

# To Compare Perceived Stress In Shift Duty Health Professionals.

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## ABSTRACT

**Background:** Shift work is common in modern society, and includes several professions responsible for the health and safety of others e.g. health care, police, and fire response. Perceived stress in Health Professionals could be regarded as being of special concern. Indeed, it is thought that level of psychological stress may be higher in Health Professionals than in other occupational groups. Objectives- To compare Perceived stress in shift duty health professionals. **Methods:** This was an observational, cross sectional study conducted at Rajindra Hospital, Patiala. The socio demographic profile of subjects was recorded and they were subjected to perceived stress scale. The observations and data obtained were statistically analysed using the software statistica 7.0 and SPSS 20. **Results and Conclusion:** Results revealed that junior residents had more perceived stress as compared to staff nurses, interns, pharmacists and other health professionals. Our study has concluded that periodic assessment and evaluation of health professionals is essential to know their perceived stress.

**Keywords:** Health Professional, Perceived stress, Shift duty.

## INTRODUCTION

Shift work is common in modern society, and includes several professions responsible for the health and safety of others e.g. health care, police, and fire response.<sup>[1]</sup> Functioning of the health sector is nearly impossible without a shift pattern of working schedule due to the fact that health care delivery system covers a period of 24 hours a day, 7 days a week. Shift work of health professionals is one of the critical issues in hospital inpatient care, making it vitally important to understand the functioning and efficiency of health care and its impact on health of employees.<sup>[2]</sup> As members of healthcare teams, these professionals are exposed to extreme loads and handling complicated dynamic phenomena under severe time pressure. Shift work is obviously a potential problem for health, mental and social well-being, work performance,<sup>[3-4]</sup> and patient safety.<sup>[5]</sup> The existing scientific studies indicate that shift work affects both sleep and waking by disrupting circadian regulation, familial and social life. Thus it is important to know about perceived stress of health professionals.

Stress can be thought of as a state resulting from an “imbalance between demands and resources” or as occurring when “pressure exceeds one’s perceived ability to cope”.<sup>[6]</sup> While stress is often associated with negative events or problems in a person’s life, it can also result from enrolling in professional programs to advance one’s career. Perceived stress in Health Professionals could be regarded as being of special concern. While Health Professionals encounter a number of occupational stressors common to other professions e.g. increased workload, organizational problems, and conflict, they also contend with unique stressors such as contact with patients who are suffering and dying.<sup>[7]</sup> These additional emotional stressors may contribute to their experience of stress. Indeed, it is thought that level of psychological stress may be higher in Health Professionals than in other occupational groups.<sup>[8]</sup> The potential significance of this occupational group is further underscored by the possibility that the experience of stress in this group is likely to have effects that go beyond Health Professionals themselves. For example, evidence suggests that stress and job ‘burnout’ among nurses is associated with increased patient mortality, reduced quality of care as measured by failure to rescue and increased patient dissatisfaction.<sup>[9]</sup>

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## MATERIALS AND METHODS

### Setting

This was an observational, cross sectional study conducted at Rajindra Hospital, Patiala. The subjects were selected by simple random method. A total of 200 subjects were taken as study sample. The socio-demographic profile and other information of the subjects were recorded, the subjects were then administered the Perceived Stress Scale. The observations made were recorded and the data was statistically analyzed by using the software Statistica 7.0 and SPSS 20.

The study was approved by institutional ethics committee.

### Inclusion and Exclusion Criteria

Only health professionals (male and female above 18 years of age) doing shift duty for at least one month were included in the study. Subjects with known prior history of psychiatric illness and those with organic brain syndrome were excluded from this study.

### Instruments

1. Proforma for Socio-Demographic profile: A semi-structured Proforma was used to gather socio-demographic and related details about the subjects.
2. The Perceived Stress Scale (PSS) is the most widely used psychological instrument for measuring the perception of stress. It is a measure of the degree to which situations in one's life are appraised as stressful. Items were designed to tap how unpredictable, uncontrollable, and overloaded respondents find their lives. The scale also includes a number of direct queries about current levels of experienced stress.<sup>[10]</sup>

## RESULTS

**Table 1: Distribution of Sample on The Basis Of Demographic Variables (n=200)**

Category	Variables	Frequency (n)	Percentage
Gender	Male	86	43%
	Female	114	57%
Educational Status	Under Graduation	35	17.5%
	Graduation	105	52.5%
	Pursuing Post Graduation	60	30%
Professional Status	Junior Resident	60	30%
	Nursing Staff	70	35%
	Intern	35	17.5%
	Pharmacist	15	7.5%
	Other	20	10%

The distribution of gender showed that out of 200 shift duty health professionals 86 (43%) were males and 114 (57%) were females. Almost 105 (52.5%) were graduates, 60 (30%) were pursuing post-graduation, 35 (17.5%) were undergraduates. Most

of our subjects were nursing staff 70 (35%) followed by junior resident 60 (30%). 35 (17.50%) were interns and others [comprising of lab technicians and OT assistants] were 20 (10%), 15 (7.50%) were pharmacists [Table 1] 126 (63%) subjects hailed from rural area. Nearly half of the subjects were married 101(50.50%), 92 (46%) were single, 3(1.50%) were divorced and 2(1%) widow. More than half 121 (60.50%) belonged to nuclear families [Table 2] Junior residents were found to be having statistically significant higher scores on Cohen perceived stress scale. [Table 3-6] findings reveal that junior resident had more perceived stress as compared to staff nurses (t=3.42; p<0.01), interns (t=5.22; p<0.01), pharmacists (t=6.33; p<0.01) and others (t=4.91; p<0.01) respectively. The reason for this may be attributed to the fact that in addition to their routine shift duty, they are also required to fulfill their academic needs and their working hours usually extend beyond their routine duty hours which separates them from other shift duty workers. Further, Junior residents are supposed to provide immediate and best treatment care and face extreme levels of expectations from patients and their families as well as their seniors.

**Table 2: Distribution of Sample on The Basis of Socio-Demographic Characteristics (N=200)**

Category	Variables	Frequency (n)	Percentage
Background	Urban	74	37%
	Rural	126	63%
Marital Status	Single	92	46%
	Married	101	50.5%
	Separated	02	1%
	Divorced	03	1.5%
	Widower	02	1%
Type of Family	Nuclear	121	60.5%
	Joint	76	38%
	Extended	03	1.5%

**Table 3: Means, S.D.'S And T-Test Values For Junior Residents (N=60) Versus Staff Nurses (N=70) On PSS**

Variables	Junior Residents (n=60)		Staff Nurses (n=70)		SE	t-values
	Mean	SD	Mean	SD		
Cohen Perceived Stress Scale	16.48	4.84	13.81	3.92	0.78	3.42**

**Table 4: Means, S.D.'S And T-Test Values For Junior Residents (N=60) Versus Interns (N=35) On PSS**

Variables	Junior Residents (n=60)		Interns (n=35)		SE	t-values
	Mean	SD	Mean	SD		
Cohen Perceived Stress Scale	16.48	4.84	12.57	2.46	0.75	5.22**

**Table 5: Means, S.D.'S And T-Test Values For Junior Residents (N=60) Versus Pharmacists (N=15) On**

Variables	Junior Residents (n=60)		Pharmacists (n=15)		SE	t-values
	Mean	SD	Mean	SD		
Cohen Perceived Stress Scale	16.48	4.84	11.73	1.58	0.75	6.33**

**Table 6: Means, S.D.'S And T-Test Values For Junior Residents (N=60) Versus Others (N=20) On PSS**

Variable s	Junior Residents (n=60)		Others (n=20)		SE	t-values
	MEAN	SD	MEAN	SD		
Cohen Perceived Stress Scale	16.48	4.84	12.75	1.94	0.76	4.91*

## DISCUSSION

The present study revealed about the perceived stress in shift duty health professionals. Results of t-tests revealed that junior resident had more perceived stress as compared to staff nurses, interns, pharmacists and other health professionals. Narayanan et al (2016) in their study at Kancheepuram,<sup>[11]</sup> Tamil Nadu also reported mean PSS score among doctors  $18.35 \pm 4.7$  was higher than nurses  $17.16 \pm 5.5$ . The above findings may be due to the unique academic challenges of M.D/M.S postgraduate course, maintenance and development of professional qualifications, long shift of duty hours, less vacation time and increasing incidence of physical assault on the junior residents.

This is consistent with the current trends published in a recent study on Indian doctors by Ambesh (2016) where the highest number of violent incidents (close to 50%) occurred in the ICU and almost 70% are caused by relatives of patients.<sup>[12]</sup> Also there exist no laws for the protection and safety of doctors' especially junior residents. While it is a non-bailable offense to assault a uniformed public servant like a bus driver or a policeman, there is no distinct penalty for hitting an on-duty physician in a white coat. Lesser perceived stress was observed in pharmacist and interns during shift work due to lack of urgent situations and work overload, these professionals also had minimum responsibility at work.

The results also showed staff nurse had more perceived stress as compared to interns and pharmacists. Atanes et al (2015) in his correlation study on primary care health professionals also showed higher levels of perceived stress predominantly in registered nurses.<sup>[13]</sup> The nurses' role has long been regarded as stress filled,

associated with physical labor, dealing with human suffering, staffing, and interpersonal relationships. In present study, there was no significant difference in perceived stress between interns, pharmacists and other health professionals. These groups had comparable mean scores.

## CONCLUSION

Junior resident had more perceived stress and sleepiness as compared to staff nurse, interns, pharmacists and other health professionals. Staff nurse had more perceived stress and sleepiness as compared to interns and pharmacists. Our study has concluded that periodic assessment and evaluation of health professionals is essential to know their perceived stress. Fixed duty hours, proper security at hospital, health insurance, continuous ongoing training, proper vacation and sick leave, counseling, support from their superiors and colleagues and comfortable work environment helps health professionals to work smoothly and thereby, enhance their career growth as well as their organizational growth and this will enable them to better cope up with the perceived stress.

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