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Knowledge on rehydration therapy

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Abstract
Diarrhea is the passage of three or more loose or liquid stools per day or more frequently than in number for an individual. Dehydration is the life threatening feature which is usually associated with the diarrhea. The aim of the study is to assess the knowledge regarding the rehydration therapy among staff nurses and nursing students in NMCH, Nellore. A quantitative descriptive survey research design was used. The sample size is 15 staff nurses who are working in pediatric ward, NICU, PICU and postnatal ward, 15 nursing students of B.Sc (N) at NNI, Nellore. Non-probability convenience sampling technique was used for this study. Structured questionnaire is used to assess the knowledge regarding rehydration therapy among staff nurses and nursing students. The data was tabulated and analyzed using descriptive and inferential statistics. The study concluded that majority of student nurses have inadequate knowledge when comparing to the staff nurses level of knowledge regarding rehydration therapy.

Keywords: Rehydration therapy, dehydration, diarrhea, infant mortality, oral rehydration solution, rehydration phase

Introduction

Diarrheal diseases are a leading cause of childhood mortality and morbidity in developing countries. On average children below 3 years of age in developing countries experience 3 episodes of diarrhea each year. Roughly 1.5 million children per year die due to diarrhea. Government of India through its national programme plan to reduces the infant mortality rate from 90 to 100 and pre-schooler mortality from 41 to 100 per 1000. World health organization study estimates that diarrhea kills 2195 children every day more than malaria, measles combined.

A substantial proportion of decrease in mortality is attributable to worldwide campaign to treat acute diarrhea with oral rehydration therapy. Development of oral dehydration therapy represents a successful collaboration between basic and applied biomedical research. Oral hydration therapy comprises of 2 phases rehydration phase, in which water and electrolyte administered as oral rehydration solution to replace existing losses and a maintenance phase, includes both replacement of ongoing fluid and electrolyte losses and adequate dietary intake. UNICEF and WHO have been successful in managing diarrhea among children with oral rehydration solution and oral rehydration therapy.

Need for the study

In the year 2014, a study was conducted on impact of dehydration and its management. Results of the study reveal that dehydration is one of the leading causes of mortality and morbidity in under-five children with diarrhea. The incidence is higher among children aged less than 2 years than in older children. The study concludes that persistent dehydration is being recognized as an important child health problem in developing countries like India for every hundred children aged five years.

In the year 2011, a study was conducted on community based diarrhea management measures. Results shown that the cases were 241 under five children with diarrhea in preceding 2 weeks before survey and who had received ORT, while the control 253 under five children with diarrhea in preceding two weeks before survey who had not received rehydration therapy. This study concludes that the care givers previous experience of oral rehydration therapy use seeking health facilities and the knowledge of ORT use.

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Statement of problem
A study to assess the knowledge regarding rehydration therapy among staff nurses and nursing students in NMCH, Nellore.

Objectives
- To assess the level of knowledge regarding rehydration therapy among staff nurses in NMCH, Nellore.
- To assess the level of knowledge regarding rehydration therapy among nursing students in NMCH, Nellore.
- To compare the level of knowledge between the staff nurses and nursing students regarding rehydration therapy.
- To find the association between the level of knowledge among staff nurses and nursing students regarding rehydration therapy with selected socio-demographic variables.

Methodology
Research approach: A quantitative approach was utilized
Research design: The descriptive survey research design was used

Setting: The study was conducted in Narayana medical College Hospital which is 10 km distance from Nellore. It has super specialties with well equipped infrastructure and a bed capacity of 1750 with the 700 nurses working in all various departments. Study was conducted in all medical wards. The bed strength of the paediatric ward is about 240 and staff strength in medical ward is 23. All the nursing students of B.Sc (N), GNM and P.B.BSc (N) are posted in NMCH.

Target population: The staff nurses who are working in the pediatric ward at Narayana Medical College Hospital and IInd and IIIrd year BSc nursing students studying in Narayana Nursing Institution.

Sample size: The sample size is 15 staff nurses who are working in paediatric ward, NICU, PICU and postnatal ward, 15 nursing students of IIIrd B.Sc (N) at NNI,Nellore.

Sampling technique: Non-probability convenience sampling technique was used.

Criteria for sample selection
Inclusion criteria: Participants included for the present study are:
- Staff nurses who are working at pediatric ward in Narayana Medical College Hospital, Nellore.
- III year BSc nursing students who are studying in Narayana Nursing Institution, Nellore.
- Both female and male staff nurses are included in the study.

Exclusion criteria: Participants excluded from this study are:
- Staff nurses and nursing students who are on leave or sick.
- Staff nurses and nursing students who are not willing to participate in this study.

Description of the tool: The tool is developed to assess the knowledge regarding the rehydration therapy among the staff nurses and the nursing students in Narayana Medical College Hospital, Nellore. It consists of 2 parts.

Section-I: Deals with the demographic data.
Section-II: It consists of part A and part B
Part A: It consists of 15 questions related to dehydration.
Part B: It consists of 15 questions related to knowledge on rehydration therapy.

Scoring Key: Scoring system is developed by the score of '1' for correct answer and '0' for wrong answer. Maximum total Score is 30 marks.
Score= obtained score/ Actual score ×100

Validity
The tool was validated by experts in the Child Health Nursing department and content validity is approved by experts.

Reliability
The reliability of the tool was established by using test retest method and the "r" value was obtained, "r" value is ±1.

Feasibility
The tool was tested for feasibility by conducting pilot study among staff nurses and nursing students in Narayana Hospital at Nellore.

Pilot study
Pilot study was conducted in NMCH, Nellore after obtaining formal permission from the Director, NMCH, Nellore. Two Staff nurses and two Nursing students are selected by using convenience sampling technique. Structured Questionnaires were used to assess the level of knowledge. Data was collected from staff nurses who are working in pediatric ward, NICU, PICU and postnatal ward, and nursing students of III B.Sc (N) at NNI, Nellore. From pilot study it was found the study was feasible.

Data collection procedure
The main study has been carried out at NMCH, Nellore, after obtaining permission from the Medical Superintendent and Nursing Superintendent in NMCH, Nellore. A sample of 15 staff nurses and 15 nursing students were selected in NMCH, Nellore. Staff nurses and nursing students who fulfill inclusion criteria were selected by using Non-probability convenience sampling technique. Informed consent was obtained from the subjects after explaining the purpose and nature of study. Data was collected from staff nurses who are working in pediatric ward, NICU, PICU and postnatal ward, and nursing students of III B.Sc (N) at NNI, Nellore by using structured questionnaire to assess the knowledge regarding rehydration therapy among staff nurses and nursing students. It took 30 minutes for each sample to complete the questionnaire.

Data analysis
The data was analyzed in terms of objectives of the study using descriptive and inferential statistics

Results
- With regard to level of knowledge on rehydration therapy among staff nurses 33.33% of staff nurses had inadequate knowledge, 40% of staff nurses had

moderately adequate knowledge and 26.66% had adequate knowledge.
- With regard to level of knowledge on rehydration therapy among nursing students, 66.66% of nursing had inadequate knowledge, 33.33% of nursing students had moderately adequate knowledge.
- The staff nurses have adequate knowledge regarding rehydration therapy than the nursing students.

Discussion
The first objective of the study: is to assess the level of knowledge regarding rehydration therapy among staff nurses in NMCH, Nellore.

Table 2: level of knowledge regarding rehydration therapy between staff nurses

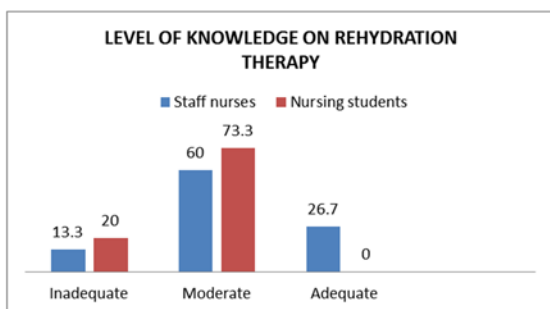| S. No | Level Of Knowledge | Staff Nurses | |
		Frequency (F)	Percentage (%)
1.	In adequate	5	33.3
2.	Moderate	6	40
3.	Adequate	4	26.7
4.	Total	15	100

Table No.2 Shows that regarding level of knowledge among staff 5 (33.3%) staff nurses are having inadequate level of knowledge, 6 (40%) staff nurses are having moderate level of knowledge, 4 (26.7%) staff nurses are having adequate level of knowledge.
The second objective of the study is to assess the level of knowledge regarding rehydration therapy among nursing students in NMCH, Nellore.

Table 3: level of knowledge regarding rehydration therapy between staff nurses

| S. No | Level Of Knowledge | Nursing Students | |
		Frequency (F)	Percentage (%)
1.	In adequate	10	66.6
2.	Moderate	5	33.3
3.	Adequate	0	0
4.	**Total**	**15**	**100**

Table No.3 Shows that regarding level of knowledge among student nurses, in that 10(66.6%) nursing students are having inadequate level of knowledge, 5(33.3%) nursing students are having moderate level of knowledge, 0(0%) nursing students are having adequate level of knowledge.

Fig 1: percentage distribution of level of knowledge on rehydration therapy

The third objective of the study: is to compare the level of knowledge between the staff nurses and nursing students regarding rehydration therapy.

Table 4: Comparison of level of knowledge regarding rehydration therapy between staff nurses and nursing students.

S. No	Sample	Mean	Standard Deviation
1.	Staff nurses	18.47	5.40
2.	Student nurses	12.53	2.92

Table No.4: shows that with regard to level of knowledge regarding rehydration therapy, mean for staff nurses and nursing students are 18.47 and 12.53 and standard deviation for staff nurses and nursing students are 5.40 and 2.92respectively.
The fourth objective of the study is to find the association between the level of knowledge among staff nurses and nursing students regarding rehydration therapy with selected socio-demographic variables.
With regard to the association between level of knowledge on rehydration therapy among staff nurses reveals that area of working of staff nurses is significant with the level of knowledge on rehydration therapy at P=0.001.
With regard to the association between level of knowledge on rehydration therapy among nursing students reveals that age and source of information on rehydration therapy are significant with level of knowledge on rehydration therapy at P=0.01.

Recommendations
On the basis of the findings of the study, recommendations are
- A similar study can be replicated with a large sample to generalize findings.
- A similar study can be done in different settings.
- An experimental study can be conducted to assess the effectiveness of rehydration therapy in various settings.
- A study can be conducted to assess the knowledge of community health workers regarding rehydration therapy.

Conclusion
The study concluded that majority of student nurses have inadequate knowledge regarding rehydration therapy while comparing to the level of knowledge of staff nurses regarding rehydration therapy.

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