

Occupational Stress among Nurses- A Study of Hospitals in Jamshedpur City of Jharkhand

Dr. Prabhat Kumar Pani*

Occupational stress can be defined as the harmful physical and emotional responses that occur when the requirements of the job do not match the capabilities, resources, or needs of the worker. The management and reduction of occupational stress are recognized as key factors in promoting employee well-being. The purpose of the study was to examine the factors that lead to occupational stress and the relationship between age and occupation stress among nurses employed in hospitals in Jamshedpur city of Jharkhand. A sample of 115 nurses belonging to different age groups were selected on the basis of simple random sampling technique. In order to get the required information a well designed questionnaire was prepared and administered among respondents. The statistical tools used were descriptive statistics and one-way ANOVA. The overall findings of the study revealed that the total occupational stress among nurses belonging to different age groups differed significantly.

Keywords: Overload, Ambiguity, Conflict, Stress, Occupation

Introduction

Stress, in general, and occupational stress, in particular, is a fact of modern day life that seems to have been on the increase. The topic is, therefore, still popular, although it occupies academics' and practitioners' attention now for more than half a century.

Occupational stress can be defined as the harmful physical and emotional responses that occur when the requirements of the job do not match the capabilities, resources, or needs of the worker. Interest in the concept of job stress have increased in recent years and a number of studies in work, occupational and organizational stress in west as well as in India have proliferated. Job stress is widely recognized as a major problem for both workers and organization that employ them. For workers, stress is frequently a factor contributing to accidents, job dissatisfaction, illness such as heart diseases, alcohol and hypertension (Davidson & Cooper, 1981), for organization stress related problems result in medical expenses, absenteeism and decreased

productivity (Wallis, 1983). The word stress has its origin in the Latin work stringere – to draw tight. In the 17th century the word was used to describe affliction and hardship. The meaning of the word later included the concepts of pressure, strain or force. Today the description of stress includes an outside stimulus and the person's responses to it. Edwards and Burnard (2003) classify stress in the workplace as "occupational stress". The term refers to the "disruption in individual's psychological or/and physiological homeostasis that force them to deviate from normal functioning in interaction with their jobs and work environment" Allen, Hitt & Green (1982). Holmlund & Strandvick (2005) defined occupational stress as "incapability of employees to manage the job pressures due to gap of job demands and employees capabilities to fulfill the job needs". Occupational stress is a mental and physical condition which affects an individual's productivity, effectiveness, health and quality of work (Comish & Swindle, 1994).

*Faculty of Commerce, Jamshedpur Worker's College, Jamshedpur, Jharkhand

Review of Literature

Occupational stress is a major hazard for many workers. Increased workloads, downsizing, overtime, hostile work environments, and shift work are just a few of the many causes of stressful working conditions. Occupational stress has become one of the most serious health issues in the modern world (Luet al., 2003), and in recent years, occupational stress has become one of the most popular topics for applied research in psychology, and in broader areas of social and medical sciences (Cooper & Payne, 1988). During the past three decades, numbers of researchers have made an attempt to study occupational stress.

Alhajjar (2013) conducted a study to investigate into stress among hospital nurses. The study found a high prevalence of psychological distress, depression among nurses. The most severe occupational stressors identified were: 'not enough staff to adequately cover the unit', 'lack of drugs and equipments required for nursing care', 'unpredictable staffing and scheduling', respectively. Further, 'workload', and 'death and dying' were identified as the most frequent and severe occupational stressors.

Sumangala et al. (2009) assessed the relationship between age and occupational stress among employees of Information Technology companies. A total of 600 respondents belonging to different age groups participated in the study. The study revealed that employees have moderate levels of stress. In addition, the study found significant difference in stress among employees of different age groups.

Mosadeghrad (2013) explored the status of occupational stress among hospital nurses. The study found that the major sources of stress among nurses were: inadequate pay, inequality at work, too much work, staff shortage, lack of promotion, job insecurity and lack of management support.

Yeh & Huang (2007) explored the perceived occupational stress in newly-graduated nurses and examined the relationship between stress and demographic and work-related variables. Findings of the study indicated that major sources of stress in newly-graduated nurses were workload, followed by interpersonal relationships, and ward management in turn. The top five stressors identified were: "dealing with patients", "emergency condition", "caring with patients with unknown or infectious disease", "listening, speaking, reading and writing medical terminology", and "caring of dying patients and their families".

Chandraiah et. al. (2003) in their study investigated the effect of age on occupational stress and job satisfaction among managers of different age groups. A sample of 105 industrial managers working in different large-scale organizations was selected for the study. The Occupational Stress Index (OSI) developed by Srivastava & Singh (1983) was used to assess the level of job stress of the sample. The study found negative correlation between age and occupational stress.

Bryan et. al. (2000) investigate workplace stress levels and personal/workplace demographics using a sample of 170 urological nurses. The study found that excessive workload was the most prominently identified cause of the work stress among the sample of urological nurses.

Considine & Buchanan (1999) reported that nurses' major sources of stress were related to hours and roistering, particular the regular working of unpaid overtime; inadequate staffing, absence of trained and experienced staff; excessive workload and increasing level of responsibility.

In a study Dua (1994) revealed that younger staff members reported more job stress than older staff. The major explanation to such a finding was that older employees have often reached a stage where career development is not their major concern, and hence a number of job characteristics which may cause stress to younger staff, who have their career ahead of them, do not cause stress to older staff.

Jagdish & Srivastava (1989) conducted a study to examine the relationship between perceived occupational stress stemming from various job dimensions and mental health or psychological well being of the first level supervisors. The perceived occupational stress was assessed with the help of Occupational Stress Index (OSI) developed and standardized by Srivastava & Singh (1981). The results of the study revealed that occupational stress arising particularly from intrinsic impoverishment, role conflict; role ambiguity and poor peer relations are closely associated with employees' health.

Vance & Humphreys (1989) in their study on Occupational Stress among 30 American, Indian and Hispanic white teachers at a reservation school, concluded that regardless of race or sex, major sources of stress were inadequate salary, lack of professional recognition, and time management problems.

Liner-Pelz et. al. (1987) conducted a study using a sample of 983 nurses working across 14 hospital wards. The researchers found that non-responsiveness of management as the most severe work stressor for nurses. This was followed by parking problems, work overload, nurses' ambiguous and unsatisfactory status in the medical care team, followed by a feeling of low professional esteem.

Bailey et al. (1980) investigated stressors in intensive care unit nurses' work environment using the Stress Audit with 1,794 respondents. The stress audit was developed to measure factors that affect stress in the workplace. Interpersonal relationships were listed as the most common stressor by respondents (e.g. personal conflicts with staff and physicians, disagreement with physicians over patient care and therapy, conflicts with organizational leadership, lack of respect by physicians, lack of team work, and communication problems).

Purpose of the Study

From the existing literature on occupational stress, it has been revealed that although there has been lot of research on occupational stress of nurses in India and abroad, yet there is a dearth of research conducted on the stress level of working nurses in hospitals in Jamshedpur region of Jharkhand. This present study is very relevant because nursing staff is the largest human resource component in the health sector and are deployed at all levels of the health care delivery system. The work of nurses is characterized by high work demands, the need to learn new technologies, to work to increasingly intensified schedules, and to respond to emergencies.

Objectives

The study will focus on the following objectives:

1. To assess the occupational stress among nurses of different age groups employed in hospitals in Jamshedpur city of Jharkhand.
2. To study the various factors which lead to occupational stress among nurses employed in hospitals in Jamshedpur city of Jharkhand.

Materials And Methods

Research Design

The research design is a plan, structure, and strategy to answer the problem. There are several methods of data collection. A systematic and scientific methodology which

is referred to as research design determines the correctness and accuracy of the results obtained.

Data Collection

The secondary data have been collected by scanning literature, various professional magazines, works carried out by other research scholars, various research agencies reports. The study is based on Primary data collected from various nurses from different hospitals. The primary data constituted of information gathered through personal communication with nurses.

Sample

A sample of 115 nurses from different hospitals in Jamshedpur, Jharkhand was selected in the age group of 29–56 years. Work experience of nurses ranged from 1 to 33 years. While selecting the sample for the study a due care was given to the working experience and length of service of the respondents under study. Out of the total sample of 115 respondents 03 were nursing superintendent, 14 were matron, and 98 were staff nurses. They were assured that their responses would be kept confidential.

Instrument

Occupational Stress Index: A well developed and widely used Occupational Stress Index (OSI) scale, tested in Indian context (Srivastava and Singh, 1981) is chosen to measure the occupational stress of the sample. The OSI purports to measure the extent of stress which employees perceive from various job constituents and conditions of their job. The scale consists of 46 items each to be rated on the five point scale. Out of 46 items 28 are "True-Keyed" and 18 are 'False- Keyed'. Two different patterns of scoring have been adopted for two types of items. For true items, strongly disagree – 1, disagree-2, neutral-3, agree-4, strongly agree-5 and for false keyed items, the reverse of the true keyed items are used. The items relate to almost all relevant components of the job which cause stress in some way or the other, such as, role overload, role ambiguity, role conflict, unreasonable group and political pressure, responsibility for persons, under participation, powerlessness, poor peer relations, intrinsic impoverishment, low status, strenuous working conditions and unprofitability. The reliability index ascertained by split half (odd-even) method and Cronbach's alpha co-efficient for the scale as a whole were found to be .94 and .90 respectively. Srivastava and Singh (1984) determined these indices on Indian population of 700 employees of different cadres operating in various producing and non-producing organizations. The validity of the OSI was

determined by computing co-efficient of correlation between the scores on OSI and various measures of job attitude and behavior and they were found to be sufficiently high.

Results & Discussion

One way ANOVA was conducted to test the significance of difference between means of sub-scales on occupational stress among nurses in different age groups. Table 1 presents mean scores on different subscales and total occupational stress of nurses in different age groups like 'below 35', '36-45' and '46 and above' and the results of one- way ANOVA analysis.

Role Overload : F value was found to be significant for the subscale role overload ($F=12.85, p<.05$). The results imply that there is significant difference in role overload among nurses belonging to different age groups. Further from the table it is clear that the mean scores obtained by nurses of different age groups on the subscale role overload are 'below 35' ($M=21.22$), '36-45' ($M=19.75$), and '46 and above' ($M=17.58$) respectively. From the results it may be concluded that the influence of age on stress in the subscale 'role overload' is significantly higher among nurses in the age group 'below 35' and least among nurses in the age group '46 and above'.

Role Ambiguity : F value was found to be significant for the subscale role ambiguity ($F=22.59, p<.05$). The results imply that there is a significant difference in role ambiguity among nurses belonging to different age groups. Further, from the table it is clear that the mean scores obtained by nurses of different age groups on the subscale role ambiguity are 'below 35' ($M=14.61$), '36-45' ($M=11.55$), and '46 and above' ($M=12.44$) respectively. This suggested that the influence of age on stress in the subscale 'role ambiguity' significantly higher among nurses in the age group 'below 35' and least among nurses in the age group '36-45'.

Role Conflict : F value was found to be significant for the subscale role conflict ($F=8.01, p<.05$). The results imply that there is significant difference in role conflict among nurses belonging to different age groups. Further from the table it is clear that the mean scores obtained by nurses of different age groups on the subscale role conflict are 'below 35' ($M=16.16$), '36-45' ($M=15.83$), and '46 and above' ($M=14.44$) respectively. Hence, it can be stated that the influence of age on stress in the subscale 'role conflict' is significantly higher among nurses in the age group 'below 35' and least among nurses in the age group '46 and above'.

Unreasonable Group and Political Pressure: F value was found to be insignificant for the subscale unreasonable group and political pressure ($F=.128, p>.05$). The results

imply that nurses belonging to different age groups do not differ significantly on subscale 'unreasonable group and political pressure'. In addition, the mean scores obtained by nurses of different age groups like 'below 35' ($M=11.19$), '36-45' ($M=11.47$), and '46 and above' ($M=11.48$) on the subscale unreasonable group and political pressure, do not differ significantly.

Responsibility for persons : F value was found to be significant for the subscale responsibility for persons ($F=7.10, p<.05$). The results imply that there is significant difference in 'responsibility for persons' among nurses belonging to different age groups. Further from the table it is clear that the mean scores obtained by nurses of different age groups on the subscale responsibility for persons are 'below 35' ($M=8.00$), '36-45' ($M=10.44$), and '46 and above' ($M=9.32$) respectively. This suggested that the influence of age on stress in the subscale 'responsibility for persons' is significantly higher among nurses in the age group '36-45' and least among nurses in the age group 'below 35'.

Under Participation : F value was found to be significant for the subscale under participation ($F=6.55, p<.05$). The results imply that there is significant difference in 'under participation' is among nurses belonging to different age groups. Further from the table it is clear that the mean scores obtained by nurses of different age groups on the subscale under participation are 'below 35' ($M=15.77$), '36-45' ($M=9.94$), and '46 and above' ($M=11.39$) respectively. This suggested that the influence of age on stress in the subscale 'under participation' is significantly higher among nurses in the age group 'below 35' and least among nurses in the age group '36-45'.

Powerlessness : F value was found to be significant for the subscale powerlessness ($F=25.29, p<.05$). The results imply that there is significant difference in 'powerlessness' among nurses belonging to different age groups. Further from the table it is clear that the mean scores obtained by nurses of different age groups on the subscale powerlessness are 'below 35' ($M=10.77$), '36-45' ($M=8.44$), and '46 and above' ($M=7.67$) respectively. This suggested that the influence of age on stress in the subscale 'powerlessness' is significantly higher among nurses in the age group 'below 35' and least among nurses in the age group '46 and above'.

Poor Peer Relations: F value was found to be insignificant for the subscale poor peer relations ($F=.232, p>.05$). The results imply that nurses belonging to different age groups do not differ significantly on subscale 'poor peer relations'. In addition, the mean scores obtained by nurses of different age groups like 'below 35' ($M=12.16$), '36-45' ($M=11.25$), and '46 and above' ($M=11.41$) on the subscale powerlessness, do not differ significantly.

Intrinsic Impoverishment: F value was found to be insignificant for the subscale intrinsic impoverishment ($F=.308, p> .05$). The results imply that nurses belonging to different age groups do not differ significantly on subscale 'intrinsic impoverishment'. In addition, the mean scores obtained by nurses of different age groups like 'below 35' ($M=11.77$), '36-45' ($M=11.83$), and '46 and above' ($M=12.16$) on the subscale intrinsic impoverishment, do not differ significantly.

Low Status: F value was found to be insignificant for the subscale low status ($F=1.228, p> .05$). The results imply that nurses belonging to different age groups do not differ significantly on subscale 'low status'. In addition, the mean scores obtained by nurses of different age groups like 'below 35' ($M=9.02$), '36-45' ($M=8.27$), and '46 and above' ($M=8.48$) on the subscale low status, do not differ significantly.

Strenuous Working Conditions: F value was found to be significant for the subscale strenuous working conditions ($F=3.89, p< .05$). The results imply that there is significant difference in 'strenuous working conditions' among nurses belonging to different age groups. Further from the table it is clear that the mean scores obtained by nurses of different age groups on the subscale strenuous working conditions are 'below 35' ($M=13.27$), '36-45' ($M=12.00$), and '46 and above' ($M=11.88$) respectively. This suggested that the influence of age on stress in the subscale 'strenuous working conditions' is significantly higher among nurses in the age group 'below 35' and least among nurses in the age group '46 and above'.

Unprofitability: F value was found to be insignificant for the subscale ($F=.507, p> .05$). The results imply that the nurses belonging to different age groups do not differ significantly on subscale 'unprofitability'. The belonging to different age groups do not differ mean scores obtained by nurses of different age groups like 'below 35' ($M=5.44$), '36-45' ($M=5.52$), and '46 and above' ($M=5.11$) on the subscale unprofitability, do not differ significantly.

Total: F value was found to be significant for total occupation stress ($F=24.85, p< .05$). The results imply that the age has a significant influence on the overall stress of nurses. Further from the table it is clear that the mean scores obtained by nurses of different age groups on the overall stress scale are 'below 35' ($M=146.79$), '36-45' ($M=136.33$), and '46 and above' ($M=138.37$) respectively. This shows that the influence of age on overall stress is significantly higher among nurses in the age group 'below 35' and least among nurses in the age group '36-45'.

Conclusion

In total occupational stress, nurses belonging to different

age groups differed significantly. The results of the analysis suggested that the nurses in the age group 'below 35' showed significantly higher scores as compared to nurses in the other two groups. On the basis of the analysis it can be stated that there is a need for control of the stress of the nurses, especially for the young nurses as their occupational stress was much higher than that of the more experienced nurses. Through the research in the past, it has already been found that occupational stress is a serious problem in health sector (Beheshtifar & Nazarian, 2013). The negative effects of occupational stress may be realised in the form of reduced efficiency, decreases capacity to perform the job, dampened initiative and reduced interest in working, increased rigidity of thought, lack of concern for the organization and colleagues and a loss of responsibility and loyalty to the organization. Hence, the management of the organization need to take several initiatives to help their employees to overcome stress viz. organizing various stress in management programs, redesigning jobs, making role clearer so as to reduce role ambiguity, encouraging open channels of communication, improving working conditions etc.

References

1. Alhajjar, B. I. (2013): *Occupational stress among hospital nurses in Gaza-Palestine (Doctoral Dissertation)*. Retrieved from <https://www.escholar.manchester.ac.uk/item/?pid=uk-ac-man-scw:189872>.
2. Antoniou, A.-S., Polychroni, F., Vlachakis, A.-N. (2006): *Gender and age differences in occupational stress and professional burnout between primary and high-school teachers in Greece*, *Journal of Managerial Psychology*, 21(7): pp: 682-690.
3. Bailey, J. T., Steffen, S. M., Grout, J. W. (1980): *The stress audit: Identifying the stressors of ICU nursing*. *Journal of Nursing Education*, 19(6), pp: 15-25.
4. Ben-Bakr, K. A., Al-Shammari, I. S., Jefri, O. A. (1995): *Occupational stress in different organizations: a Saudi Arabian survey*, *Journal of Managerial Psychology*, 10(5): pp: 24-28.
5. Beheshtifar, M., & Nazarian, R. (2013): *Role of occupational stress in organisations*. *Interdisciplinary Journal of Contemporary Research in Business*, 4(9) pp: 648-657.
6. Bryan, C. Fairbrother, G., & Fenton, P. (2000): *The relative influence of personal and workplace descriptors on stress*. *British Journal of Nursing*, 9(13), pp: 876-880.

7. Chandraiah, K., Agrawal, S. C., Marimuthu, P., & Manoharan, N. (2003): *Occupational stress and job satisfaction among managers*. *Indian Journal of Occupational and Environmental Medicine*, 7(2), pp: 6-11.
8. Comish, R., Swindle, B. (1994): *Managing stress in the workplace*. *National Public Accountant*, 39(9), pp: 24-28.
9. Considine, G., & Buchanan, J. (1999): *The hidden costs of understaffing: An analysis of contemporary nurses working conditions in Victoria*. Victoria: Australian Nursing Federation.
10. Cooper, C. L., & Payne, R. (Eds.).(1988): *Causes, Coping and Consequences of Stress*. Chichester, UK: Wiley.
11. Daivdson, M. J., & Cooper, C. L. (1981): *A model of occupational stressors*. *Journal of Occupational Medicine*, 23, pp: 564-575.
12. Dua, J. K. (1994): *Job stressors and their effects on physical health, emotional health and job satisfaction in a university*. *Journal of Educational Administration*, 32(1), pp: 59-78.
13. Edwards, D., & Burnard, P. (2003): *A systematic review of stress and stress management interventions for mental health nurses*. *Journal of Advanced Nursing*, 42(2), pp: 169-200.
14. Holmlund-Rytkonen, M. & Strandvik, T. (2005): *Stress in business relationships*, *Journal of Business & Industrial Marketing*, 20 (1), pp: 12-22.
15. Jagdish, & Srivastava, A. K. (1989): *Perceived occupational stress and mental health: A case study*. *Indian Journal of Industrial Relations*, 24(4), pp: 444-452.
16. Linder-Pelz, S., Pierce, J. P., & Minslow, M. (1987): *Nurses, work stressors in an Australian metropolitan teaching hospital*. *Journal of Occupational Health and Safety- Australia and New Zealand*, 3, pp: 624-630.
17. Lu, L., Cooper, C. L., Kao, S. F., Zhou, Y. (2003): *Work stress, control beliefs and well-being in Greater China- An exploration of sub-cultural differences between the RRC and Taiwan*, *Journal of Managerial Psychology*, 18(6), 479.
18. Mosadeghrad, A. M. (2013): *Occupational stress and turnover intention: Implications for nursing management*, *International Journal of Health Policy and Management*, 1(2), pp: 169-176.
19. Sager, J. K. (1990): *Reducing sales manager job stress*. *The Journal of Consumer Marketing*, 7(4), pp: 5-14.
20. Sumangala, C., Nagendrababu, K., & D'Souza, L. (2009): *Relationship between age and occupational stress among IT employees*, *Journal of Management Research* 1(1).
21. Srivastava, A. K., & Singh, A. P. (1981): *Construction and standardization of an occupational stress index: A pilot study*, *Indian Journal of Clinical Psychology*, 8, pp: 133-136.
22. Sullivan, S. E., Bhagat, R. S. (1992), *Organizational Stress, Job Satisfaction and Job Performance: Where Do We Go From Here?*, *Journal of Management*, 18(2): pp: 353-374.
23. Vance, B. N., & Humphreys, S. (1989): *Response of laboratory school teachers to the teacher stress inventory*, *Perpetual and Motor Skills*, 68, (3), pp: 934-944.
24. Wallis, C. (1983, June 6): *Stress: Can we cope?* TIME.
25. White, B., O'Connor, D., Garrett, L. (1997): *Stress in female doctors*, *Women in Management Review*, 12(8): pp: 325-334.
26. Yeh, M., & Huang, H. (2007): *Occupational stress among newly-graduated nurses: An exploratory study*. Retrieved July 4, 2014, from <http://web.hk.edu.tw/~gas/main/download/journal/50/1.pdf>.

ANNEXURE

Table 1 : One-way ANOVA Analysis

Sub-scale	Age Groups	Mean	S. D.	F	Sig.
Role Overload	Below 35	21.22	3.43	12.85	.000
	36-45	19.75	3.34		
	46 and above	17.58	2.91		
Role Ambiguity	Below 35	14.61	2.48	22.59	.000
	36-45	11.5	1.31		
	46 and above	12.44	1.99		
Role Conflict	Below 35	16.16	2.22	8.01	.000
	36-45	15.83	1.13		
	46 and above	14.44	2.45		
Unreasonable group and political pressure	Below 35	11.19	2.89	.128	.880
	36-45	11.47	2.38		
	46 and above	11.48	3.08		
Responsibility for persons	Below 35	8.00	2.47	7.10	.001
	36-45	10.44	1.85		
	46 and above	9.32	3.40		
Under participation	Below 35	15.77	11.71	6.55	.002
	36-45	9.94	2.73		
	46 and above	11.39	3.97		
Powerlessness	Below 35	10.77	2.37	25.29	.000
	36-45	8.44	1.55		
	46 and above	7.67	1.93		
Poor peer relations	Below 35	12.16	2.80	1.479	.232
	36-45	11.25	2.06		
	46 and above	11.41	2.36		
Intrinsic Impoverishment	Below 35	11.77	2.53	.308	.737
	36-45	11.83	1.63		
	46 and above	12.16	2.75		
Low status	Below 35	9.02	1.78	1.228	.297
	36-45	8.27	2.25		
	46 and above	8.48	2.21		
Strenuous working conditions	Below 35	13.27	2.66	3.893	.023
	36-45	12.00	0.95		
	46 and above	11.88	2.93		
Unprofitability	Below 35	5.44	2.03	.507	.603
	36-45	5.52	2.04		
	46 and above	5.11	1.74		
Total	Below 35	146.79	11.68	24.85	.000
	36-45	136.33	4.46		
	46 and above	138.37	8.15		