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## Impact of Job Stress and Sleep Disturbance on the Occupational Health of Shift Nurses in Tertiary Care Hospitals, Lahore

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### Abstract

*This study was conducted at tertiary care hospitals of Lahore Pakistan in 2022 to identify the effects of job stress and sleep disturbance on occupational health of shift nurses. A descriptive cross-sectional study design was used with convenience sampling technique and a pre designed questionnaire was utilized to record the responses. A total of 312 nurses participated in this study. Approximately 75% nurses thought that job stress and changes in shift can disturb the occupational health due to poor sleep habits 8% of them disagreed with the statement while 16% remained neutral. Poor sleep or sleep disturbance was main reason of poor occupational health of shift nurses. In conclusion, nurses greatly affected by sleep disturbance that resulted in errors and conflicts between colleagues. Job stress can lead to conflict between colleagues and yourself. So, there is a dire need to resolve these concerns to achieve optimal performance from nurses.*

**Key words:** job stress, sleep disturbance, occupational health.

### INTRODUCTION:

WHO shapes mental health action plan for 2013-2020; targets to support additional evidence-based effort to progress mental health worldwide. Many studies have recognized a link between physical activity and mental health, and additional proof proposes that physical activity can have a valuable impact on mental health in elders (Ghrouz, et al., 2019). In fact, current investigations emphasized an affiliation between shift-work, comprising night-shift, and the disruption of sleep-wake cycle, referred as circadian rhythm, causing deprived sleep and/or augmented daytime sleepiness relating with the circadian rhythm sleep disorder known as shift work sleep disorder (d'Ettor, et al., 2020).

Shift-work and work at night complements in job stress concerning a higher threat of cardiovascular and metabolic diseases in contrast to daytime shift. Therefore, it exemplifies a negative determinant for the workers' health, because natural barriers of the individual's body are compromised by situations of stress (Rosa, et al., 2019).

Shift work intensifies these discomforts. Night-time shifts make it challenging to sustain sleep, reduced entire sleep time and consequent sentiment of not taking adequate sleep in contrast to different shifts like those in the morning-time and evening-time shifts (Khade, et al., 2018).

Nurses, particularly working in emergency rooms/departments, work in increase stress pertaining to the quick pace of work to deal with life threatening situations. Most of the population base and the tendency of patients to go to renowned hospitals in the event of crises. The capacity of nurses working in emergency can be very tall, particularly in tertiary care hospitals, which can elongate working time or speed up the work beat, making

nurses further susceptible to issues related to sleep. Minute evidence now exists on the current sleep status of nurses working in the emergency rooms (Dong, et al., 2020).

It is appropriate to incorporate into the technical dialogue, the significance of sleep-wake arrangements for enhancing the health and academic performance of professional nurses so it can deliver professional nurses with quality of life and better care. Then, aim to assess the quality and duration of sleep in nurses. (Garcio, et al., 2019).

Objectives of this study were to:

- To determine the factor effecting on occupational health.
- To assess the association between the factors and occupational health.

## **METHODS**

**Study Design:** This was a descriptive cross-sectional study.

**Study setting:** This study was conducted in Tertiary Care Hospitals of Lahore Pakistan. All departments of nurses participated in this research study.

**Sampling technique:** Data was collected by the researchers by using non-probability convenient sampling technique. A total of 312 participants answered the questionnaire including staff nurses, head nurses (male or female) who were willing to participate.

**Variables:** The study variables included two independent variables i.e. job stress and sleep disturbance and one dependent variable i.e. occupational health of nurses.

**Data Analysis:** Data was analyzed by using SPSS version 21.0. Descriptive statistics were calculated to categorize the demographic variables and responses of participants for each question from the questionnaire.

## **RESULTS:**

Total nursing population of the hospital studied were 1658. Out of these 350 nurses were approached to participate in the study but 312 completed the questionnaire with a response rate of 89%. The mean gender of participants was 89.4% of females and 10.6% of males were interviewed. The participants were categorized for their demographic variables and listed in the table 1 (appendix).

The nurses' response was collected pre-designed questionnaire and the response of 312 nurses is illustrated in the following table for each question asked. The answers of nurses were categorized using the Likert scale and it came out that most of nurses reiterated that job stress and sleep disturbances can put a strong impact. Frequency of participants' response for each question is displayed in table 2 (appendix).

Summarizing the individual responses, it came out that 41% nurses strongly agreed to the statement. 35% answers were recorded as agreed and only 8% disregarded the statement while 16% nurses preferred to remain neutral while answering the questionnaire. The summary of responses is illustrated in the figure 1 (appendix).

Results of this study illustrated that stress at work and sleep disturbances can affect the occupational health of the nurses which ultimately impact their performance; a hindrance in the way of achieving best quality care for the patients.

## **CONCLUSION:**

This study found that factors affecting sleep disturbance in shift nurses included subjective health status, work stress and health promoting behavior. However subjective health status was the most critical factor, in other words poor health can exacerbate sleep disturbance, and sleep deprivation can ultimately affect nurse's health. Therefore, measures should be taken to improve the subjective health of nurses to reduce the sleep disturbance problems of nurses in shift work. Hence, more time should be spent on exercise or hobbies to supplement the irregular life style caused by shift work. In addition, individuals should strive to develop life style management guidelines that are compatible with their work style. Hospitals may be provided facilities like gym available 24 hours a day, and or adequate compensation like more days off work and financial elements must be delivered.

Institutionally, legislative measures to minimize the job stress for shift nurses could be implemented in all hospitals. This will improve sleep quality and a safe working environment in hospitals. Therefore, improving nurse`s health status and job satisfaction will lead to better for patients.

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**APPENDIX**

Table 1: Frequencies and percentage of the staff according to their demographic variables.

	<b>Demographic Details</b>	<b>Frequency</b>	<b>Percentage</b>
<b>Gender</b>	Male	33	10.6%
	Female	279	89.4%
<b>Age</b>	25-35	262	84.0%
	36-45	40	12.8%
	>45	10	3.2%
<b>Level of education</b>	Diploma	235	75.3%
	BSN	70	22.4%
	Others	7	2.2%
<b>Designation</b>	staff nurse	293	93.9%
	Head Nurse	19	6.1%

Table 2: Frequency of the participants' response for each question

<b>Questions</b>	<b>Strongly disagree</b>	<b>Disagree</b>	<b>Neutral</b>	<b>Agree</b>	<b>Strongly agree</b>
Sleep help me to restore my health.	2	1	5	69	233
Difficulty falling asleep after waking up from sleep.	7	32	77	114	82
Poor sleep causes effect on physical health.	4	2	6	83	217
Lack of sleep leads to increased errors.	3	10	45	136	118
I am not satisfied with my hours of sleep.	6	54	66	94	92
Work load is also a lead cause of my stress.	5	19	51	107	130
I must keep my mind on my work at all time.	4	13	54	111	130
Conflict between colleague on duty affect the normal day functioning.	9	25	56	118	104
Do you find it hard to sleep because your mind is occupied with work?	12	25	55	128	92
To what extent do you consider your sleep problem to interfere with your daily functioning of shift work?	8	25	85	121	73

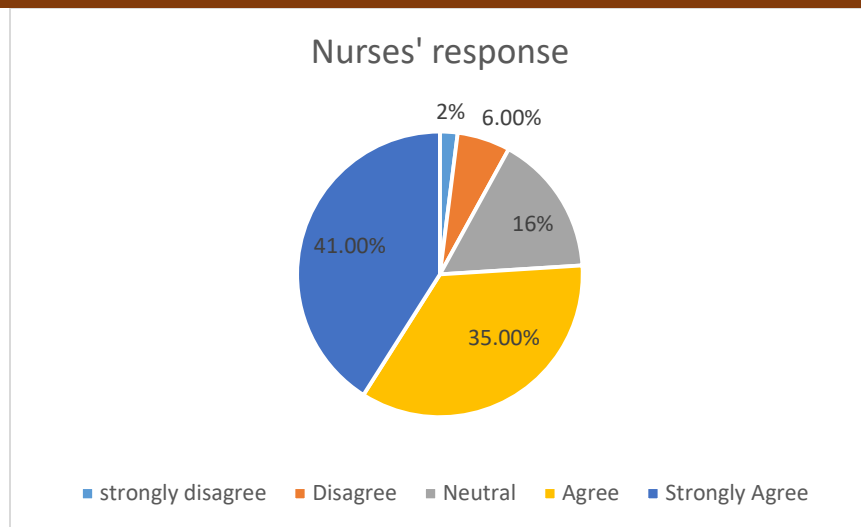


Fig. 1 Overall response of nurses