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A Study to Assess Effectiveness of Structured Teaching Programme on Knowledge and Practice Regarding Infection Control Among Specialised Care Unit Nurses in Selected Hospitals of Raigarh, Chhattisgarh

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***Abstract*: The current study aimed to assess effectiveness of structured teaching programme on knowledge and practice regarding infection control among specialised care unit nurses in selected hospitals of Raigarh, Chhattisgarh. Pre experimental one group pre test and post design is utilized to achieve the stated. Objectives: To prepare the structured teaching programme regarding Infection control. 2. To assess the pre-test and post-test knowledge score regarding infection control among specialised care nurses. 3. To assess the pre-test and post-test practice score regarding infection control among specialised care nurses 4. To assess the effectiveness of structured teaching programme. 5. To find out the association between the pre-test knowledge with selected demographic variable. 6. To find out the associate between pre-test practice with the selected demographic variables. 7. To correlate post-test knowledge and practice of specialised care unit nurses regarding infection control. Hypothesis: H1- There will be significant difference between pre and post-test knowledge scores regarding infection control among specialised care unit nurses at 0.05 level of significance. H2- There will be no significant difference between pre and post-test practice scores regarding infection control among specialised care unit nurses at 0.05 level of significance. H3- There will be significant association between pre-test knowledge scores with their selected demographic variables at 0.05 level of significance. H4- There will be significant association between pre-test practice scores regarding infection control among specialised care unit nurses with their selected demographic variables at 0.05 level of significance H5- There will be significant co-relation between post-test knowledge and practice scores regarding infection control among specialised care unit nurses at 0.05 level of significance. Projected Outcome: In the present study Pre experimental one group pre test and post design is used to achieve the stated objectives. The study was based Context, Input, Process, Product (CIPP) evaluation model and Kirkpatrick's learning evaluation model. Context Input Process Product evaluation model was developed by Daniel L Stuffle Beam in 1996 and further updated throughout the years with update 2002. A quantitative research approach is used and pilot study was conducted to confirm the feasibility of the study. For main study total enumerative sampling technique Sample size for this study was 60 specialised care unit staff nurses in selected hospitals of Raigarh, Chhattisgarh. The tool used for data collection consists of socio-demographic variables and Self structured questionnaire to assess the knowledge and practice, Nurses performance observational check list regarding infection control among specialised care unit nurses in selected hospitals of Raigarh, Chhattisgarh. The data was analyzed using descriptive and inferential statistics where the results shows the findings depicted that in the view of inferential statistics there is The findings revealed the mean score of pre test practice mean 12.74 with, SD 5.31, Mean (%) was 28.26 and the mean score of post-test practice was 46.67 with the 71 S.D of 8.99 with mean (%) 80.96 The calculated paired "t" value was t = 25.32 which was found to be statistically significant at p<0.005 level.**

***Keywords*: Assess, Effectiveness, Structured Teaching Programme, Knowledge, Practice, Infection Control, Specialised Care Unit Nurses.**

1. Introduction

Infection prevention and control is integral to safe, effective and ethical nursing practice. Ensuring the use of infection control standards is an important component of nursing. It aims to avoid infection (i.e. primary prevention) by enhancing practices of hand hygiene, surgical asepsis, environmental hygiene, clean equipment and training of health care. Therefore, collecting national data on maternal morbidity and mortality, reforming infection control guidelines and enrolling it hospital policies, providing holistic and flexible maternal health care, and initiating in-service educational programs in hospitals are recommended. Further research is needed on issues related to infection control practice in specialised care unit.

Hospital acquired infection 2011 Nosocomial Infections are most frequently occurring infections of the urinary tract, surgical wounds, and the lower respiratory tract. A world health organization prevalence study and other studies have shown that these infections most commonly occur in intensive care units and in acute surgical and orthopedic wards. Infection rates are also higher in patients with increased susceptibility due to

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old age, underlying disease, or chemotherapy United States, the Centre for Disease Control and Prevention estimates that roughly 1.7 million hospital-associated infections, from all types of bacteria combined, cause or contribute to 99,000 deaths each year. In Europe, where hospital surveys have been conducted, the category of Gram-negative infections are estimated to account for two- thirds of the 25,000 deaths each year. Nosocomial Infections can cause severe pneumonia and infections of the urinary tract, bloodstream and other parts of the body. World health organization 2013 Globally the prevalence of infection during labour increases day by day. The WHO report estimated 358,000 maternal deaths yearly occurring due to childbirth problems and out of these upto 15% are associated with puerperal sepsis. Disease control and prevention health care associated prevalence survey (2015) the current statistical data of overall hospital acquired infections in post operative cardiac patients on 2015 is very high. Hospital acquired infections after cardiac surgeries shows that less than 1% of septicemia and deep sternal wound infection and less than 5% for pneumonia. The current CDC national and state health care associated report based on 2013 is, 46% decrease central line associated blood stream infection between 2008 and 2013. 19% decrease in surgical site infections. 10% increase in catheter associated urinary tract infection between 2009 and 2013. World health organization fact sheet 2017 according to a recent European multicenter study, the proportion of infected patients in intensive care units can be as high as 51%; most of these are health care associated. Approximately 30% of patients in ICUs are affected by at least one episode of health care-associated infection. On average, the cumulative incidence of infection in adult high-risk patients is 17.0 episodes per 1000 patient /days. High frequency of infection is associated with the use of invasive devices, in particular central lines, urinary catheters, and ventilators. There was a strong need to conduct a study which would help staff nurses to develop knowledge and practice in prevention of nosocomial infections. In view of the above context the present study is undertaken to improve the nursing practice and knowledge.

2. Result and Discussion

A. Organization of the Data

The findings of the study are discussed under following section.

Section I: Description of demographic variables of specialised care unit staff nurses

Distribution of subject based on age in years, 28 (46.67%) of the sample were in the age group of 21–22 years, and 18 (30%) of them were in the age group of 31-40 years. 11(18.33%) were in the age group of 41-50. and 3(5%) were in the age group of 51-60. With respect to sex all 60 (100%) of the sample were females.

With regard basic professional qualification level, majority 66.67% (40) of the samples were - educated with B.Sc. Nursing degree, and only 33.33% (20) with general nursing (GNM) and none of the sample fall under any specific nursing and M.Sc. nursing category.

In respect to additional specialised qualification majority of samples 63.33% (38) were specialised qualification, 23.34% (14) samples were diploma in critical care nursing ,3.33% (2) of samples were diploma in neonatal and 6(10%) samples were any other category.

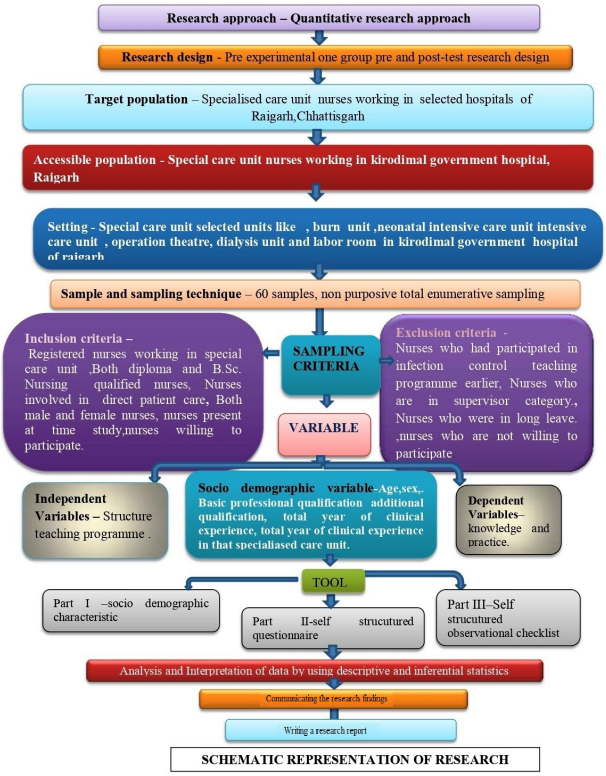

Fig. 1. Methodology

Considering the total years of the experience 8(13.33%) of the sample had less than 1 year of experience as staff nurse and 39(65%) of the sample had 1-5 year of experience an sample 10 (16.67%) sample had 6-10 year experience and 3 (5%) samples had more than 10 experience.

Regarding the total year of clinical experience in that specialised care unit (In year) experience 23(38.33%) of the sample had less than 1 year of experience in specialised care unit and 30 (50%) of the sample had 1-5 year of experience a sample 5 (8.33%) sample had 60-10-year experience and more than sample 10 had less experience 2(3.33%).

Section II: Assessment of pre-test and post-test knowledge regarding infection control among specialised care unit nurses

Revealed that pre-test knowledge regarding infection control among specialised care unit staff nurses, with respect to knowledge majority of the sample 52(86.67%) had below average knowledge ,8(13.33%) of the sample had average of knowledge and none of sample had good knowledge.

Revealed that post test knowledge regarding infection controls among specialised care unit staff nurses in the post test, resulting the knowledge with respect 15 (25%) staff nurses had average knowledge regarding infection control measures,45 (75%) sample had good knowledge regarding infection control measure none of sample had below average knowledge. There

will be significant difference between pre and post-test knowledge scores regarding infection control among specialised care unit nurses was accepted.

Section III: Assessment of pre-test and post-test practice regarding infection control among specialised care unit nurses

Revealed that pre-test practice regarding infection control among specialised care unit staff nurses, with respect to practice majority of the sample 52 (86.67%) had Inadequate practice, 8 (13.33%) of the sample had moderate practice and none of sample had good practice.

Revealed that post test practice scores regarding infection control measures among specialised care unit staff nurses with respect 14 (23.33%) staff nurses had moderate practice regarding infection control measures, 46 (79.67%) sample had adequate practice regarding infection control measure none of sample had inadequate practice.

There will be significant difference between pre and post-test practice scores regarding infection control among specialised care unit nurses was accepted.

Section IV: Assessment of effectiveness of structured teaching programme on knowledge and practice regarding infection control among specialised care unit nurses

Shows comparison of pre-test and post-test knowledge scores. The findings revealed the mean score of pre test knowledge was 13.33 with, SD 3.05 and the mean (%) 9.31 and post test knowledge was 30.4 with the S.D of 7.65 and mean (%) 58.55. The calculated paired "t" value was t = 16.25 which was found to be statistically significant at $p<0.005$ level. Shows comparison of pre-test and post-test practice scores. The findings revealed the mean score of pre test practice mean 12.74 with, SD 5.31, Mean (%) was 28.26 and the mean score of post test practice was 46.67 with the S.D of 8.99 with mean (%) 80.96 The calculated paired "t" value was t =25.32 to be statistically significant at $p<0.005$ level.

Section V: Significant association of mean differed pre test knowledge scores with selected demographic variables

The findings revealed that there was no statistically association found between the mean differed in knowledge score age in year, sex, Basic professional Qualification, Total year of clinical experience, total year of clinical experience in that specialised care unit and additional specialised qualification chi square value was 12.10, degree of freedom 3, with critical value 7.82 associate with pretest knowledge. There will be significant association between pre-test knowledge scores with their selected demographic variables was accepted.

Section VI: Significant association of mean differed pre test practice scores with selected demographic variables

The findings revealed that there was no statistically significant association found between the mean differed practice score and the demographic variables such as age in year, sex, Basic professional Qualification, Total year of clinical experience, additional specialised qualification, total year of clinical experience in that specialised care unit on infection control measures. There will be significant association between pre-test practice scores with their selected demographic variables was not accepted.

Section VII: Assessment of relationship between the post- test knowledge and practice regarding infection control among specialised care unit nurses

The findings revealed that the post test mean knowledge score was 30.40 with S.D 7.65 and the post test mean score of practice was 46.67 with 8.99. The calculated Karl Pearson's Correlation value r = 0.40 which show moderate positive correlation and was found to be statistically significant at $p<0.05$ level. The study findings showed that when the knowledge of staff nurses regarding infection control measures increases their practice level also increases. There will be significant co-relation between post test knowledge and practice scores regarding infection control among specialised care unit nurses was accepted.

3. Conclusion

The study concluded that the structured teaching programs was effective in improving the knowledge and practice of specialised care unit staff nurses. It helped them to be more confident in their duty and to omit errors. The unit-based collaborative learning activities and competency skills validation helped reinforce the content of the educational program. In order to improve patient outcomes, this type of program may be more effective if it were to involve all of the staff members on the unit who are responsible for patient care. More research is needed to establish to improve the effectiveness of the program in improving patient outcomes when all staff is included and if additional strategies are used, such as unit champions and group rewards.

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