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A DESCRIPTIVE CORRELATIONAL STUDY: PREVALENCE OF SHIFT WORK DISORDER AMONG HOSPITAL STAFF

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ABSTRACT

The present study is aimed to determine the prevalence of shift work disorder and its associated factors among hospital staff. A descriptive research was adopted to determine the shift work disorder and its associated factors among hospital staff. Self-structured questionnaire scale used to obtain the data. A convenient sampling method was used to obtain 205 subjects who met the inclusion criteria for the research. The study was carried in selected healthcare institute Punjab. Analysis will be done as per objectives. SPSS statistical software was used for descriptive and inferential analysis. The study found that significant proportion of hospital staff suffered from shift work disorder. Reducing night work exposure appears to be the best intervention strategy for preventing SWD. It is important that nurses being frontline providers of care should have good mental and physical health in order to cater to the needs of the patients.

Keywords: Shift Work Disorder, Prevalence of Shift Work Disorder, Associated factors of Shift Work Disorder

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INTRODUCTION

Sleep, waking up early in the morning, difficulty falling back to sleep, and inadequate quality of sleep.[4] Shift work disorder patients commonly complain of extreme exhaustion, sleeplessness, poor sleep quality, and difficulties falling asleep. Other sleep disorders must be separated from SWD, as parasomnias, disorders of restless legs syndrome and uneven limb movement. Sleep apnea is associated with excessive snoring and apneic breathing, whereas parasomnias are connected with reports of hallucinations or nightmares interfering with sleep. The difficulty to sleep caused by a continuous urge to move the legs is known as restless legs syndrome. Associated sleep disorders are

18.8 percent more likely among persons with SWD than in those who work on a normal schedule.[5]. Researchers can encourage healthier, more sustainable work conditions for healthcare professionals and enhance the quality of treatment for patients worldwide by creating novel methods for mitigating the detrimental impacts of non-traditional work hours.[6] A person's work schedule is a direct cause of the chronic disease known as SWSD. According to the International Classification of Sleep Disorders, SWSD is a "circadian rhythm sleep disorder", Third Edition (ICSD). A circadian rhythm is an irregular 24-hour biological cycle. Numerous odd work schedules fall under the scope of shift work, as well as on overnight duty, irregular hours, permanent, ongoing night shifts, and plans requiring an early wake from nocturnal sleep. It is assumed that a main factor contributing to shift work routine fatigue and sleep disturbance is a conflict between core circadian rhythms and the necessary work schedule.[2]

RESEARCH PROBLEM: A descriptive correlational study to determine the prevalence of shift work disorder and its associated factors among hospital staff in selected health care institutes of Punjab.

OBJECTIVES

- To assess the prevalence of shift work disorder among hospital staff.
- To identify the associated factors of shift work disorder among hospital staff.
- To find out correlation between shift work disorder and associated health factors.

MATERIAL AND METODS

The target population of the study was hospital staff working in shifts. The total sample size of present study consists of 205 hospital staff. In this study, convenient sampling technique was used to select the subjects. Study was conducted on hospital staff of Civil hospital Phase 6 Mohali (Punjab). A self structured questionnaire in form of likert scale was utilized to determine the prevalence of shift work disorder. A first draught of the instrument was created after a thorough literature assessment on the subject of the current

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study. It includes the preparation of socio- demographic data, self- structured questionnaire. Tool was given to different experts and changes were made according to their opinions. Then tool's final draught was developed accordingly.

Tool consists of Socio Demographic variable which consists of ten questions intended to collect personal information from respondents, including age, educational status, marital status, work experience, education, profession designated area and a Self-Structured Questionnaire which comprised of a total of 25 likert scale questionnaire that determine the prevalence of shift work disorder among staff. Questions were divided into five domains that is sleep, stress, fatigue, anxiety and other health related factor. Further each domain has five questions related to it.

"Descriptive and Inferential Statistics" were used to analyze the data. The level of significance chosen was at $p \leq 0.05$. The results were summarized and described using descriptive statistics, including the frequency of shift work disorder and its contributing variables among hospital employees. The association between shift work disorder and its related health variables was determined using correlation analysis.

RESULTS

In present study Demographic profile of hospital staff out of 205 samples shows that the majority of participants were between the ages of 26-45 (76%) years old, female (75%), and married or living with a partner (93%). The majority of participants had work experience between 5-10 years (44%), having a bachelor's degree (44%). Majority of the participants worked as nursing officer (32%) In terms of the designated area of work, the majority of participants worked in wards (36%) (Table1). The prevalence of Shift Work Disorder (SWD) out of the total sample 205 is 46.8% (96 individuals). In terms of work experience, hospital staffs who have worked for 0-4 years have a significantly higher prevalence of shift work disorder compared to those who have worked for 5-10 years, 10-15 years, or more than 20 years. The correlation between SWD and sleep is positive but weak ($r = .169$, $p = .015$), indicating that as the prevalence of SWD increases; the quality of sleep decreases slightly (Table 2). The data indicates that stress is the most prevalent health-related factor among the participants, with a mean of 19.06±2.609, a median of 19, and a mean percentage of 76.25. Other health-related factors have the second-highest mean, with a mean of 18.02±3.147, a median of 18, and a mean percentage of 72.08. Sleep has a mean of 16.20±1.986, a median of 16, and a mean percentage of 64.80, while fatigue has a mean of 15.49±2.177, a median of 15, and a mean percentage of 61.95. Anxiety has the lowest mean, with a mean of 14.81±2.626, a median of 15, and a mean percentage of 59.26. (Table 3). The correlation between SWD and sleep is positive but weak ($r = .169$, $p = .015$), indicating that as the prevalence of SWD increases, the quality of sleep decreases slightly. The results show that there is a statistically significant positive correlation

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between shift work disorder and stress (r = .795, p < .001), fatigue (r = .330, p < .001), anxiety (r = .705, p < .001), and other health-related factors (r = .662, p < .001). The correlation between shift work disorder and sleep is also positive, but weak (r = .169, p = .015). In addition, the data shows significant correlations between some of the other health-related factors. There is a significant positive correlation between stress and anxiety (r = .547, p < .001), stress and other health-related factors (r = .438, p < .001), and fatigue and anxiety (r = -.187, p = .007). There is also a significant negative correlation between sleep and other health-related factors (r = -.288, p < .001). However, there are also some correlations that are not significant, such as between sleep and stress (r = -0.114, p = .103), sleep and fatigue (r = -0.090, p = .202), and fatigue and other health-related factors (r = 0.103, p = .141) (Table 4).

Table 1: Frequency and Percentage distribution of study subjects as per their sociodemographic variables

N=205

Variables	Opts	Percentage(%)	Frequency(f)
Age in years	Upto 25 Years	1	2
	26-35 Years	38	77
	36-45 Years	38	77
	46-55 Years	21	43
	56-60 Years	3	6
Sex	Female	75	154
	Male	25	51
Marital status	Married/Living with a partner	93	190
	Separated/Divorced	1	2
	Single	6	13
Work experience	0-4 years	15	30
	5-10 years	44	91
	10-15 years	28	58
	More than 20 year	13	26
Education	≤ High school	6	13
	Diploma	25	52
	Bachelor's	44	90
	Master's or above	24	50

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Profession	Physician	17	35
	Nursing officer	32	66
	Pharmacist	12	24
	Worker	6	13
	lab technician	17	34
	Other health professionals	16	33
Designated area	Emergency	19	38
	ICU/NICU	7	14
	Wards	36	73
	Laboratory	14	28
	Pharmacy	12	24
	OPD	14	28

Table 2: Association of prevalence Scores and Demographic Variables

N=205

DEMOGRAPHIC DATA		**PREVALENCE SCORE**		**ASSOCIATION WITH PREVALENCE SCORE**				
Variables	**Opts**	**SEVERE SWD**	**MODERATE SWD**	**Chi Test**	**P Value**	**df**	**Table Value**	**Result**
Age in years	Upto 25 Years	0	2	20.43	0.000	4	9.488	Significant
	26-35 Years	12	65					
	36-45 Years	4	73					
	46-55 Years	15	28					
	56-60 Years	0	6					
Sex	Female	31	123	12.09	0.001	1	3.841	Significant
	Male	0	51					
Marital status	Married/Living with a partner	29	161	13.54	0.001	2	5.991	Significant
	Separated/ Divorced	2	0					
	Single	0	13					

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Work experience	0-4 years	0	30	22.53	0.000	3	7.815	Significant
	5-10 years	20	71					
	10-15 years	2	56					
	More than 20 year	9	17					
Education	≤ High school	0	13	9.66	0.022	3	7.815	Significant
	Diploma	4	48					
	Bachelor's	21	69					
	Master's or above	6	44					
Profession	Physician	0	35	25.67	0.000	5	11.070	Significant
	Nursing officer	13	53					
	Pharmacist	0	24					
	Worker(GDA, drivers, security guards etc)	0	13					
	lab technician	6	28					
	Other health professionals	12	21					
Designated area	Emergency	15	23	28.68	0.000	5	11.070	Significant
	ICU/NICU	2	12					
	Wards	8	65					
	Laboratory	6	22					
	Pharmacy	0	24					
	OPD	0	28					

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Table 3: Descriptive statistic for domains

N=205

DESCRIPTIVE STATISTICS	Mean & S.D.	Median	Mean %	RANK
SLEEP	16.20±1.986	16	64.80	3
STRESS	19.06±2.609	19	76.25	1
FATIGUE	15.49±2.177	15	61.95	4
ANXIETY	14.81±2.626	15	59.26	5
OTHER HEALTH RELATED FACTORS	18.02±3.147	18	72.08	2
Overall	83.59±7.064	82	66.87	

Table 4: Correlation of SWD and health factors of SWD

N=205

Variable 1	vs	Variable 2	r value	P value
Shift Work Disorder	vs	SLEEP	.169*	0.015
Shift Work Disorder	vs	STRESS	.795**	<0.001
Shift Work Disorder	vs	FATIGUE	.330**	<0.001
Shift Work Disorder	vs	ANXIETY	.705**	<0.001
Shift Work Disorder	vs	Other health related factors	.662**	<0.001

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DISCUSSION

The present study findings shows depicts that the prevalence of Shift Work Disorder (SWD) out of the total sample 205 is 46.8% (96 individuals). Supported by similar study done in southern India on Shift Work Disorders revealed that the prevalence of Shift Work Disorder was found to be 43.07% Surekha Anbazhagan et al. (2016).[7] During the COVID-19 pandemic, shift nurses who were sampled for the condition had a 48.5% prevalence of shift work sleep disturbance. Physical exhaustion, mental stress, shift work lasting more than six months a year, busyness during the night shift, working more than 40 hours a week, working more than four nights a month, sleeping longer than eight hours before the night shift, using sleep medication, irregular meals, and high-

intensity physical activity were all linked to an increased risk of shift work sleep disorder.[8]. Wang et al. (2019) Poor sleep quality was shown to be strongly related with shift work disorder in research on the association between shift work disorder and hospital staff. the correlation between SWD and sleep is positive but weak ($r = .169$, $p = .015$), indicating that as the prevalence of SWD increases, the quality of sleep decreases slightly. A similar study examined the effects of shift work on sleep and alertness and discovered that shift work is linked to decreased sleep quality and increased sleepiness because it messes with circadian rhythms.

CONCLUSION

According to the findings of this research, it is concluded that shift work disorder is a prevalent issue among hospital staff. In order to meet the demands of the patients, it is crucial that hospital staff, who serve as the frontline providers of care, are in good physical and mental health.

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CONFLICTS OF INTEREST

There are no conflicts of interest.

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