



## A Comparative Study To Assess The Level Of Work Stress Among Day Shift And Night Shift Staff Nurses In District Hospital Of Sasaram, Rohtas.

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Date of Submission: 07-09-2021

Date of Acceptance: 22-09-2021

### ABSTRACT

**Background of study:** a study was conducted to assess the level of the work stress among day shift and night shift staff nurses in district hospital of Sasaram, Rohtas. **Aims:** Aims of the study were to find the work stress according to shift changes. **Objectives:** 1.To assess the level of work stress among day shift and night shift staff nurses. 2. To find out the association between level of work stress with selected demographic variables.3. To compare the level of work stress between day shift and night shift staff nurses.**Materials and Methods:** It was non-experimental descriptive approach. The research design for the study is comparative design. Non-probability purposive sampling technique was used to select the sample. The study was conducted in district hospital of Sasaram, Rohtas. The sample sizes were 60 staff nurses in which 30 day shift and 30 night shift staff nurses. Self structured questionnaires was used for assess the work stress level. **Results:** In order to collect the scientific data we used self structured occupation stress index. According to the finding the majority study sample (0%) day shift staff nurses and (0%) night shift staff nurses were having mild work stress, (36.6%) day shift staff nurses and (33.3%) night shift staff nurses were having moderate work stress and (63.3%) day shift staff nurses and (66.6%) night shift staff nurses were having severe work stress. The compared value found by 't' test extremely significant at p value <.001\*. The extent of work stress two group day shift and night shift are highly differentiated.

**KEYWORDS:** Day shift, Night shift, occupation, Staff nurses, Work stress.

### I. INTRODUCTION

Occupational stress in nursing is the physical and emotional reactions that occur when the nurse's abilities and resources cannot deal with the demands and requests of their work.[1]

According to American Journal of Industrial Medicine (2014), more than 70% of interviewed nurses indicated acute and chronic impacts of stress and exhaustion on their safety and health concerns. Several studies indicated that there are individual, social, environmental and organizational factors that lead to high levels of occupational stress among nurses .[2]

According to the American Institute of Stress, it is the main factor in up to 80% of all work-related injuries and 40% of turnovers in the workplace, while the European Foundation for the Improvement of Living and Working Conditions reported that 30% of the European working population is affected by work-related stress.[3]

A study from Jordan revealed stress among general physicians, dentists, pharmacists, and physician assistants was 33%, 32%, 25% and 19% respectively[4] . Studies from Ethiopia showed occupational stress in health professionals were 36.7% [5] Although different studies showed the prevalence of occupational stress among health care professionals, still there is very limited evidence regarding the management of occupational stress [6]

In Vietnam, the issue of occupational stress among health workers has also been of great interest in recent years [7]. Specifically, in 2016, a study conducted on eight central hospitals in Hanoi showed that 48.6% of health workers showed stress [8].

Occupational stress is an imbalance between requirements and ability to work [9]. In the context of globalization and changing factors of the nature of work, the environment is increasingly pressured and unstable, people are at risk of facing increasing work stress [10].



## II. MATERIALS AND METHODS

It was a quantitative non-experimental descriptive approach is used for this study as it is considered as suitable one to assess the level of work stress among day shift and night shift staff nurses. The research design for the study is comparative design. Non-probability purposive sampling technique was used to select the sample. The study was conducted in district hospital of Sasaram, Rohtas. The sample sizes were 60 staff nurses in which 30 day shift and 30 night shift staff nurses. Self structured questionnaires was used which consist of two parts related to sociodemographic data and 30 questionnaires.

Sociodemographic data included age, gender, education, monthly income, marital status shift change, ward, work experience, type of job. The questionnaires assess the extent of stress, employees experience in context of their life. Informed consent was taken before participation. The validity and reliability of the tools were established before their use.

## III. RESULTS

Table no.1 shows that the research hypothesis H1 is accepted for shift change and ward rotation and null hypothesis is accepted for the age, gender, education, monthly income, marital status, ward and type of job. It represent the chi square association of day shift and night shift with ward rotation statistically significant as the calculated value of shift change are 0.0007 and ward rotation calculated value is 0.0035, which is less than tabulated value at p-0.05.

Table no.2 show the data in the above table depicts the mean work stress, sd, and 't' test. 3.62 shows stress in day shift and night shift. The compared value found by 't' test extremely significant at p value < .001\*. The extent of work stress two group day shift and night shift are highly differentiated. Here the null hypothesis H<sub>0</sub> is rejected and research hypothesis H<sub>1</sub> is accepted.

Figure no.1 reveals that the majority study sample (0%) day shift staff nurses and (0%) night shift staff nurses were having mild work stress, (36.6%) day shift staff nurses and (33.3%) night shift staff nurses were having moderate work stress and (63.3%) day shift staff nurses and (66.6%) night shift staff nurses were having severe work stress

TABLE NO. - I

Chi square analysis Association between day shift and night shift selected demographic variables

Demographic variables	Day shift		Night shift		X <sup>2</sup>	Df	p value	inference
	No	%	No	%				
<b>1. AGE</b>								
a. Below 25 years	16	53%	21	70%	3.565	3	0.3124	NS
b. 25-35 years	11	37%	7	23.3%				
c. 35-45 years	3	10%	1	3.3%				
d. More than 45 years	0	0%	1	3.3%				
<b>2. GENDER</b>								
a. Male	13	43%	11	36.6%	0.278	1	0.5980	NS
b. Female	17	57%	19	63.3%				
<b>3. EDUCATION</b>								
a. M.sc nursing	0	0%	0	0%	0.501	3	0.9186	NS
b. B.sc nursing	2	6.60%	5	16.6%				
c. Post B.sc nursing	1	3.30%	1	3.3%				
d. G.N.M	27	90%	24	80%				



4. MONTHLY INCOME								
a. Less than 20,000/-	0	0%	0	0%	5.455	3	0.1413	NS
b. 20,000/- to 40,000/-	0	0%	0	0%				
c. 30,000/- to 40,000/-	0	0%	5	17%				
d. More than 40,000/-	30	100%	25	83%				
5. MARITAL STATUS								
a. Married	16	53.30%	17	56.6%	0.067	3	0.9954	NS
b. Unmarried	14	46.60%	13	43.4%				
c. Divorce	0	0%	0	0%				
d. Widow	0	0%	0	0%				
6. SHIFT CHANGE								
a. Weekly	12	40%	2	6.6%	16.786	3	0.0007	S
b. Monthly	9	30%	1	3.3%				
c. After 6 month	3	10%	11	36.6%				
d. Yearly	6	20%	16	53.3%				
7. WARD								
a. I.C.U	10	33.30%	5	16.7%	3.467	3	0.3250	NS
b. Emergency	6	20%	4	13.3%				
c. General ward	14	46.60%	21	70%				
d. O.T	0	0%	0	0%				
8. TYPE OF JOB								
a. Regular	22	73.30%	21	70%	0.082	2	0.9598	NS
b. Contract	8	26.60%	9	30%				
c. Non-contract based	0	0%	0	0%				
9. WARD ROTATION								
a. Weekly	6	20%	12	40%	11.273	2	0.0035	S
b. Monthly	15	50%	18	60%				
c. Yearly	9	30%	0	0%				

\*P ≤0.05 is significant

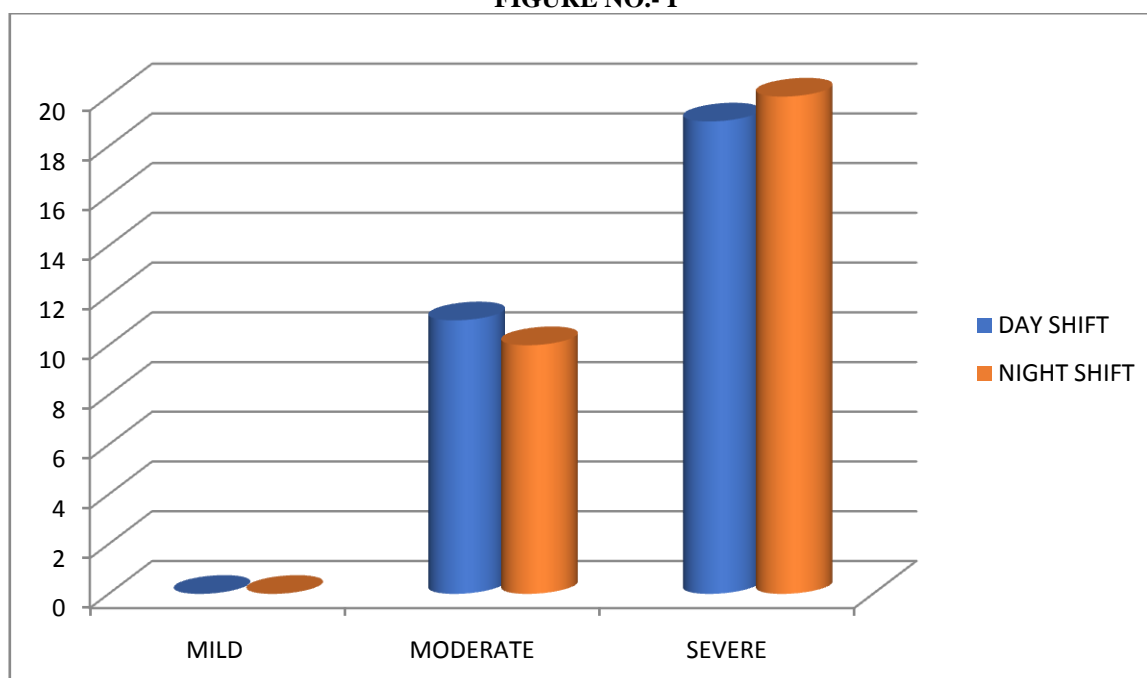


TABLE NO. - II

Work stress level score	Day shift		Night shift		t-test	df	p value	inference
	Mean	Sd	Mean	Sd				
	101.80	20.77	111.30	12.77	3.62	29	.001*	significant

\* $p \leq 0.05$  is significant

FIGURE NO.- I



#### IV. DISCUSSION

Majority of sample (0%) day shift staff nurses and (0%) night shift staff nurses were having mild work stress, (36.6%) day shift staff nurses and (33.3%) night shift staff nurses were having moderate work stress and (63.3%) day shift staff nurses and (66.6%) night shift staff nurses were having severe work stress.

The study established significant association between age factor of staff nurses and level of work stress. The study did not find significant association between age of staff nurses and level of stress.

The chi square test did not established any significant association between respondents of age year ,gender ,education, monthly income ,marital status ,ward ,type of job .The association between shift changes and ward rotation of staff nurses was found to be significant by chi square test the obtain 0.9954 which is higher the than the table value at 0.05 .This may be happen due to extra burden of

ward rotation and shift changes. Major findings of the study are summarized as follows, findings related demographic characteristics in the present study all select variable were not statistically significant with level of stress hence, hypothesis H1 is related in this area. Socio demographic variables mainly shift changes and ward rotation about staff nurses have statically association with work stress .Hence hypothesis H is accepted in this area.

t-test was done for the correlation between day shift and night shift staff nurses and found the mean work stress, sd , and 't' test 3.62 shows stress in day shift and night shift. The compared value found by 't' test extremely significant at p value  $< .001^*$ . The extent of work stress two group day shift and night shift are highly differentiated. Here the null hypothesis  $H_0$  is rejected and research hypothesis  $H_1$  is accepted.

A study done by Johnykutty Joseph and Babitha K Devu reported the level of work related stress among working women and non-working



women. The calculated 't' value was 20.57 which was statically significant at p, 0.0001. There was significant association of level of stress with the demographic variable 'occupation' for both working and non-working women which was statistically significant at  $P < 0.001$ .

Revels that the majority study sample (0%) day shift staff nurses and (0%) night shift staff nurses were having mild work stress, (36.6%) day shift staff nurses and (33.3%) night shift staff nurses were having moderate work stress and (63.3%) day shift staff nurses and (66.6%) night shift staff nurses were having severe work stress.

## V. CONCLUSION

The present study was aimed at assessing the level of work stress among day shift staff and night shift staff and its consequences.

The relevant data was collected statistically based on objectives of the study. there 30 staff of day and 30 staff night shift sample (0%) day shift staff nurses and (0%) night shift staff nurses were having mild work stress, (36.6%) day shift staff nurses and (33.3%) night shift staff nurses were having moderate work stress and (63.3%) day shift staff nurses and (66.6%) night shift staff nurses were having severe work stress. statistically significant association was found between day shift and night shift, shift change, ward rotation these are shows that these variables had influenced level of work stress. This shows that these variables had influenced level of knowledge in this study.

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