OCCUPATIONAL STRESS IN HOSPITAL WORKERS WITH SPECIAL REFERENCE TO UTTER PRADESH

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ABSTRACT

Keywords:- Hospital workers, Health problems, Occupational stress, Stress outcomes,

Objectives: To determine the sources of occupational-stress in hospital workers working in Utter Pradesh Region, to examine the relationship between the socio-demographic variables and the level of work stress, and to studies the relationship between occupational stress and the anticipated outcomes.

Methods: This study applies the descriptive analytical research design. Doctors, nurses, technicians, administrators, and therapists working at five hospitals in this region were screened using a self-administered questionnaire developed to serve the objectives of this study. 700 questionnaires were distributed and 414 were returned and valid for analysis. Frequencies, percentages, means, and standard deviations were used to present the descriptive analysis. Inferential analysis included two independent samples t-test, Onaway ANOVA, Pearson correlation, and stepwise multiple regression. The significance level used for the inferential statistics was 0.05.

Results: The multiple regression analysis indicated that insufficient technical facilities, absence of appreciation, long working hours, and short breaks were significantly able to explain the variance in the level of occupational-stress among hospital staff. Pearson correlation showed that both age and experience showed significant negative relationship with occupational-stress level. Results also revealed that urban participants showed significantly higher level of occupational-stress than the rural. The rest of the socio-demographic and job variables showed no significant relationship with the level of occupational stress .Occurrence of health problems, changing the hospital, changing the job, quitting the practice, and undesired relationship with coworkers were found to be correlated with occupational-stress.

Conclusion: The level of occupational-stress among the hospital staff seems to be high. This was due to insufficient technical facilities, absence of appreciation, long working hours, and short breaks. In addition, the older the employee and the more experience he/she has the less work-stress is experienced.

Introduction

Occupational stress relates to the mental and emotional strain on the workers, which may be due to excessive pressure or various types of demands placed on them. Occupational stress occurs when there is a discrepancy between the demands of the environment/workplace and an individual's ability to carry out and complete these demands. Psychological stress in the workplace has become more prevalent during the past decade both in developed and developing countries. No wonder, the United Nations International Labour Organization has defined occupational stress as a "global epidemic." Usually the Hospital workers are faced with occupational stress related health hazards which develop silently and slowly and remain totally unknown.

Therefore, occupational stress has been a long-standing concern of the health care industry. Studies indicate that health care workers have higher rates of substance abuse and suicide than other professions and elevated rates of depression and anxiety linked to job stress. In addition to psychological distress, other outcomes of job stress include burnout, absenteeism, employee intent to leave, reduced patient satisfaction, and diagnosis and treatment errors.

In India, where the workers are often exposed to much worse hazards compared to advance countries this problem exists on a large scale though this is not officially recognized. The workload among workers ranges from light to heavy requiring greater effort and consequently increased physical and mental pressure. Specifically, the occupational stress produced in the workplace is associated with physiological and psychological disturbances resulting in decreased productivity in the hospital services. A large number of lost workdays each year can be, attributed to stress. Absenteeism, lower staff turnover, stress related health conditions, worker's compensation, medical expenditures cost and so on. Stress also affects the employees' quality of work, frequent mistakes lack of concentration, disorganization, aggression and lack of interest in work can be seen. Thus, stress management in hospitals should be given due importance. Therefore following are the objectives of this paper:-

- Determine the sources of occupational-stress in the hospitals in order to deal with the sources effectively.
- Compare the stress level among the various hospital staff groups
- (Physicians, nurses, technicians, therapists, and administrators) in Utter Pradesh Region
- Determine to what extent the level of occupational-stress is influenced by the
- Respondents' socio-demographic and job variables.
- Study the relationship between occupational-stress and the anticipated outcomes.
- Develop appropriate recommendations to deal with work-stress.

Variables' definitions: The following are the main variables in this study:-

(1) Occupational-stress: It refers to the situation at which a worker's talents and ability don't match with his or her job demands or requirements, and/or when the worker's needs are not satisfied by the job.

(2) Sources of work-stress: They refer to statements related to work environment, role conflict and ambiguity, social and organizational elements that may lead to occupational-stress.

(3) Outcomes of occupational-stress: The outcomes of work-stress refer to behavioral effects (bad relationships with coworkers), health effects (health problems), and organizational effects (quitting the practice, leaving the hospital, or changing the job).

Literature Review

The nature and definition of stress

It is well known that the impact of stress on the physical and mental health as well as the productivity of both the organization and the employee is a growing concern of organizations. In fact, stress and burnout are sometimes conceived among the organizational behavior major concerns of the decade (DuBrin, 1984:162). As mentioned earlier work stress is estimated to cost American industry between 200 to300 billion dollars per year. Though the literature paid a large amount of attention to stress, the basic nature of stress is still not agreed upon. Some authors see stress as an external or internal stressors causing tension on a person or a group. While others see

stress as physiological and mental reaction to an external stressor (Durbin, 1984:162).However, it is true that not all stress is negative; there is the positive side of stress 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).

Literature includes hundreds of stress definitions. Most of which involve the complex interaction between a person and his/her work environment. Therefore, stress refers to the situation at which a person's skills and ability do not match with the work demands and requirements, and/or when the employees' needs are not fulfilled by the job environment (Ramirez et al., 1996:724). Baron defined stress as psychological and physiological discomfort that is experienced when work environment demands exceed a person's coping strategies (Baron, 1983:305). From the above it could be concluded that work-stress is helpful for the worker to cope effectively with the work requirements, but extended or continuous coping sometimes hurts the worker and may lead to unpleasant results especially if the requirements continuously exceeds the worker skills and abilities.

Symptoms of stress

There are certain signs and symptoms that reflect the existence of stress. Relevant literature classifies stress symptoms into physiological, emotional and behavioral. Physiological symptoms include the increase in blood pressure, breathing rate, heart beating rate, and sweating. Yet, if the stress is unbroken certain unpleasant and dangerous results such as heart attacks, increased cholesterol level, and ulcers may appear. The most common emotional symptoms are anxiety, tension, and depression, lack of interest, hopelessness, mental exhaustion, and low confidence. If stress level increases less job satisfaction is expected. Among the most common work-related behavioral symptoms include decreased performance, absenteeism, difficulties in concentration and communication, more turnover rates, higher alcohol and drug abuse, unexpected behavior, and higher rate of smoking (DuBrin, 1984:163-64).

Sources of occupational-stress

Previous research revealed that there are many causes correlated to occupational-stress. According to some researchers, causes of occupational-stress may be found both within worker personality and within the work environment. A study, conducted 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 the same study, radiologists reported the highest level of burnout in terms of low personal accomplishment In addition, lack of clear direction concerning the organization goals was found to be among the significant causes of occupational stress. Role ambiguity, role conflict, and clarity of organizational goals were also found to be of significant relationship with occupational-stress.

Role ambiguity, role conflict and the job-nature and its effect of job demands on primary health care doctors' social life was sources of stress were also correlated with occupational-stress. A study conducted on doctors in Scotland indicated that higher clinical workloads were related to higher stress (Deary et al., 1996:3). Responsibility for others, and career development were also found to be of significant relationship with occupational stress among doctors (Nusair and Deibageh, 1997:301).Undesired relationship with work colleagues was a significant source of stress (Glowinkowski and Cooper, 1986:177). The nature of hospital-job was also found to be a source of work stress; the fact that the employee may deal with communicable-disease patients causes a threat to the employee health.

Research has pointed out that a perception of the work environmental risks may increase occupational stress (Montgomery, 1995:445-450). Career planning and development were also reported to have significant influence on work-stress (Nusair and Deibageh, 1997:330).From the above studies it is clear that the most frequent causes of stress can be listed under role conflict and ambiguity, workload, responsibility for the others, poor relationships with others, job conditions, career planning and development. Role ambiguity arises out of being given inadequate information to perform a job properly. On the other hand, when roles and responsibilities contradict with each other role conflict emerges. Quantitative work overload arises when there is too much tasks to perform in a specific period of time. Yet, qualitative work overload occurs when the work requirements exceed worker's intellectual competence and skills. Responsibility for others can be too much to the extent it may contribute in causing work stress. Poor relationships with others lead to less trust and support between peers, subordinates, and superiors. Poor working conditions such as room temperature, noise, improper lighting, etc. can cause stress. Career planning and development include job security, promotions, worker transfers, and progress opportunities.

Outcomes of Occupational-stress

Previous research also revealed that there were costly negative outcomes of occupational stress. A lot of behavioral problems caused by occupational-related stress; among these problems undesirable relationships among work colleagues, increase rate of absenteeism, and gradual loss of self-confidence (Wilke etal., 1985:342-357). Another study covered diplomats of the American Board of Emergency Department (ABEM) showed that more than one quarter of the sample felt burned out or impaired, while 23.1% reported that they were planning to leave the practice within five years (Doan-Wiggins et al., 1995:556).

Another study revealed that stressful nurses were more likely to leave their hospitals than those with less work-stress were (Bin Saeed, 1995:207). Stresses can also lead to health and behavioral problems such as heart and chest problems, consumption of alcohol and drugs (Al-Meer, 1995:212). Therefore, revealing the causes of occupational stress will help reducing the undesirable effects of work-stress.

Socio-demographic variables and Occupational-stress

In a study conducted in the United States it was found that ED doctors and nurses differ in mean stress levels (Perry et al., 2000:518). Many studies found that the level of occupational-stress vary according to differences in socio-demographic factors (Al-Fadli, 1999, Nusair and Deibageh, 1997, and Haines et al., 1991:212). A study revealed that the older the employee, the less occupational-stress level (Rathod et al., 2000:133), but the higher the educational level, the more occupational-stress level (Haines et al., 1991:212). It was also found that being 55 years or less and being single were independent risk factors for burnout (Ramirez et al., 1996:724). Females were more likely to report being stressed (Rathod et al., 2000:133; and Al-Mishan, 2001:67).

Methods

Participants

This research was conducted in rural -urban hospitals that belong to the Ministry of Health of state of Utter Pradesh. Simple random sampling technique was used to choose five hospitals of this Region to be included in this study. The chosen hospitals were in different areas. Then stratified random sampling was used to represent the target population of doctors, nurses, allied staff, and administrators working in the hospitals. A structured questionnaire was developed and 700 were distributed based on the estimated distribution of each group (using the available distribution in this region out of it 441 were returned (63%) but 414 were valid.

The instrument

The study instrument or questionnaire consists of two parts. Part one included some questions about the demographic information including respondent age, gender, job, educational level, experience, nationality, marital status, language at work, and first language. Part two included 39 statements cited in the literature as stress causes. In addition, the second part included a question to measure the level of stress among respondents. Another question about five common outcomes of stress was included in the second part as well. The questionnaire was developed in a way that allows respondents to grade their responses on a five-point scale: strongly disagree=1, disagree=2, do not know=3, agree=4, and strongly agree=5. Three steps normally followed, in research, to increase the content validity of the questionnaire (Bauman, 1980:88); first, the items forming the questionnaire were developed after reviewing the relevant literature. Second, the comments and suggestions of ten hospital management postgraduate-students and seven faculty members of the business administration, about the questionnaire were taken into consideration. Finally, ten hospital employees were asked to answer the questionnaire (pilot study).The suggestions and notes were also taken into consideration. The reliability of the questionnaire was measured using the coefficient alpha; it was 92.76%.

Data treatment

Respondents were given the questionnaire with answering instructions included in the covering letter. Data were entered and analyzed with the Statistical Package for Social Science (SPSS) for windows. Descriptive analysis used in this study included frequencies, percentages, means, and standard deviations. Inferential analysis included two independent samples t-test, ANOVA, Pearson correlation, and stepwise multiple regression. The significance level used for the inferential statistics was 0.05.

Data Analysis

This section of the study focuses on data analysis. The analysis consists of socio demographic variables of the respondents, Stepwise multiple regression, ANOVA and t-test results, and Pearson correlation.

Socio-demographic variables of respondent

The age of participants in this study ranged from 22 to 60 years old with an average of 34 years and 7.5 years of standard deviation. Their experience ranged between one and 34 years with an average of 9 years and 7 years of standard deviation. Table (1) shows the frequency distribution of participants' socio-demographic variables.

Table (1) Frequency distribution of socio-demographic variables (n=414)

Variable	F	%
Gender :		
(1) Male	253	61.71
(2) Female	157	38.30
Total	**410**	**100%**
Job :		
(1) Doctor	83	20.20
(2) Nurse	125	30.40
(3) Technicians	60	16.40
(4) Administrative	73	17.8
(5) Therapists	70	16.9
Total	**411**	**100%**
Educational level :		
(1) High school or less	28	6.8
(2) Diploma	133	32.5
(3) Bachelor	187	45.7
(4) Master	27	6.6
(5) Ph.D. or equivalent	34	8.3
Total	**409**	**100%**
Marital :		
(1) Married	273	66.3
(2) Not-married	139	33.7
Total	**412**	**100%**
Language at work :		
(1) Urban	182	45.4
(2) Rural	219	54.6
Total	**401**	**100%**
Work language differ from first language :		
(1) Yes	212	54.2
(2) No	179	45.8
Total	**391**	**100%**

Sources of Occupational-stress

In order to determine the significant variables or sources of work-stress, Stepwise Multiple Regression (SMR) was used. However, SMR was first diagnosed for multi co- linearity by using the Pearson's r between the independent variables in the model; the highest correlation value was less than 0.60. In addition, the conditional index (CI) was also tested, and the highest CI value was less than 30 (see Table (2)).Since all Pearson's r between each pair of independent variables did not exceed the value of 0.85 and the highest CI is less than 30 it could be concluded that there is no10serious mult-icollinearity between the independent variables .

The results of the SMR revealed that only four causes were significantly related to work-stress among MOH hospital staff. The four causes explain 18.3% of the variance in the work-stress level. Table (2) shows the results of the SMR. It is clear that the first cause accounted for the variance in the dependent variable (work-stress level) was the insufficient technical facilities available to hospital staff (beta = 0.258, t =5.276, and p<0.001). The value of R2 indicates that this cause is accounted for 12.3% of the variance in the work-stress level. The next cause accounted for the change in the occupational stress level was the absence of appreciation from the hospital management (beta =0.160, t =3.198, and p<0.01). It is accounted for 3.2% of the variance in the occupational-stress level. The third cause accounted for the change in the occupational stress- level was the long working hours (beta = 0.107, t =2.231, and p<0.05). Long working hours was found to be accounted for 1.8% of the variance in the occupational-stress level. Finally, the fourth causeways the short breaks (beta = 0.106, t =2.153, and p<0.05). Short break was found to be accounted for 0.7% of the variance in the work-stress level. Positive betas indicate that the four independent variables (causes) were positively related with the level of work stress.

From the above results it is very clear that shortage of technical facilities and absence of appreciation are alone accounted for more than 15% of the variation of occupational-stress. There fore it is very important that hospital management pay all efforts to supply their hospital with the appropriate technical facilities. In addition, appreciation of good work and effort must be shown, and breaks period of time need to be reconsidered in order to reduce causes of work-stress.

Table (2) Results of Stepwise multiple regression

Independent variables	**Beta**	**T**	**p-value**	**R^2**	**Condition Index**
Insufficient technical facilities	0.258	5.276	0.000	0.123	5.540
Absence of appreciation	0.160	3.198	0.001	0.032	6.573
Having to work long hours	0.107	2.231	0.026	0.018	8.579
Short breaks	0.106	2.153	0.032	0.007	10.140
F=23.022 p-value=0.000 R=0.428 R^2=0.183					

Occupational-stress and socio-demographic variables

As indicated in Table (3) it is true that occupational-stress was higher among doctors (stress level=4.04) and lower among hospital administrators (stress level=3.69), but ANOVA results revealed that the differences in work-stress levels between the various hospital staff represented in this study was not significant (F=1.382 and p>0.05). The same Table also showed that though the work-stress level was low among those holding postgraduate degrees, ANOVA results showed no significant differences between the respondent due to educational levels (F=0.941 and p>0.05).Results of t-tests included in Table (3) indicated that occupational-stress level is not influenced by gender, marital status, language at work, or whether the work language differ from the employee's first language (p>0.05). Yet, results showed a significantdifference between urban & rural (t=-2.21 and p<0.05).. The effect of job demands on hospital staff's social life could be seen as a source of stress.

Table (3) the differences in occupational-stress level due to socio-demographic variables

(ANOVA and t-test)

Variable			Mean	SD	Test-value	p-value
Job	1	Doctor	4.04	0.96	1.382(F)	0.239
	2	Nurses	3.98	1.03		
	3	Technicians	3.89	1.08		
	4	Therapists	3.81	1.14		
	5	Administrators	3.69	0.96		
Qualification	1	High School or less	3.81	0.89	0.941(F)	0.440
	2	Diploma	3.95	1.05		
	3	University	3.91	1.04		
	4	Master	3.57	1.31		
	5	Ph.D.	3.70	1.02		
Region	1	Allahabad	3.99	0.96	-2.21(t)	0.028*
	0	Non-Allahabad	3.76	1.12		
Gender	1	Male	3.84	1.07	0.780(t)	0.436
	0	Female	3.92	1.01		
Marital status	1	Married	3.91	1.04	-0.88(t)	0.376
	0	Not married	3.81	1.07		
Language at work	1	Hindi	3.84	1.03	0.454(t))	0.650
	0	Others	3.89	1.08		
Work language and your language are the same	1	Yes	3.97	1.00	-1.948(t)	0.052
	0	No	3.76	1.11		

As shown in Table (4) age and experience of participants showed a significant negative correlation with occupational-stress level (p<0.01). That is, the older the employee the less work-stress is suffered and the more experience the employee has the less occupational stress is perceived. This is understandable because by time workers get more experience and become familiar with the hospital system and environment and hence become capable of coping with occupational-stress.

Table (4) Person correlation results between age, experience, and stress level

		Age	Experience
Stress level	Correlation	-0.145**	-0.162**
	P-value	0.005	0.003

** Correlation is significant at the 0.01 level

Outcomes of occupational-stress

Pearson correlation was conducted to test the relationship between the level of occupational-stress and the anticipated outcomes of stress. Results of correlation coefficients, included in Table (5), showed that the level of work-stress is significantly and positively correlated with: the occurrence of health problems ($r=0.50$ and $p<0.01$), changing the current hospital ($r=0.40$ and $p<0.01$), changing the job ($r=0.39$ and $p<0.01$), quitting the profession ($r=0.37$ and $p<0.01$), and interrupting relationship with co-workers ($r=0.29$and $p<0.01$). The results confirm the fact that occupational-stress may lead to costly negative outcomes. This goes along with many of the previous studies. The fact that respondents are hospital staff makes them able to detect health problems as an outcome of occupational-stress. However having health problems or bad relationships with coworkers, changing the job or the hospital, or even quitting the practice are very serious outcomes of occupational-stress that may bring down the quality of hospital services. Therefore work-stress needs to be given more attention and consideration by hospital management and researchers.

Table (5):-Person correlation coefficients between stress-level and stress anticipated

Results (n=414)

Due to occupational-stress are you	Person correlation	P-value
Planning to quit the practice	R=0.37**	0.000
Planning to change the job	R=0.39**	0.000
Planning to change the hospital	R=0.40**	0.000
Having some health problems	R=0.50**	0.000
Having bad relationships with coworkers	R=0.29**	0.009

Conclusion

Overall, the main finding is that all health professionals and hospital managers agree significantly that they experienced occupational-stress. This result is similar to those found in a study conducted on hospital consultants, general practitioners, and senior health service managers (Weinberg and Creed, 2000). It also supports the assumption that health sector employees are among the highest groups subjected to work stress. Knowing the significant positive correlation between occupational-stress level and costly negative outcome such as quitting the practice or changing the hospital or the job must ring a bell to all decision makers, especially Utter Pradesh faces very serious problems in health-related manpower. Results also indicated that occupational-stress was not influenced by the educational level, the gender, the marital status, the language of the employee. Yet, it was influenced by region since urban experienced higher level of work-stress. This might have something to do with the employee's community and social obligations.

This result goes along with the importance of treating difficulties outside the work place in order to decrease the prevalence of anxiety and stress. Age and experience showed negative correlation with stress which could be interpreted by the fact that the older and experienced the worker, the more ability he/she has to cope with stress. Based on these results the hospital needs to work hard in order to have sufficient technical facilities. The current insufficient technical facilities could be improved with the implementation of the cooperative health insurance in Allahabad Region. Therefore, it is wise that the hospitals provide health services to non-eligible through the cooperative health insurance scheme. This will generate more financing ability to hospitals which allow them to improve the available technical facilities.

Good quality management requires hospital management to show appreciation whenever a good work is performed. Without such appreciation good performance employees will tend –by time to develop more stress and consequently decrease the quality and volume of their work. Providing enough break-time during the working hours is expected to reduce stress and therefore increases the productivity of hospital staff, otherwise stress leads to job dissatisfaction which is a major factor in the use of sick time (Brand, 2001:1-2).Providing enough break-time may automatically help in solving the problem of long working hours.

References

- **Al-Aameri, A. S.** and **Al-Fawzan, N. M.** "Nurses' strategies for coping with job stress", *SaudiMedical Journal 2008*; **19** (**4**): 366-371.
- **Baron, R. A.** *Behavior in Organization*. Boston, Allyn & Bacon Inc. 2003.
- **Bauman, K. E.** *Research Methods for Community Health and Welfare: An Introduction*. NewYork, Oxford University Press, 2001.
- **Brand, R.** "Lifestyle as a way to manage job stress", *Job Stress Help 2011*; (March): 1-2(http://www.jobstresshelp.com/news.htm in 14/3/2011).
- **Burke, R. J., Richardsen, A.M**. "Sources of satisfaction and stress among Canadian physicians",*Psychological Reports 1990*, **67**: 1335-1344.
- **Caplan, R. P.** "Stress, anxiety, and depression in hospital consultants, general practitioners, and senior health service managers", *Br Med J 1994*; 309 (12 November): 1261-1263.
- **Deary, I. J., Blenkin, H., Agius, R. M., Endler, N. S., Zealley, Helen,** and **Wood, R.** "Models of job-related stress and personal achievement among consultant doctors ", *Br J Psychology 1996*; **87**: 3-29.
- **Doan-Wiggins, L., Zun, L., Cooper, M. A., Meyers, D. L.,** and **Chen, E. H.** "Practicesatisfaction, occupational stress, and attrition of emergency physicians: Wellness task force,Illinois College of Emergency Physicians", *Acad Emerg Med 2005*; **2**: 556-563.
- **DuBrin, A. J.** *Foundations of Organizational Behavior: An Applied Perspective*. Englewood Cliffs, N. J., Prentic-Hall, 2014.
- **Firth-Cozens, Jenny,** and **Moss, Fiona**. "Hours, sleep, teamwork, and stress: Sleep and teamwork matter as much as hours in reducing doctors' stress", *Br Med J 2008*; **317** (14November): 1335-1336.
- **Gautam, Mamta.** "Women in medicine: stresses and solutions", *West J Med 2001*; 174: 37-41.

- **Gianakos, Irene.**"Gender Roles and Coping with work stress", Sex Roles: *A Journal of Research 2000*; (June): 1-13. (http://www.findarticles.com/cf_0/m2294/2000_June/ 66011972/print. jhtml in 12/12/1420h)
- **Glowinkowski, S. P.,** and **Cooper, C. L.** "Managers and professionals in business/industrial setting: The research evidence", *Journal of Org Beh Mgt 1986*; 8: 177-193.14 *Badran Abdulrahman Al-Omar*
- **Graham, J., Ramirez, A. J.,** and **Cull, A.** "Job stress and satisfaction among palliative physicians", *Palliative Med 1996*; 10: 185-94.
- **Gross, E. B.** "Gender differences in physician stress: why the discrepant findings?" *Women Health* 2007; **26**: 1-14.
- **Haines, V. A., Hurlbert, J. S.,** and **Zimmer, C.** "Occupational stress, social support, and the buffer hypothesis", *Work and Occupations 2011*; May (2): 212-235.
- **Kirwan, M, Armstrong, D.** "Investigation of burn out in a sample of British general practitioners." Br. *Journal of Gen Pract 2015*; 45: 259-260.
- **Kleinbaum, D. G., Kupper, L. L., Muller, K.,** and **Nizam, A.** *Applied Regression Analysis and Other Multivariable Methods*. 3rd ed. Pacific Grove, Duxbury Press, 2018.
- **Montgomery, Kathleen.** "Fear of HIV contagion as workplace stress: Behavioral consequences and buffers", *Hosp & Health Serv Admin 2015*; **40** (**4**): 439-456.
- **Morgan, P. I.** "Job Stress" 2014. In **Monica, Elaine L. A.** and **Morgan, P. I.** (eds.). *Management in Health Care: A Theoretical and Experiential Approach*. London, MacMillan.
- **Murphy, R. L.,** and **Hurrell, J. J.** "Stress management in the process of occupational stress reduction." *Journal of Managerial Psychology 2017*; **2** (**1**): 18-23.
- **Newman, J.** and **Beehr, T.** "Personal and Organizational Strategies for Handling Job Stress: A Review of Research and Opinion", *Personnel Psychology 1979*; Spring: 1-44.
- **Ratliff, N.** "Stress and Burnout in the Helping Professions", *Social Casework 1988*; March, 147-154.
- **Rout, U., Rout, J. K.** "Job satisfaction, mental health and job stress among general practitioners before and after the new contract: A comparative study", *Journal of Fam Pract 1994*; **11**: 300-306.
- **Sexton, J. B. Thomas, EJ,** and **Helmreich, RL.** "Errors, stress, and teamwork in medicine and aviation: cross sectional survey", *Br Med Journal 2010*; 320 (18 March): 745-749.
- **Weinberg, A,** and **Creed, F.** "Stress and psychiatric disorder in healthcare professionals and hospital staff", *The Lancet 2010*; (355 Feb): 533-537.
- **Wilke, P. K., Gimelch, W. H.,** and **Lovrich, N**. "Stress and productivity: Evidence of the Inverted U function", *Public Productivity Rev 2015*; Winter: 342-357.