997). The sources of work stress: A field of study of the resources of work stress of emergency doctors at public hospitals in the northern governorate of Jordan. *Journal of King Saud University, Admin Sciences*, 9(2):301-322.
- Pareek, U. (1983). *Role Stress Scale Manual*, Ahmedabad, Navin Pulications.
- Pines, A. (1981). Burnout: A current problem in pediatrics. *Current issues in Pediatrics*, May issue.
- Pines, A. (1982). Changing organizations: Is a work environment without burnout an impossible goal? In W.S. Paine (Ed), *Job stress and burnout:Research, theory, intervention perspectives* (pp. 189-211). London: Sage.
- Pines, A., & Kafry, D. (1978). Occupational tedium in the social services. *Social works*, 23, 499-507.
- Pines, A., & Kafry, D. (1981). Tedium in the life and work of man as compared with women. *Sex Roles. A journal of Research*, 7, 963-977.
- Pines, A., & Maslach, C. (1978). Characteristics of staff burnout in mental health settings. *Hospital and community psychology (U)*, 233-237.
- Pradhan, M. & Misra N. Gender differences in type A behaviour pattern: Burnout relationship in medical professionals. *Psychological Studies*, 1996, 41(1-2), 4-9.
- Schweitzer, B. (1994). Stress and Burnout in Junior Doctors. *SAMJ*, Vol.84, 352-354.
- Shapiro, S.L., Brown, K, Biegel, G. (2007). Self-care for Health care professionals: Effects of MBSR on Mental Well Being of Counseling Psychology Students. *Training and Education in Professional Psychology*, 1(2), 105-115.
- Soderfeldt, M., Soderfeldt, B. & Warg, L. (1995). Burnout in Social work. *Social Work*, 40, 638-646.

Tziporah Rosenberg and Matthew Pace (2006). Burnout Among Mental Health Professionals: Special Consideration For the Marriage and Family Therapist. Journal of Marital and family Therapy, Vol.32 (1),87-99.

Wei Zhu, Zhi-Ming Wang, Mian-Zhen Wang, Ya-Jia Lan, Si-Ying Wu (2006). Occupational stress and job burnout in doctors. Journal of Sichuan University Medical science edition, Volume: 37, Issue: 2, Pages: 281-283, 308