

A Comparative Analysis On Health And Well-Being Of Night Shift Nurses Working In Icus And Emergency Departments

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Abstract: *Health in its broadest sense is a dynamic state in which the individual adapts to change in internal and external environments to maintain a state of well-being. Night shift work is essential to the operation of a hospital. Several studies have shown that working on a night shift as a permanent shift or rotating shift affects the health and well-being of the workers. Night shift workers report poorer health than their day shift counterparts. A descriptive comparative study was conducted in IMS & SUM Hospital, Bhubaneswar. 86 staff nurses randomly selected for this study. The objectives of the study were to assess health and wellbeing of night shift nurses working on different intensive care units. To assess health and well-being of night shift nurses working on emergency. To find out the difference between health and wellbeing of night shift nurses working on different medical and surgical ICU. To find out the difference between health and well-being of night shift nurses working in ICU and emergency. The study population were emergency staff nurses, medical and surgical ICU staff nurses of Sum nursing College, Bhubaneswar. Self-structure socio-demographic Performa, knowledge and experience questionnaire was used to assess the association of knowledge and experience with socio-demographic variables. The data was analyzed by using SPSS version 11.5. The result of the studies revealed that 43% having very hard night shift duty, 23.36% having hard night shift duty, 8.6% having moderate night shift duty. The present study revealed that age, marital status, total exposure, nurse-patient ratio having no significant relationship with health. In this study revealed that age, educational status, experience, nurse-patient ratio having no significant relationship with well-being*

Keywords: *Health and Well-being; Nurses; Night shift*

INTRODUCTION

Health is very dynamic in which the individual become adjusted to change in internal and external environments to enable a state of well-being. The environments of internal world include many circumstances that have an influence on health including hereditary and mental variables, intellectual and spiritual dimensions and disease conditions.

The environment of external links to factors outside the person that may have capacity to affect health including the physical environment, societal relationships, and variables of economy because both environments without any interruption changes, the person probably enable a state of well-being.¹

Wellbeing is not only the absence of disease condition. It is a complex mixture of a person's physical, mental, emotional and social factors. Well-being is greatly combined with happiness and satisfaction of life. Shortly, wellbeing could be marked out as how you think about yourself and your life. Wellbeing is about feeling good and enjoyment of your day to day life.²

Night shift duty is very necessary for the operation of a hospital. So many studies have described that Night shift workers report bad health than their day shift.³

Health Times (2017) published an article on "Impact of night shift on nurses". In 2015 the Australian Health Survey (AHS) found that 40% of male night shift nurses and 45% of female night shift nurses were suffering from chronic health diseases including back-pain, diabetes and COPD in comparison to 36% - 39% of the remaining population. High rate of obesity also has been observed amongst the night shift nurses. Shift workers from their family, friends and relatives. The mental happening of these social disturbances may have negative implications on the quality of health services the nurse is providing to the patient.⁴

Nurses are vital in health care delivery system, but nurses working in night having a main role in provision of this health care. Night shift nurses are accountable for care of client with little support in difficulty working conditions; in condition of tiredness and other hard works directly related to working at night.⁵

Shift work is mostly necessary to make adequate for continuation of care in the hospitals. Mostly the night shift is one of the favourable reasons for the disturbances of circadian rhythms, causing markedly alterations of sleep and function of body that can affect physiological and psychological well-being and negatively impact on work performance.⁶

During our clinical experience we found night shift duty has a bad experience of maximum staff nurses.

Materials and methods

A quantitative approach and descriptive comparative design was adopted for the present study. This study was conducted in IMS&SUM Hospital, Bhubaneswar. 86 staff nurses randomly selected for this study. The study population was emergency staff nurses, medical and surgical ICU staff nurses of Sum Nursing College, Bhubaneswar.

Subjects

The population of the present study comprised of all-night shift nurses working in emergency and medical & surgical ICUS.

The Inclusion criteria were-

- Emergency room, labour room, medical and surgical ICU night shift staff nurses interested to participate in the study.
- Nurses who can understand Odia and English.

The Exclusion criteria were-

- Night supervisor
- Nurses who are not available at the time of data collection.
- The nurses who are not interested to participate in the study.

Procedure-

Data collection was done by Self-structure socio-demographic Performa, knowledge and experience questionnaire were used to assess the association of knowledge and experience with socio-demographic variables.

Methods

A quantitative non-experimental approach was use in this study. Comparative research design was used in the study. In the present study research variables health and wellbeing of nurses and

demographic variables are age, educational status, marital status, maximum exposure area, total experience in clinical area, nurse patient ratio in area of work, feelings of nurses regarding night shift duty. Self-structured questionnaire was prepared for collecting socio demographic data schedule and rating scale and WHO well-being index rating scale was used to assess health status and well-being of staff nurses.

Measuring Instruments-

Section A: Socio demographic data

It consists of seven items.

Section B: Self structured questionnaire contains Health Assessment

- Physical health
- Emotional health
- Social health
- Spiritual health
- Intellectual health

Section C: Standardized tool

- Wellbeing-Index
The WHO wellbeing-index scale consists of 5 questions with possible scores ranging from 0-25. Higher wellbeing-index scores indicates 25 representing best possible quality of life and lowest score indicates 0 representing worst possible.

Statistics

Data obtained were analyzed in terms of objectives and by using both descriptive & inferential statistics.

RESULTS

Description of study sample according to socio demographic variables by using frequency (f) && percentage (%)

Study finding reveals that 65 number of study samples belongs to age group 20-25 yrs, 15 number of study samples are belonging to age group 26-30 yrs, sixnumber of samples belong to age group of 31-35 years. It is also found that four no. of samples are belongs to ANM, 58 number of samples are belonging to GNM, 22 numbers of study samples are belonging to B.SC nursing. and two numbers of study sample belongs to PG nursing.

– it reveals that 20 numbers of study samples were married, 62 no. Of study samples were un married, 2 numbers of study sample were divorcee, 2 numbers of study samples are widow. Among them 11 numbers of sample were married in MICU, 20 were unmarried, 2 were divorcee and 2 were widow. And 3 were married in SICU, 12 were unmarried. In Emergency 6 numbers of samples were married, 22 were unmarried.

it reveals that 56 numbers of study sample were having maximum ICU exposure, 26 were having maximum emergency exposure, 5 were from labour room exposure.

it reveals that 22 numbers of sample having 6-month experience from which 10 were from MICU, 4 were from SICU, 8 were from emergency. 18 numbers of samples were 1-year experience from which 11 from MICU, 1 from SICU, 6 from emergency. 22 were having 2 years' experience from which 8 from MICU, 10 from SICU, 4 from emergency. 24 were having >2 years' experience from which 14 from MICU, 10 from emergency.

it reveals that 4 numbers of sample having 1:1 ratio from which 4 were from MICU. 57 numbers of samples were 1:2 ratio from which 30 from MICU, 13 from SICU, 14 from emergency. 23 were having 1:4 from which 7 from MICU, 2 from SICU, 14 from emergency. 2 were having > that nurse patient ratio from which 2 from MICU.

– it reveals that 50 numbers of sample having very hard from which 20 were from MICU, 8 from SICU, 22 from emergency. 26 numbers of samples were having hard night duty from which 13 from MICU, 7 from SICU, 6 from emergency. 10 were having moderate from which 10 from MICU.

Chi- Square analysis to describe the Association of health of night shift nurse working in different ICU and Emergency with selected demographic variable.

The analysis shows that there is not statistically significant between health of night shift nurse with working in different ICU and Emergency as the chi-square value is 0.000901 which is less than the tabulated value, health of night shift nurse with marital status is Not quite statistically significant as the chi-square value is 6.57 which is more than tabulated value, Extremely statistically significant health of night shift nurse with maximum exposure area as the chi-square value is 42.4087 which is more than tabulated value, health of night shift nurse with experience as the chi square value is 35.13202 which is greater than tabulated value, Not statistically significant health of night shift nurse with nurse patient ratio as the chi square value is 6.1086 which is greater than tabulated value, Not statistically significant health of night shift nurse with Feeling in night shift as the chi-square value is greater than tabulated value.

Chi- square analysis to find out the association of wellbeing of the night shift nurses working in different icu and emergency with selected demographic variables .

The analysis shows that there is not statistically significant between wellbeing with age as the chi - square value is 0.0036 ,which is less then tabulated value, wellbeing with educational status is statistically significant as the chi – square value is 9.6260,which is more than the tabulated value , wellbeing with marital status is not statistical significant as the chi-square value is 2.4337,wich is less then tabulated value ,wellbeing with maximum exposure is not statistical significant as the chi- square value 2.0403, which is less then tabulated value ,wellbeing with total experiences in clinical area is not quite statistical significant as the chi-square value 6.523683,which is less then tabulated value .wellbeing with nurse patient ratio in area of work is not statistical significant as the chi- square value 0.69,which is less then tabulated value . wellbeing with how is your night shift duty is not statistically significant as the chi-square value 0.1546, which is less then tabulated value.

T Test to find out the health and well-being of the night shift nurses working in medical and surgical ICU.

The data represents that there is not a significant difference in health and wellbeing of the nurses working night shift duties in MICU and SICU. The calculated 't' value for health is 3.03 which is more than the tabulated 't' value at 0.01 level of significance and the 'p' value is 0.0037. The calculated 't' value is 3.03 which is more than the tabulated 't' value at 0.01 level of significance and 'p' value is 0.0037. Here non hypothesis is accepted. There will be no significance difference in health and wellbeing of nurses working in night shift duty.

Co- relation of health and wellbeing of the nurses working night shift duties in medical and Surgical ICU

The data represented that there was a positive co-relation between the health are (60.45 ± 8.80) and wellbeing are 4.68 ± 5.06 , The r value are 0.9411 and P value are 0.267($p \leq 0.05$). which is statistically significant. So,the null hypothesis is rejected and research hypothesis is accepted

Discussion

This present study emphasized to assess the health and Wellbeing of nurses working in different icus and emergency in SUM Hospital, Bhubaneswar, using a self-structured Questionnaire and Well-being index rating scale. The aim of the study is to assess the health of night shift nurses working in different ICUS and emergency, to assess the correlation between health and well-being of night shift nurses and to find out the association of health and well-being regarding night shift with selected demographic variables. The result of the studies revealed that 43% having very hard night shift duty,23.36% having hard night shift duty,8.6% having moderate night shift duty. The present study revealed that age, marital status, total exposure, nurse-patient ratio having no significant relationship with health. In this study revealed that age, educational status, experience, nurse-patient ratio having no significant relationship with well-being.⁸⁻¹⁰ To validate the findings more sample size is needed.

Conclusion

In this study majority of the night shift nurses reported that they have positive co-reaction between health and well-being.

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Conflict of interest: The authors declare that there is no conflict of interest.

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Table 1.Chi- Square analysis to find out the Association of health of night shift nurse working in different ICU and Emergency with selected demographic variable.

N=86

Sl no	Variables	Chi-square value	Degree of Freedom	Tabulated value P=0.01	Inference
1	AGE	0.000901	1	0.9761	Not statistically significant

2	EDUCATIONAL STATUS	6.57	3	0.0867	Not quite statistically significant
3	MARITAL STATUS	42.4087	3	0.0001	Extremely statistically significant
4	MAX. EXPOSURE AREA	35.13202	2	< 0.0001	Extremely statistically significant
5	EXPERIENCE	6.1086	3	0.1064	Not statistically significant
6	NURSE PATIENT RATIO	3.5940	3	0.3088	Not statistically significant
7	FEELING INNIGHT SHIFT	1.1972	2	0.5496	Not statistically significant

Table 2. Chi- square analysis to find out the association of wellbeing of the night shift nurses working in different icu and emergency with selected demographic variables .

N=86

Sl no	Variables	Chi-square value	Degree of Freedom	Tabulated Value P= 0.01	Inference
1	AGE	0.0036	1	0.9522	NOT STATISTICAL SEGNIFICANT
2	EDUCATIONAL STATUS	9.6260	3	0.022	STATISTICAL SEGNIFICANT
3	MARITAL STATUS	2.4337	3	0.4874	NOT STATISTICAL SEGNIFICANT
4	MAXIMUM EXPOSURE	2.0403	2	0.3605	NOT STATISTICAL SEGNIFICANT
5	TOTAL EXPERIENCES IN CLINICAL AREA	6.523683	3	0.0887	NOT QUITE STATISTICAL SEGNIFICANT
6	NURSE PATIENT RATIO IN AREA OF WORK	1.4665	3	0.69	NOT STATISTICAL SEGNIFICANT
7	HOW IS YOUR NIGHT SHIFT DUTY	3.7296	2	0.1546	NOT STATISTICAL SEGNIFICANT

Table 3. T Test to find out the health and well-being of the nurses working night shift duties in medical and surgical ICU.

N=86					
PARAMETERS p value	MICU		SICU		
	MEANS±SD	t value	p value	MEAN±SD	p value
HEALTH 0.0037	52.34±8.18	3.03	0.0037	43.26 ±10.53	3.03
WELL BEING 0.036	52.34±	5.78	0.036	43.266±	5.78

Table 4. Correlation of health and wellbeing of the nurses working night shift duties in medical and Surgical ICU

N=86			
PARAMETERS	MEAN±SD	r value	p value
Health	60.45± 8.80	0.9411	0.267
Welbeing	4.68±5.06		