

Comparative Study to Assess the Knowledge of Final Year B.Sc.(N) Students

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"Probably, no human experience cuts deeply into the centre of one's heart as the loss of a child" -A. Joy Ingalls (1991).

Drug administration is a vital part in the care of children and all the more in critically ill children. The nurse is wholly responsible for the drugs administered by her during the emergency situations of child care. The students of final year Basic B.Sc. Nursing may soon find themselves responsible for the care of children. Administration of emergency drugs and the calculation of drug doses in paediatric settings is different from that of the other settings and even a minor medication error can pose a life threatening consequence in the care of critically ill children. Hence, it becomes a mandate for the graduate nurses to be equipped with adequate knowledge on paediatric emergency drugs and proper calculation of drug doses.

"Medicines are nothing in themselves if not properly used, but the very hands of God if employed with reason and prudence". - Herophilus

A comparative study to assess the knowledge of final year Basic B.Sc. nursing students on Paediatric Emergency Drugs and Calculation of Drug Doses in selected Colleges of Nursing in Bangalore was therefore undertaken for preparing an information booklet.

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Objectives

The study sought :

1. To assess the knowledge of final year Basic B.Sc. nursing students on paediatric emergency drugs and the calculation of drug doses.
2. To compare the knowledge scores of final year Basic B.Sc. nursing students belonging to selected colleges of nursing with and without own hospital.
3. To find out the association of knowledge scores with selected variables.
4. To prepare an information booklet on paediatric emergency drugs and the calculation of drug doses.

Research Hypothesis

The knowledge score of the final year Basic B.Sc. Nursing students of Colleges of Nursing with own hospital is significantly different from those studying in the Colleges of Nursing without own hospital at 0.05 level.

Conceptual Framework

Conceptual framework adopted for this study is based on General Systems theory with Input, Throughput/ process, Output, Feedback and environment as essential components, which was first introduced by Von Bertalanffy (1968).

Input consisted of demographic characteristics of the respondents and the available resources. Process refers to the utilisation of self-administered questionnaire to assess the knowledge of final year B.Sc. Nursing students on paediatric emer-

gency drugs and the calculation of drug doses. The assessment of knowledge is essential because the cognitive processes have their motivational and dynamic forces which direct the system's behaviour. The system returns the output to the environment in the form of change of behavior in the desired direction after the processing of input. If there is adequate knowledge, it leads to high quality care of critically ill children. An inadequate knowledge leads to poor and hazardous medication administration in the nursing care of critically ill children.

The feedback is the process whereby the output of the system is redirected as part of the input of the same system. The input provided by the information booklet can contribute towards enriching knowledge of paediatric emergency drugs and the calculation of drug doses for student nurses learning paediatric nursing, thus leading to improved care of critically ill children. Individual's environment is the fixed constraint that influences the knowledge of final year B.Sc. Nursing students on paediatric emergency drugs and the calculation of drug doses

Methodology

A comparative research approach was employed in this study. The study was undertaken in selected colleges in Bangalore. The total sample size for the study was 100 final year Basic B.Sc. Nursing students with 50 students from colleges of nursing with own hospital and 50 students from colleges of

nursing without own hospitals.

The colleges of Nursing were selected by purposive sampling and the respondents were selected using simple random sampling by draw method. The tool used for data collection was structured questionnaire which was developed by the researcher.

The pilot study was conducted to check the feasibility of this study and establishing the reliability of the tool. The collected data was organised and analysed according to the objectives of the study using descriptive and inferential statistics.

Findings of the Study

I. Findings related to assessment of knowledge on Paediatric Emergency Drugs and calculation of Drug Doses

- ◆ The mean knowledge score was 23.13 for a total of 50 statements and a maximum score of 50. The mean knowledge of the respondents was 46.26 percent.
- ◆ In relation the knowledge of the various aspects of Paediatric emergency drugs and the calculation of drug doses, the mean knowledge of the respondents was above 50 percent in the categories such as action of drugs, side effects and nurse's responsibility whereas the mean knowledge of the respondents in the other categories was below 50 percent. It was also found that the mean knowledge was the highest (61.2%) in the category of side effects of Paediatric emergency drugs and the lowest (33.17%) in the category of indications of Paediatric emergency drugs.

II. Findings related to the comparison between the knowl-

edge scores of final year Basic B.Sc. Nursing students studying in Colleges of Nursing with and without own hospital

- ◆ The knowledge scores of final year Basic B.Sc. Nursing students of Colleges of Nursing with own hospitals was significantly different from those studying in the Colleges of Nursing without own hospital at 0.05 level. Thus the hypothesis was accepted. It is also inferred that the knowledge on Paediatric emergency drugs and the Calculation of Drug Doses among the students studying in Colleges of Nursing with own hospital is more than those studying in Colleges of Nursing without own hospital.
- ◆ There is a significant relationship between knowledge of the respondents and the presence of own hospital in the realms of action of drugs, indications and precautions whereas there is no significance in the other areas under study.

III. Findings related to Association between knowledge scores and the demographic variables.

- ◆ The study revealed a non-significant association between the age and the knowledge level of final year Basic B.Sc. Nursing students.
- ◆ As for choice of subjects in PUC, the chi-square test established a non-significant relationship (0.16) between the choice of subject in PUC and the knowledge level of final year Basic B.Sc. Nursing students.
- ◆ The association between the presence of other medical courses in the institution and the knowledge

level of final year Basic B.Sc. Nursing students is non-significant.

- ◆ The association between the availability of post graduate teacher in Paediatric Nursing and the knowledge level of final year Basic B.Sc. Nursing students was established to be significant.
- ◆ There was a significant relationship between the theory hours conducted on Paediatric emergency drugs and the calculation of drug doses and the knowledge level of final year Basic B.Sc. Nursing students. Chi-Square test established an association between the clinical hours attended by the respondents and the knowledge level of final year Basic B.Sc. Nursing students.

Conclusion

In the realm of knowledge on Paediatric emergency drugs and the Calculation of drug doses, the mean knowledge of the respondents (less than 50%) indicates that the final year Basic B.Sc. Nursing students have inadequate knowledge on Paediatric emergency drugs and the calculation of drug doses.

Thus in this study it is found that there is a significant relationship between the availability of a post graduate teacher in Paediatric Nursing (10.71), duration of theory classes on the topic of study (17.45) and the number of clinical hours in Paediatric Nursing (16.0) and the knowledge score of the respondents on Paediatric emergency drugs and the calculation of drug doses at 0.05 level. There is no significant relationship between the ages of the respondents, choice of subjects in PUC and the presence of other medical courses in the institution and

their knowledge score of Paediatric emergency drugs and the calculation of drug doses.

Recommendations

The study could be replicated on a larger sample thereby the findings could be generalised better. A comparative study can be conducted between the students of different universities, a study can also be done to assess the skills of nursing students in administration of Paediatric emergency drugs and the calculation of drug doses. Problems encountered by the students in the realm of acquiring adequate knowledge on Paediatric emergency drugs and the

calculation of drug doses and assessment of the effectiveness of the information booklet thus prepared as the outcome of this study are also other areas in which studies can be undertaken.

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