A Study to Assess the Effectiveness of Structured Teaching Programme Related to Level of Knowledge Regarding Shift Work Disorder and Its Management among Staff Nurses in SMI Hospital Dehradun

Pooja Pant, Blessy Cherian

Abstract: <u>*Background of the Study*</u>*: Sleep plays a vital role in good health and well-being throughout your life. Getting enough quality sleep at the right times can help protect your mental health, physical health, quality of life, and safety. During sleep, your body is working to support healthy brain function and maintain your physical health. Sleep supports healthy growth and development, healing and repairing our heart and blood vessels, also maintaining balance of hormones and has a clear mind and sharper focus, and improves our memory. Research also suggests that sleep deprivation makes us more stressed, irritable and we react negatively to minor annoyances and interruptions.* <u>*Methodology:*</u> *A pre experimental research design is used in this study as there is a need to conduct generalized assessment of the knowledge of staff nurses regarding shift work disorder and its management. The conceptual framework used for this study is based on Imogen king's Goal Attainment model. A pre experimental research design is used in this study. Sample in this study were selected by using purposive Non-Probability sampling technique. Structured teaching programme was given to the staff nurses. The data was collected to assess the effectiveness of structured teaching programme to assess the level of knowledge of staff nurses regarding shift work disorder and its management. The data was collected using a Questionnaire for knowledge level and analysed using descriptive and inferential statistics.* <u>*Conclusion:*</u> *The results show that the Staff Nurses knowledge level improved after implementation of the structured teaching Programme on shift work disorder and its management. The study indicates that the Stp is an effective method in improving moderate to adequate level of knowledge regarding health topics to the present day society where much attention is given to health promotion rather than treating the disease after acquiring it.*

Keywords: Shift work disorder, Effectiveness, Knowledge level, Structured teaching program, Health and safety, Staff nurses, Workplace hazards, Sleep hygiene

1. Introduction

When you are inspired in your work, everything seems to fall into places

Wayne Dyer

Background of the Study

Sleep plays a vital role in good health and well-being throughout your life. Getting enough quality sleep at the right times can help protect your mental health, physical health, quality of life, and safety. During sleep, your body is working to support healthy brain function and maintain your physical health. Sleep supports healthy growth and development, healing and repairing our heart and blood vessels, also maintaining balance of hormones and has a clear mind and sharper focus, and improves our memory. Research also suggests that sleep deprivation makes us more stressed, irritable and we react negatively to minor annoyances and interruptions. For example, a survey from the American Psychological Association found that adults who slept fewer than eight hours a night were more likely to report symptoms of stress. Poor sleep can increase the risk of having poor health, and poor health can make it harder to sleep. Often basic techniques can improve your sleep, like small lifestyle and attitude adjustment, implementing HEAL technique that is addressing on ,Health- It's important to get any health concerns shared both for helping physical symptoms and for addressing any worries that might keep you awake. Environment-Where you sleep is important, and

the bedroom and bed should be mainly places you associate with sleep. Attitude-It's easiest to get to sleep when we are able to relax, and let go of concerns. In the time before we go to bed, we should try and wind down, our concerns be less stimulated, and relax, but relaxation techniques, a warm bath, warm drinking milk or mindfulness practice can all help. Lifestyle-What you eat and drink can affect your sleep. Stimulants like caffeine can make it harder to sleep, and a heavy or sugary meal close to bedtime can make sleep uncomfortable. Alcohol might seem to help you get to sleep, but it reduces the quality of sleep later. Taking exercise during the day is also a good way to aid sleep, but exercise releases adrenaline so exercising during the evening may be less helpful.

National Heart, Lung, and Blood Institute 2018 [2]
Shift work is work that takes place on a schedule outside the typical 9 am – 5 pm day. It can involve evening or night shifts, early morning shifts, and rotating shifts. Many industries rely heavily on shift work.

National sleep foundation, 2019
Shift work sleep disorder (SWSD) is a circadian rhythm sleep disorder characterized by insomnia and excessive sleepiness affecting people whose work hours overlap with the typical sleep period. Insomnia can be the difficulty to fall asleep or to wake up before the individual has slept enough. The excessive sleepiness appears when the individual has to be productive, awake and alert. Both symptoms are predominant in SWSD. There are numerous shift work

schedules, and they may be permanent, intermittent, or rotating; consequently, the manifestations of SWSD are quite variable.

Wikipedia 2019
A study was undertaken, which shows high prevalence of insufficient sleep and symptoms of common sleep disorders among medical centre nurses. 49% of participating nurses had averaged less than 7 hours of sleep per night, and the overall average night sleep time was 6.6 hours. Symptoms consistent with chronic insomnia were identified in 31% of nurses, and excessive daytime sleepiness was found in 4.5% of them. Twenty-seven percent of nurses used medications to help them sleep, and 13% reported using medications to stay awake and these symptoms were indicative of shift work disorder among 31% of nurses. About 18.5% of nurses also had a moderate-to-severe risk for obstructive sleep apnoea. The American Academy of Sleep Medicine recommends that adults should sleep 7 or more hours per night on a regular basis to promote optimal health. According to the authors, nearly 100,000 deaths are estimated to occur each year in U.S. hospitals due to medical errors, and sleep deprivation and sleep disorders are significant contributors to this risk. The study involved an online survey of 1,165 nurses at a tertiary care medical centre.. Questionnaires such as the STOP-BANG and Epworth Sleepiness scale were used to assess the nurses for sleep disorder symptoms. "Nurses are at increased risk for circadian rhythm sleep-wake disorders such as shift work disorder. "Recognition needs to take place so that we can screen appropriately and make scheduling modifications to help alleviate the burden of shift work disorder among nurses."

American Association for the advancement of science-AAAS, 2019 [3]
Prevalence rates of symptoms of shift work disorder varied from 32.4–37.6% depending on the assessment method and from 4.8–44.3% depending on the work schedule. Associations were found between symptoms of shift work disorder and age, gender, circadian type, night work, number of shifts separated by less than 11 hours and number of nights worked the last year. The different assessment procedures yielded similar results (prevalence and logistic regression analyses). The prevalence of symptoms indicative of shift work disorder was high.

Elisabeth Flo et.al, 2012
A descriptive cross-sectional study was conducted in a tertiary care hospital in Bangalore Based on simple random sampling 130 nurses were selected for the study. After obtaining written informed consent from the participants, structured interview schedule using Standard Shift Work Index and Bergen Shift Work Sleep Questionnaire (BSWSQ) was administered. The mean age of the 130 nurses was 27.4 ± 2.64 years. The prevalence of SWD was found to be 43.07%. Headache, back pain, gastritis, and menstrual disorders were the most common complaints, which are found in 78 (60.0%), 75 (57.6%), 42 (32.3%), and 39 (30.0%) cases, respectively. Anxiety and depression was found in 23 (17.6%) and 31 (23.8%) individuals, respectively. We also found a significant association of SWD with increasing age, more number of nights worked in

a year, and longer duration of working hours. According to the BSWSQ, 70 (53.8%) nurses were found to have sleep problem. A high prevalence of SWD symptoms calls for a focus on the antecedents of work related sleep problems and appropriate intervention, such as behavioural changes, clockwise rotating shifts, and treatment.
Surekha Anbazhagan et al, 2014

2. Methodology

A pre experimental research design is used in this study as there is a need to conduct generalized assessment of the knowledge of staff nurses regarding shift work disorder and its management. The conceptual framework used for this study is based on Imogen king's Goal Attainment model. A pre experimental research design is used in this study. Sample in this study were selected by using purposive Non-Probability sampling technique. Structured teaching programme was given to the staff nurses. The data was collected to assess the effectiveness of structured teaching programme to assess the level of knowledge of staff nurses regarding shift work disorder and its management. The data was collected using a Questionnaire for knowledge level and analysed using descriptive and inferential statistics.

3. Results

1) Figure.1 depicted that the demographic data details according to their age in years. It depicts that the majority of the respondent 38% (23) were in the age group between 26-30 years, 30% (18) were in the age group 22-25 years, 22% (13) were in the age group 31-35 years, and 10% (6) were in the age group 36-40 years.
2) Figure no.2 shows that percentage distribution of staff nurses in relation to their gender and it depicted that majority of the respondents 70% (42)were Female, 30% (18) were Male.
3) Figure no 3 shows that percentage distribution of staff nurses in relation to their marital status depicted that majority of respondents 53% (32) were married, 47% (28) are unmarried.
4) Figure no. 4 shows that percentage distribution of staff nurses in relation to their professional qualification depicted that majority of respondents 52% (31) are GNM, 27% (16) are Bsc, 22% (13) are Post-basic Bsc Nursing.
5) Figure no 5 shows that percentage distribution of staff nurses in relation to their work experience depicted that majority of the respondents 32% (19) have 2-3 yrs of experiences, 25% (15) have 4-5 yrs, 25% (15) had above 5 yrs and 18% (11) are 0-1 yr were freshers.
6) Figure no 6 shows that percentage distribution of staff nurses in relation to their area of experience depicted that majority of respondents 27% (16) were working at RICU, 27% (16) were at CCU, 23% (14) at MICU, and 23% (14) SICU are their area of experience.
7) Figure no 7 shows that percentage distribution of staff nurses in relation to their no. of night duties in a month that majority of the respondents 85% (51) had night duties/work≤3 and 15% (9) were having ≥4-≤8, respectively.
8) Figure no 8 reveals that percentage distribution of staff nurses in relation to their place of stay shows that

majority of respondents 38% (23) were residing in hostel, 27% (16) were coming from home, 25% (15) were residing in relatives home, 10% (6) were stayed in P.G.

4. Conclusion

The results show that the "Staff Nurses" knowledge level improved after implementation of the structured teaching Programme on shift work disorder and its management. The study indicates that the Stp is an effective method in improving moderate to adequate level of knowledge regarding health topics to the present day society where much attention is given to health promotion rather than treating the disease after acquiring it.

References

Book References
[1] Reference Module in Chemistry, Molecular Sciences and Chemical Engineering Comprehensive Medicinal Chemistry II Volume 6, 2007, Pages 139-167
[2] The American psychiatric publishing textbook of psychiatry, fifth edition volume 8
[3] VARCAROLI'S foundation of psychiatrics and mental health nursing, seventh edition, Elsevier publications, 20014
[4] Essentials of Psychiatric Mental Health Nursing - E-Book: A Communication, By Elizabeth M. Varcarolis, third edition
[5] Psychiatric Mental Health Nursing - E-Book, By Katherine M. Fortinash, Patricia A. Holoday Worret, fifth edition, Elsevier Mosby publication

Net References
[6] www.nhlbi.nih.gov/healthtopics/sleepdeprivationanddeficiency
[7] www.sleepfoundation.org/shiftworkdisorder/whatshiftwork
[8] https://en.wikipedia.org/wiki/Shift_work_sleep_disorder
[9] https://www.sleepfoundation.org/articles/four-things-you-need-know-about-shift-work
[10] https://www.eurekalert.org/pub_releases/2019-06/aaos-nha060719.php
[11] https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4922274/
[12] https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5836745/
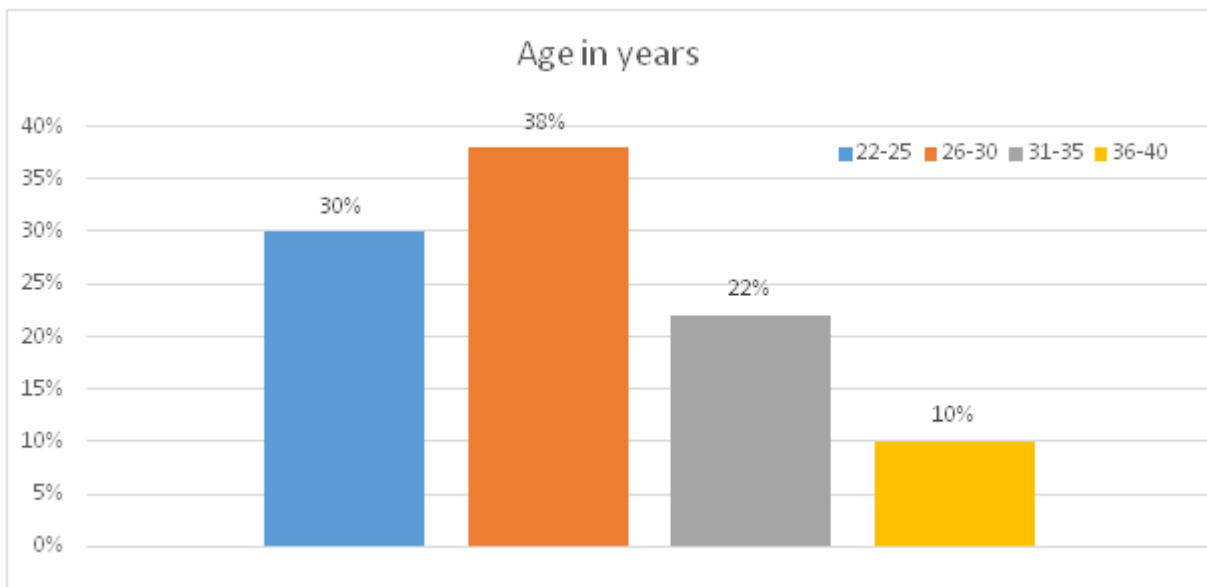
Figure 1: Bar diagram depicts percentage of staff nurses according to their Age. figure.1 depicted that the demographic data details according to their age in years depicts that the majority of the respondent 38 % (23) were in the age group between 26-30 years, 30 % (18) were in the age group 22-25 years, 22 % (13) were in the age group 31-35 years, and 10 % (6) were in the age group 36-40 years.
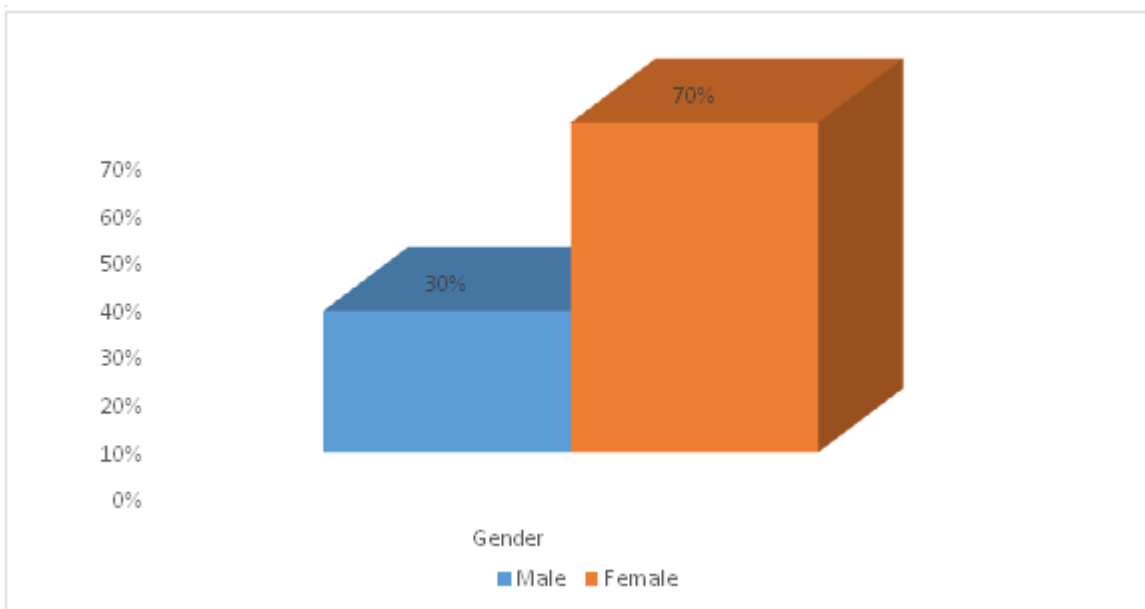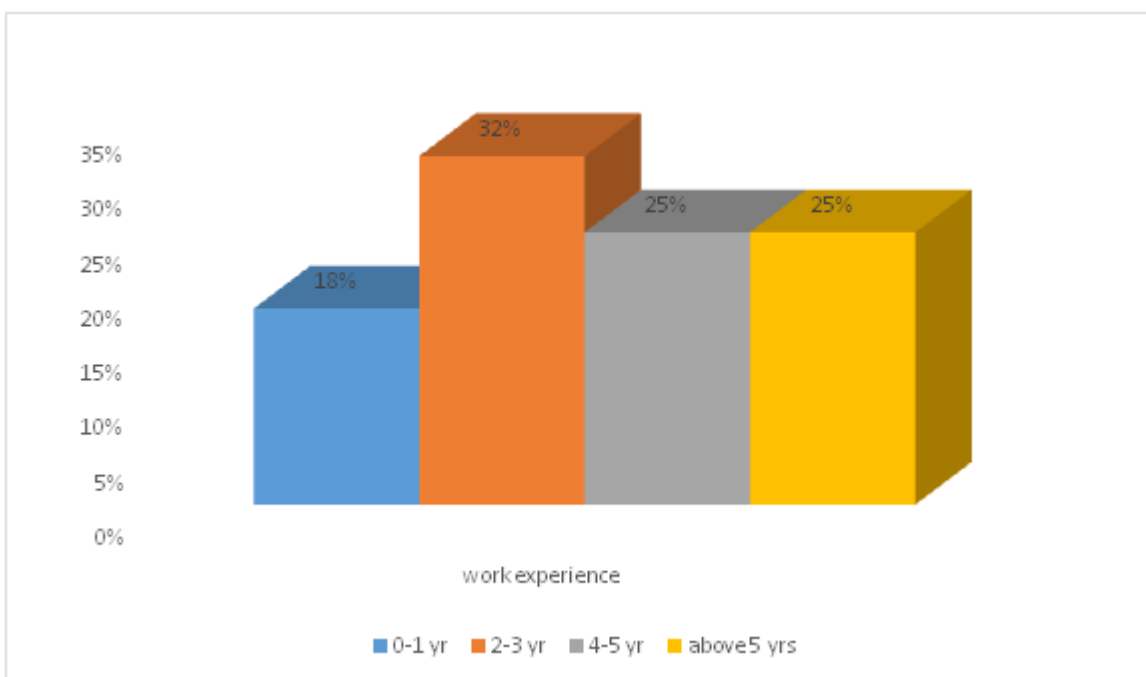
Figure 2: Bar diagram depicts percentage of staff nurses according to their gender. Figure no.2 shows that percentage distribution of staff nurses in relation to their gender depicted that majority of the respondent 70 % (42) were Female, 30 % (18) were Male
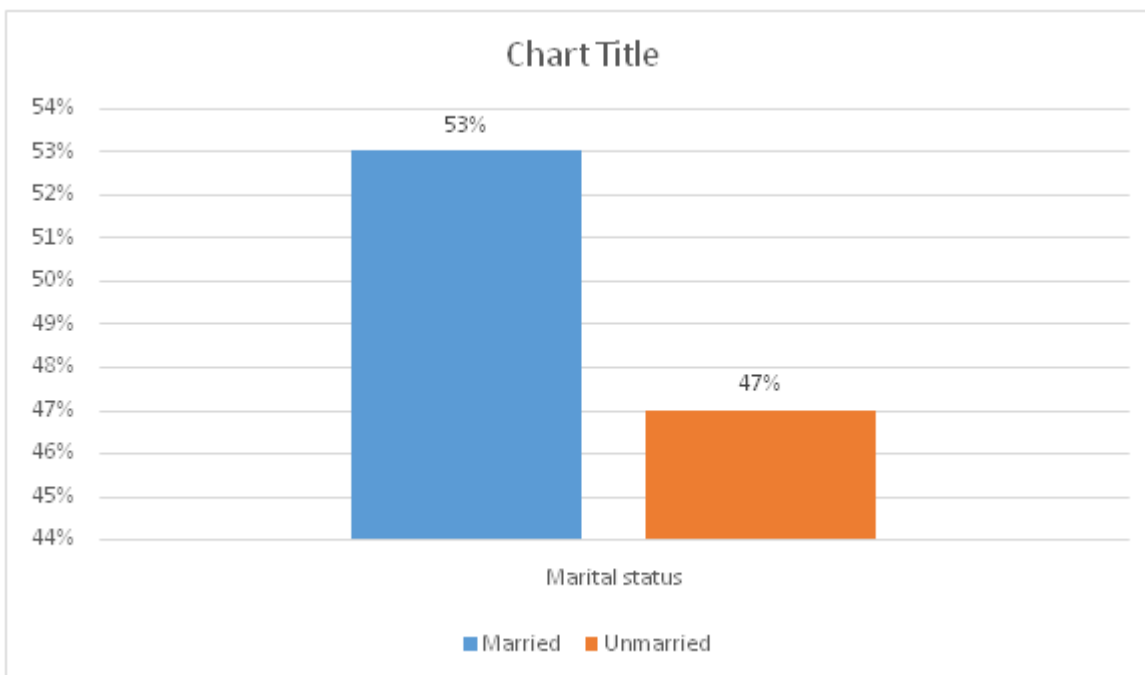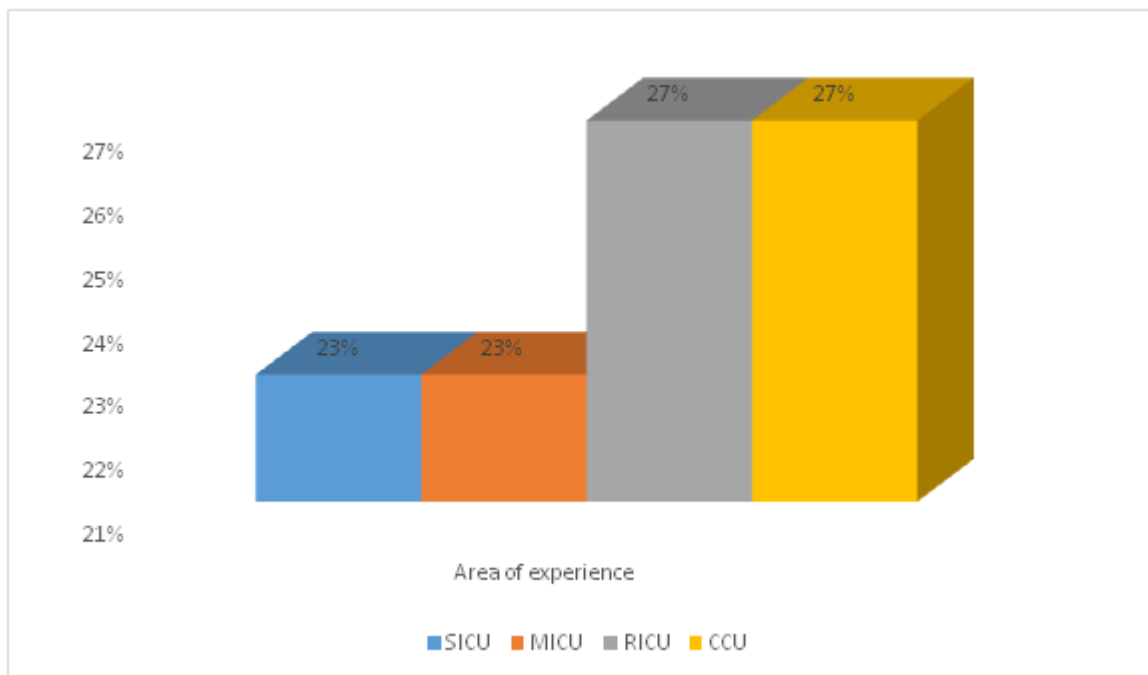

Figure 3: Bar diagram depicts percentage of staff nurses according to their Marital status. Figure no 3 shows that percentage distribution of staff nurses in relation to their marital status depicted that majority of respondents 53 % (32) are married, 47 % (28) are unmarried
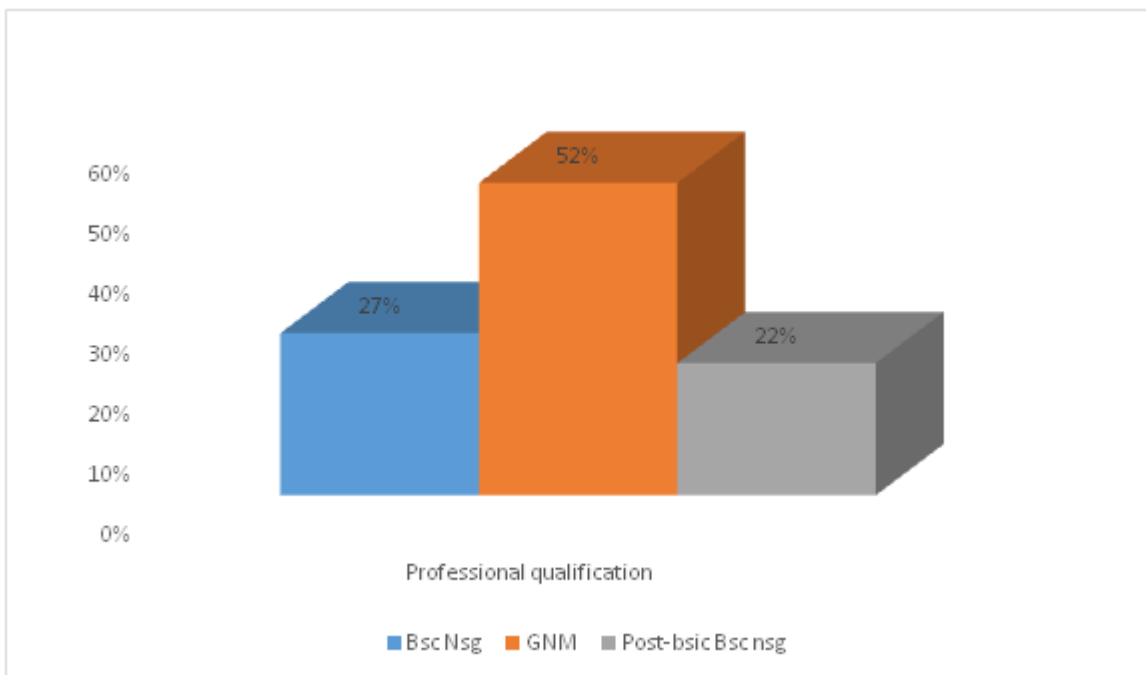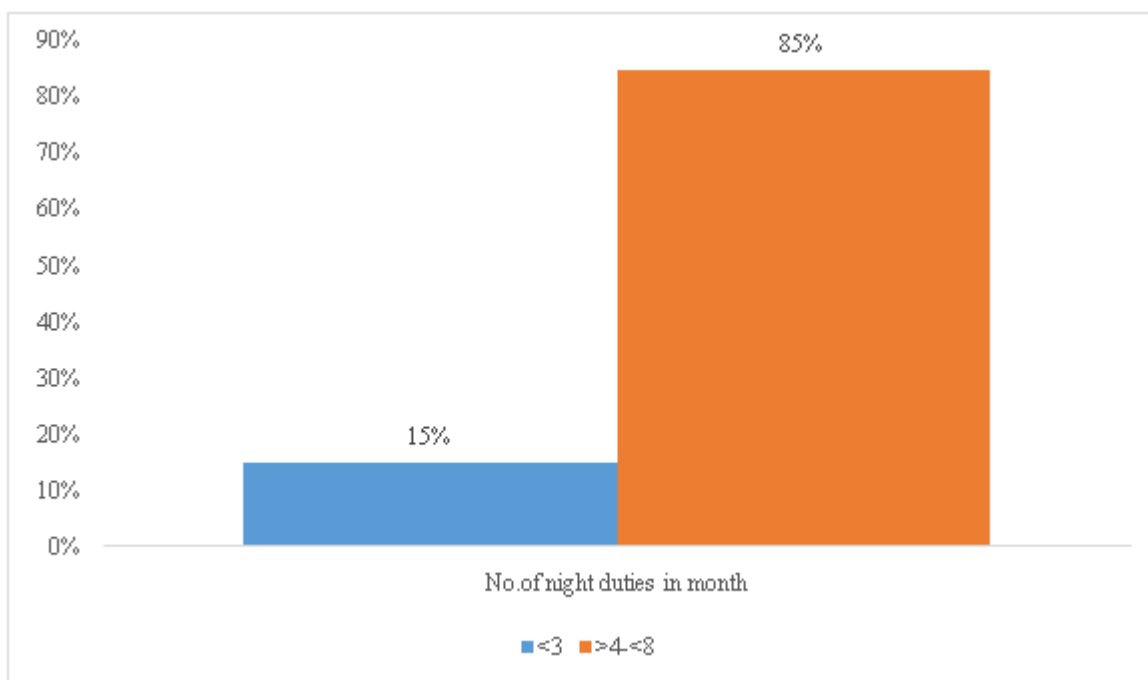
Figure 4: Bar diagram depicts percentage of staff nurses according to their professional qualification. Figure no. 4 shows that percentage distribution of staff nurses in relation to their professional qualification depicted that majority of respondents 52 % (31) are GNM, 27 % (16) are Bsc, 22 % (13) are Post-basic BscNsg
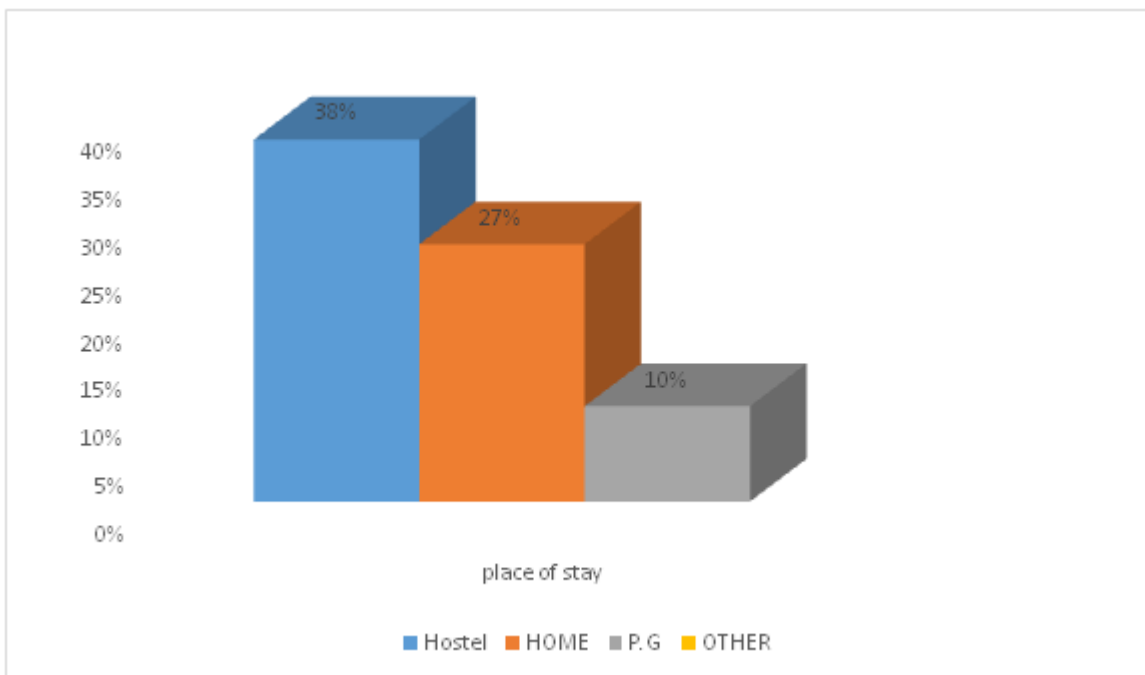

Figure 5: Bar diagram depicts percentage of staff nurses according to their work experience. Figure no 5 shows that percentage distribution of staff nurses in relation to their work experience depicted that majority of the respondents 32% (19) are 2-3 yrs, 25% (15) are 4-5 yrs, 25% (15) are above 5 yrs and 18% (11) are 0-1 yrs

Figure 6: Bar diagram depicts percentage of staff nurses according to their area of experience. Figure no 6 shows that percentage distribution of staff nurses in relation to their area of experience depicted that majority of respondents 27% (16) were at RICU, 27% (16) were at CCU, 23% (14) at MICU, and 23% (14) SICU are their area of experience

Figure 7: Bar diagram depicts percentage of staff nurses according to their No. of night duties in a month. Figure no 7 shows that percentage distribution of staff nurses in relation to their no. of night duties in a month that majority of the respondents 85% (51) were have ≤3 and 15% (9) were having ≥4-≤8, respectively

Figure 8: Bar diagram depicts percentage of staff nurses in relation to their place of stay. Figure no 8 reveals that percentage distribution of staff nurses in relation to their place of stay shows that majority of respondents 38% (23) were in hostel, 27% (16) were in home, 25% (15) were in other, 10% (6) were in P.G.