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Occupational Stress and Factors Associated among Healthcare Workers in A Tertiary Care Hospital: A Cross-Sectional Study

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Abstract

The study aimed to assess the degree of occupational stress and identify associated factors among healthcare workers in a tertiary care hospital, with the goal of analyzing occupational hazards within the working environment. The total sample consists of 93 number of people, out of which 17 are male and 76 are females ranging from 18 years to 40 years of age groups. Subsequent to preparation the participants about the investigation, their consent were taken and respondents were approached to round out the surveys. The tools employed to study occupational stress is Fatigue Assessment Scale (FAS) and to study the associated factor Peace of Mind Scale (PMS). To conclude, we summarized that this negative correlation suggests that as peace of mind increases, fatigue tends to decrease, and vice versa.

Keywords: occupational hazard, occupational stress, nurses, fatigue, peace of mind

Work-related stress can emerge when individuals are confronted with job requirements and pressures that don't align with their skills and capabilities, straining their capacity to manage. This stress can manifest across various work situations, but it tends to intensify when employees perceive a lack of support from their superiors and peers, along with limited control over their work procedures. It's common for people to blur the line between pressure or a challenge and genuine stress, occasionally using this distinction to justify poor managerial practices.

Workplace pressure is an inevitable consequence of the demands inherent in the modern work environment. When an individual perceives this pressure as acceptable, it can actually serve as a means to keep employees attentive, motivated, and capable of working and learning effectively, contingent upon the available resources and personal attributes. However, when this pressure becomes excessive or unmanageable, it transitions into stress. Stress can have adverse effects on an employee's health and on the overall performance of the business. Work-related stress may arise from diverse factors, including suboptimal organization of work involving job design, work system arrangements, and management practices. Inadequate work structure, characterized by a lack of control over work processes, along with ineffective management, unfavorable working conditions, and insufficient support from colleagues and supervisors, can contribute to this stress. Importantly, stress doesn't dissipate once you leave the workplace. If it persists, it can adversely affect your health and overall well-being.

An environment filled with stress at work can give rise to various problems, including headaches, stomach discomfort, disturbances in sleep patterns, irritability, and challenges in maintaining concentration. Prolonged exposure to stress can lead to more serious conditions like anxiety, insomnia, increased blood pressure, and a weakened immune system. Additionally, it can contribute to health issues such as depression, obesity, and heart disease. Compounding the situation is the tendency for individuals facing excessive stress to resort to unhealthy coping mechanisms like overeating, consuming unhealthy foods, smoking, or turning to drugs and alcohol.

Workplace stress has garnered significant recent attention, being acknowledged as a worldwide affliction because of its adverse effects on the physical, emotional, and psychological health of individuals across different professional sectors.

The stress experienced by healthcare workers can significantly impact our peace of mind on a profound scale. The demanding nature of their jobs, particularly in healthcare settings, where they are often exposed to critical and emotionally taxing situations, can lead to heightened stress levels. This stress can, in turn, affect not only their own mental and emotional well-being but also impact the quality of care they provide to patients. In order to maintain a high standard of healthcare and preserve the peace of mind of both healthcare workers and the individuals they serve, it is crucial to address and mitigate the stressors they encounter in their daily work.

Li, Jiang, Sun, *et al.* (2021) The study uncovered that surgical nurses exhibited a relatively low level of personal satisfaction. Notably, variations were observed in patients' personal satisfaction scores based on factors such as orientation, age, title, and frequency of night shifts ($P < 0.05$). A positive correlation was identified between occupational stress and job burnout. Higher levels of occupational stress and job burnout were linked to a poorer personal satisfaction score. Occupational stress and job burnout were recognized as risk factors for quality of life, and the interaction between elevated stress levels and burnout significantly diminished overall satisfaction. The primary condition model uncovered that word related pressure and occupation burnout straightforwardly affected personal satisfaction, word related pressure straightforwardly affected work burnout, and work burnout was recognized as an intervening element in the connection between word related pressure and personal satisfaction. Babapour Reza Ali, et al (2022) This study sought to explore the relationship between job-related stress and its

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impact on the quality of life and caregiving behaviors exhibited by nurses. Work-related stress adversely impacts the health-related quality of life for nurses. Moreover, it can cast a shadow over their caregiving performance and diminish their behaviors, potentially influencing patient outcomes.Rink C. Lesley, et al. (2023) the aim of this study was to evaluate the primary stress factors reported by healthcare professionals. Over the period from June 2018 to April 2019, a total of 2,310 healthcare workers in the United States provided responses to an open-ended question, which asked, "When you reflect on the past few weeks, what have been your most significant sources of stress?" A comprehensive content analysis approach was employed to scrutinize the data. The findings revealed that healthcare workers delineated stressors falling into three categories: work-related stressors (comprising 49% of the overall stressors), stressors arising from their personal lives (constituting 32% of the total stressors), and stressors at the intersection of work and personal life (accounting for 19% of the total stressors).

Table 1: Demographic Details

Items	Details	Frequency	Percentage
Age	**18-24**	**12**	**12.9**
	24-30	**31**	**33.3**
	30-36	**21**	**22.6**
	36 and above	**29**	**31.2**
Gender	**Male**	**17**	**18.3**
	Female	**76**	**81.7**
	Others	**00**	**00**
Marital status	**Unmarried**	**31**	**25.8**
	Married	**69**	**74.2**
	Separated	**00**	**00**
	Divorced	**00**	**00**
Type of family	**Single**	**18**	**19.4**
	Nuclear	**34**	**36.6**
	Joint	**41**	**44.1**
Area of working	**ICU**	**37**	**39.8**
	Ward	**13**	**14**
	Private Rooms	**13**	**14**
	Others	**30**	**32.3**
Department of posting	**Medicine**	**10**	**10.8**
	Surgery	**14**	**15.1**
	Paediatrics	**04**	**4.3**
	Obs/Gynaecology	**02**	**2.2**
	Emergency	**06**	**6.5**
	Gastroenterology	**04**	**4.3**
	OT	**06**	**6.5**
	Neurology	**09**	**9.7**
	Endocrinology	**00**	**00**
	Urology/Nephrology	**00**	**00**
	Oncology	**01**	**1.1**
	Pulmonology	**05**	**5.4**
	Plastic Surgery	**00**	**00**
	Others	**32**	**34.4**
Number of years working	**1-3 years**	**25**	**26.9**
	3-6 years	**20**	**21.5**
	6-9 years	**12**	**12.9**
	9-12 years	**09**	**9.7**
	12 and above	**27**	**29**
Duty Hours	**8hrs**	**85**	**91.4**
	12 hours	**06**	**6.5**
	Double Duty (8+8 hours)	**02**	**2.2**

N=93

Method

Objective: The aim of the study was to investigate the extent of occupational stress and identify associated factors among healthcare workers in a

tertiary care hospital for analysing the occupational hazard in the working environment.

Hypothesis: the following hypothesis are as follows:

- There will exist significant relationship among fatigue and peace of mind scale of healthcare workers.
- There will be no significant relationship among fatigue and peace of mind scale of healthcare workers.

Design: The current research employs a non-experimental cross-sectional research design. It is characterized as an empirical study with a quantitative approach.

Sample: The total sample consist of 93 participants out of which n=17 was male and n= 76 was female individuals has been collected through cluster sampling technique, ranging from 18-55 age groups.

Selection Criteria:

Inclusion Criteria: workers with at least 1 year working experience in the hospital.

Exclusion criteria: workers with less than 1 year working experience in the hospital.

Tools: The tools employed to study occupational stress is Fatigue Assessment Scale (FAS) and to study the associated factor Peace of Mind Scale (PMS).

The Fatigue Assessment Scale (FAS) is a 10-thing self-report scale assessing side effects of persistent exhaustion. The FAS regards weariness as a uni-dimensional build and doesn't separate its estimation into various variables. In any case, to guarantee that the scale assesses all parts of weariness, it estimates both physical and mental side effects. The FAS has an internal consistency of .90. The all out score goes from 10 to 50, with a higher score showing more serious weakness. There are two subscales:

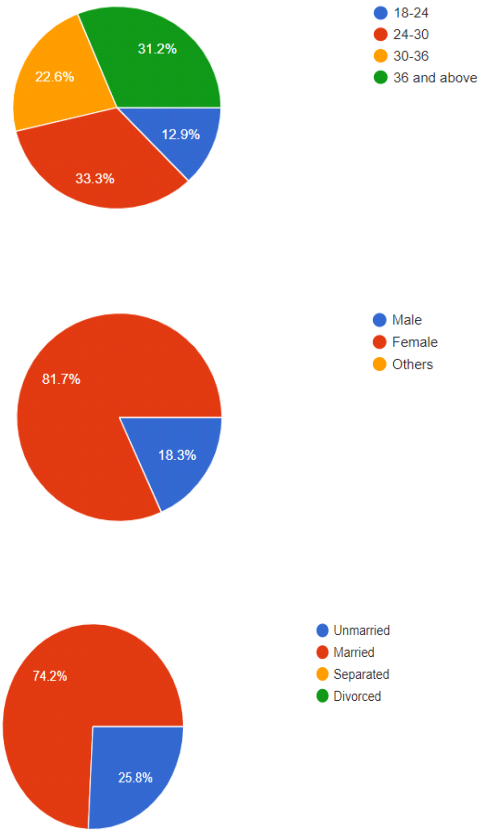
Cognitive fatigue, represented by the cumulative scores of items 3, 6, 7, 8, and 9, serves as an assessment of the cognitive effects of fatigue on the individual, encompassing aspects such as diminished motivation, difficulties initiating tasks, and impaired cognitive function. Meanwhile, physical fatigue, indicated by the combined scores of items 1, 2, 4, 5, and 10, provides a gauge of the physical consequences of fatigue, including sensations of physical exhaustion and a lack of energy.

Peace of Mind Scale (PoMS) is a 7-item self-report measure of internal peace and ease in daily life. The items of the questionnaire are measured on a 5-point Likert-type scale: 1= not at all, 2= some of the time, 3= often, 4= most of the time, 5= all of the time. This scale was developed by Lee, Lin, Huang, & Fredrickson in 2012. It was first developed in Chinese and later translated to English. Instructions tend to ask the participants to tell how often do they experience the internal states of peace and harmony which are conjoined in each item. The alpha reliability (α=.90) and test–retest reliability over a 2-week period(r=.75, p\.05) of the PoM was sufficient (Lee et. al., 2012). The same study showed good criterion-related and discriminant validity of PoMS.

Procedure: Participants were contacted via email, WhatsApp, or in-person meetings, during which they were provided with an overview of the study's purpose and objectives. Upon obtaining their consent, participants were presented with a questionnaire in the form of a Google Doc, encompassing queries related to demographic information, the Fatigue Assessment Scale (FAS), and the Peace of Mind Scale (PoMS). The researcher assured participants in advance that their responses would be utilized solely for research purposes and emphasized the confidentiality of their information. Following the completion of the questionnaire, any inquiries from participants were addressed, and they were sincerely thanked for their cooperation and involvement in the study.

Statistical Analysis: To investigate the comparison between fatigue and peace of mind scale of nurses, independent sample t-test was administered.

Socio-demographics



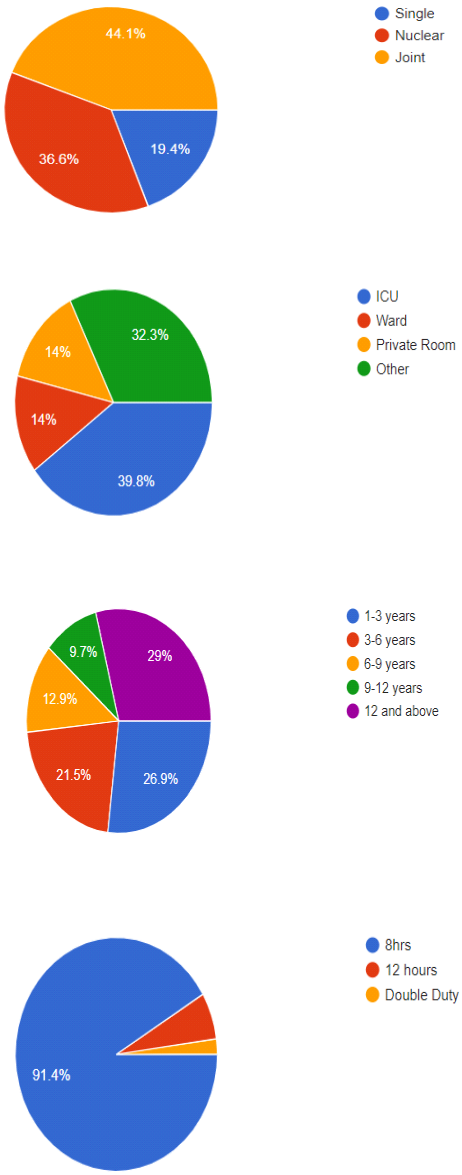


Figure1 : the given below figures are pie-charts demonstrating the socio-demographic details of the sample used in the present study.

The responses were collected from a total sample of 93 individuals out of which 76 (81.7%) were females and 17 (18.3%) were males, and 12 (12.9%) individuals ranged between the age group of 18 to 24 years, 31 (33.3%) individuals ranged between the age group of 24 to 30 years, 21 (22.6%) individuals ranged between the age group of 30 to 36 years, and 29 (31.2%) individuals ranged between 36 years of age and above. The data was collected from individuals belonging to workers posted in different department out of these 93 responses 10 (10.8%) are from medicine department, 14 (15.1%) are from surgery department, 04(4.3%) are from paediatrics department, 02 (2.2%) are from obs/gynaecology department, 06 (6.5%) are from emergency department, 04 (4.3%) are from gastroenterology department, 06 (6.5%) are from OT department, 09 (9.7%) are from neurology department, 01 (1.1%) are from oncology department, 05 (5.4%) are from pulmonology department, 32 (34.4%) are from several other departments of the hospital. Endocrinology, urology/nephrology & plastic surgery departments didn't responded to the survey questionnaires. From these individuals they were working for different working hours of their duty, 85 (91.4%) were working for 8 hours of shift, 06(6.5%) are working for 12 hours of shift and 02(2.2%) were doing double shift at the time of data collection.

Results

To find out the contrast, the fatigue assessment scale and peace of mind scale was applied to study the relationship between the two variables which can affect the employee and make the job environment stressful. To understand this, the Karl Pearson correlation method was applied to know the relationship between the variables.

Results revealed that on the fatigue assessment scale, the average and standard deviation values for the two groups were calculated 19.28571429±4.889998764 and 18.41558442±0.618508848 respectively, and the corresponding t value came out to be 0.577195088. With a p-value of 0.57331 for a two-tailed test with a t-statistic of 0.5652, and given that this p-value exceeds the significance level of 0.05, we do not have enough evidence to reject the null hypothesis.

Results further revealed that on the peace of mind scale, the average and standard deviation values for the two groups were calculated 25.35714286±5.300321367 and

Table 2: Comparison between the male and female on the scale of fatigue assessment scale and peace of mind scale(N=93)

Variable	Group	N	Mean	Std. Deviation	Std. Error Mean	T	P value
Fatigue Assessment Scale	**Male**	**17**	19.28571429	4.889998764	1.306907143	0.577195088	0.5652
	Female	**76**	18.41558442	5.427393116	0.618508848		
Peace of mind scale	**Male**	**17**	25.35714286	5.300321367	1.416570471	0.688947776	0.4926
	Female	**76**	25.96103896	5.154051953	0.587358732		

25.96103896±5.154051953 respectively, and the corresponding t value came out to be 0.688947776.

With a p-value of 0.62347 for a two-tailed test and a t-statistic of 0.4926, and considering that this p-value is above the commonly used significance level of 0.05, we do not have sufficient evidence to reject the null hypothesis.

The overall results of the present study after an in-depth analysis revealed that there exists a significant relationship among fatigue and peace of mind scale of healthcare workers.

Discussion

IV (Independent Variable) which is fatigue, and DV (Dependent Variable) which is peace of mind. In this case, the correlation coefficient is negative, which indicates that there is a negative linear relationship between fatigue and peace of mind.

Strength of the Correlation: In this case, -0.546755747 indicates a moderate negative correlation

Direction of the Correlation: The presence of a negative sign implies a negative correlation. In other words, as the degree of fatigue rises, there is a tendency for the level of peace of mind to decrease, and conversely, as fatigue decreases, peace of mind tends to increase. In simpler terms, higher fatigue is associated with lower peace of mind, and lower fatigue is associated with higher peace of mind.

Magnitude of the Correlation: The absolute value of the correlation coefficient (0.546755747) tells you how close the relationship is to a perfect linear relationship. In this case, it's relatively close to 1, which means that fatigue and peace of mind are moderately related, but not perfectly.

Wellbeing programmes can make possible for the workers to make efficient workplace. Several employee wellbeing aided programmes are:

1. Employee Education and Training:

a. **Stress Management Workshops:** Provide workshops and training sessions on stress management, resilience, and coping strategies.

b. **Fatigue Awareness Training:** Educate employees about the risks of fatigue, its impact on health and performance, and ways to recognize and address it.

2. Rest Breaks and Recovery Time:

a. **Mandatory Breaks:** Ensure that employees take regular breaks during their shifts to rest and recharge.

b. **Extended Time Off:** Offer additional paid time off or extended leaves for employees to recover from extended periods of high stress or fatigue.

3. Mental Health Support:

a. **Employee Assistance Programs (EAPs):** Provide access to EAPs that offer counseling and mental health services.

b. **Peer Support Groups:** Establish peer support groups or mentorship programs where employees can share their experiences and offer each other emotional support.

c. **Mental Health First Aid Training:** Train employees and managers to recognize signs of mental health issues and provide initial support.

4. Recognition and Appreciation:

a. **Employee Recognition:** Recognize and reward employees for their hard work and dedication, which can boost morale and job satisfaction. In our organizations we will implement employee support programs that focus on mental health and stress management. These programs can help employees maintain a sense of peace of mind, reducing the likelihood of experiencing high levels of fatigue.

b. **Feedback Mechanisms:** Encourage open communication channels for employees to provide feedback and suggest improvements in their work environment.

5.Physical Well-being:

a. **Health Promotion Programs:** Offer programs that promote physical health, such as exercise classes, healthy eating initiatives, and smoking cessation support.

b. **On-site Health Facilities:** If possible, provide on-site health clinics or facilities for quick access to medical care and check-ups.

Conclusion

In conclusion, the correlation coefficient of -0.546755747 between peace of mind and fatigue in a healthcare organization reveals an important relationship between these two variables. This negative correlation suggests that as peace of mind increases, fatigue tends to decrease, and vice versa.

Limitations & Recommendations

There is need for more such studies with more details and bigger sample size. More variables should be added to understand the factors like occupational mental health hazards. Pre and post interventions outcome on the wellbeing should be studied.

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