ORIGINAL RESEARCH PAPER

A QUASI EXPERIMENTAL STUDY TO ASSESS THE EFFECTIVENESS OF STRUCTURED TEACHING PROGRAM ON KNOWLEDGE REGARDING COLD CHAIN MAINTENANCE AMONG B.SC. NURSING STUDENTS IN BOMBAY HOSPITAL COLLEGE OF NURSING, INDORE .M .P.

Nursing

Rubi Manual

ABSTRACT

BACKGROUND: Over the last century, vaccination has been the most effective medical strategy to control infectious diseases. Most viral and bacterial diseases traditionally affecting children worldwide are now preventable by vaccines. Vaccination is estimated to save at 3 – 4 million lives every year. The cold chain is a system of storage and transport of vaccines at low temperature (+2oc to +8oc) from the manufacturer to the actual vaccination site. The cold chain system is necessary because vaccine failure may occur due to failure to store and transport the vaccines under strict temperature control. Problems related to cold chain implementation & vaccine management have been reported from developed & developing countries. Such studies help to the staff nurses and student nurses, for understanding the protocols, routine and urgent vaccine storage, handling and their responsibility in maintaining the cold chain. Therefore, the researcher decided to conduct the research with an intention to educate the B.Sc. Nursing students regarding cold chain maintenance.

PROBLEM STATEMENT

"A quasi experimental study to assess the effectiveness of Structured Teaching Program on knowledge regarding cold chain maintenance among B.Sc. Nursing students in Bombay Hospital College of Nursing, Indore .M .P. "

OBJECTIVES OF THE STUDY

- To assess the level of knowledge regarding cold chain maintenance among B.Sc. Nursing students of experimental group and control group.
- To evaluate the effectiveness of Structured Teaching Programme on knowledge regarding cold chain maintenance among B.Sc. Nursing students of experimental group.
- To compare the post test knowledge scores regarding cold chain maintenance among B.Sc. Nursing students of experimental and control group.
- To find out the association of pre test knowledge scores regarding cold chain maintenance with selected socio-demographic variables of B.Sc. Nursing students of experimental group.
- To find out the association of pre test knowledge scores regarding cold chain maintenance with selected socio-demographic variables of B.Sc. Nursing students of control group.

METHODOLOGY

A quantitative evaluative research approach & quasi experimental research design with non-randomized control group was used in this study. The study was conducted among 98 B.Sc. Nursing 1st year 2nd year students in Bombay Hospital College of Nursing, Indore. (M.P.) regarding Cold Chain Maintenance. Non-probability consecutive sampling technique was used to recruit the subjects. Structured Teaching Program was conducted after pre test. On 7th day, after taking post test for assessing the effectiveness of Structured Teaching Program regarding cold chain maintenance. The data was collected by using socio - demographic proforma and structured knowledge questionnaire on cold chain maintenance. The data analysis was done by descriptive statistics (frequency, percentage, mean, standard deviation) & inferential statistics (chi - square, paired & unpaired **t- test**).

MAJOR FINDINGS OF THE STUDY

Findings related to effectiveness of Structured Teaching Programme on knowledge of experimental group.

- Post test mean score (30.43, S.D.± 3.79) is higher than pre test mean score (13.55, S.D. ±4.13) in experimental group. There is significant difference in pre test and post test mean score in experimental group. In control group post test mean score (14.387, S.D.± 4.649) is almost same as pre test mean score (14.08, S.D. ±4.81). The paired **t** – test value of experimental group is 22.6 and in control group 2.13.

Findings related to comparison between the post test knowledge scores of experimental groups and control group.

- Post test mean score (30.43, S.D.± 3.79) of experimental group is higher than post test mean score (14.39, S.D. ±4.65) of control group. There is significant difference in post test mean score in experimental group and control group. The unpaired **t** –test value of post test of experimental and control group was 18.705.

Findings related to association between the pretest knowledge scores with selected socio - demographic variables of experimental and control group.

The association between the pretest knowledge scores with selected socio - demographic variables of experimental and control group were computed by using Chi –square test.

- In experimental group, the significant association between the pre-test knowledge scores with socio demographic variables of B.Sc. Nursing student's knowledge regarding cold chain maintenance such as studying class ($X^2_{(cal)} = $ 9.88 & P- 0.007), parent's education ($X^2_{(cal)} = $ 12.4 & P- 0.015), parent's occupation ($X^2_{(cal)} = $ 18.9 & P- 0.004), previous knowledge regarding cold chain maintenance ($X^2_{(cal)} = $ 6.67 & P- 0.036) and source of information regarding cold chain maintenance ($X^2_{(cal)} = $ 6.12 & P- 0.047) are significant at p < 0.05 level. All other socio - demographic variables like age and religion were found that there is no significant association of B.Sc. Nursing student's knowledge score with these variables.
- In control group, the significant association between the pre-test knowledge scores with socio demographic variables of B.Sc. Nursing student's knowledge regarding cold chain maintenance such as age ($X^2_{(cal)} = $ 7.98 & P- 0.019), studying class ($X^2_{(cal)} = $ 10.7 & P- 0.005), parent's education ($X^2_{(cal)} = $ 15.4 & P- 0.004), previous knowledge regarding cold chain maintenance ($X^2_{(cal)} = $ 6.09 & P- 0.048) and source of information regarding cold chain maintenance ($X^2_{(cal)} = $ 6.45 & P- 0.048) are significant at p < 0.05 level. All other socio - demographic variables like religion and parent's occupation were found that there is no significant association of B.Sc. Nursing student's knowledge score with these variables.

CONCLUSION

The main aim of the study was to assess the effectiveness of Structured Teaching Program regarding cold chain maintenance among B.Sc. Nursing 1st and 2nd year students in experimental and control group and find the association between the pre test knowledge scores on cold chain maintenance with selected demographic variables. This study enlightens that, Nursing students and vaccine administrators must provide adequate information regarding cold chain maintenance which enable the nursing students and nurses can reduce the vaccine recall and wastage, and will help to the healthier and proper immunized generation.

REFERENCES
1. B. T. Basavanthappa. Community health nursing. 2nd ed. Jaypee Brothers Medical Publishers (p) Ltd. New Delhi. India. 2008. 552-553
2. C. Manivannan, S. Rathamani, T. Latha Manivannan. "Textbook of Community Health Nursing -1". 1st ed, (2011). Bangalore: Published by EMMESS. Pg no: 210- 211
3. Abhiruchi Galhotra, Goel Naveen,et al. Surveillance of Cold Chain System During Intensified Pulse Polio Programme. Indian Journal of Pediatrics 2007 August; 74(8):751 - 53.
4. Aggarwal A, Singh A J. Evaluation of cold chain system in rural areas of Haryana, Indian Journal of Paediatrics1995 January ;vol 32:31-34.
5. Directorate of Health & Family Welfare, Government of UP. Hand book for Vaccine & Cold Chain Handlers. Lucknow: 2004.