

EFFECTIVENESS OF STRUCTURED TEACHING PROGRAM ON KNOWLEDGE REGARDING PREVENTION OF FIVE F'S DISEASE TRANSMISSION AMONG MOTHERS OF UNDER FIVE CHILDREN AT SELECTED RURAL AREAS OF JAMUHAR., SASARAM, BIHAR



Healthcare

Chandan Kumar	B.Sc. Nursing 4 th year student, Narayan Nursing College, Gopal Narayan Singh University, Sasaram, Jamuhar, Bihar, India
Deepa Kumari	B.Sc. Nursing 4 th year student, Narayan Nursing College, Gopal Narayan Singh University, Sasaram, Jamuhar, Bihar, India
Dr. Lisy Joseph*	Professor & HOD, Department of Community Health Nursing, Narayan Nursing College Gopal Narayan Singh University, Sasaram, Jamuhar, Bihar *Corresponding Auhtor

ABSTRACT

Adequate sanitation, together with good hygiene and safe water, are fundamental to good health and to social and economic development. Improvements in one or more of these three components of good health can substantially reduce the rates of morbidity and the severity of various diseases and improve the quality of life of huge numbers of people, particularly children, in developing countries. A quasi-experimental research design was used for this study to select 60 mothers of under five children by purposive sampling technique. Structured knowledge questionnaire was used to collect the data from the samples. The findings of the study concluded that the STP was found to be effective in improving the knowledge of mothers regarding prevention of Five F's (food, finger, fluids, flies and faeces) disease transmission.

KEYWORDS

Sanitation, mothers, under five children, five F's disease

INTRODUCTION

Sanitation is vital for health. Every child has a right to grow up in healthy environment- to live, learn and play in healthy places. According to the World Health Organization (WHO), "Hygiene refers to conditions and practices that help to maintain health and prevent the spread of diseases." Hygienic practices are employed as preventive measures to reduce the incidence and spreading of disease. Acting to safeguard children's environment can save millions of lives, reduce diseases and provide a safer, healthier world for their future. Children under the age of five are at an increased risk for food borne illness and related health complications because their immune systems are still developing. Children with developing immune systems cannot fight off infections as adults can. Additionally, children produce less stomach acid that kills harmful bacteria, making it easier for them to get sick.

In India, increased child morbidity rates (<5 years) are attributed to food, sanitation and water contamination. Mothers are usually the final line of defense against disease transmission. Thus, the role of mothers in ensuring food and water safety and hygiene promotion at homes is well accepted. So, the researchers felt that it is important to bring about the awareness of prevention of 5F's (food, finger, fluids, flies and faeces) of disease transmission among mothers of under five children.

Statement Of The Problem

"A study to evaluate the effectiveness of structured teaching program on knowledge regarding prevention of Five F's (food, finger, fluids, flies and faeces) disease transmission among mothers of under five children at selected rural areas of Jamuhar, Sasaram, Rohtas, Bihar."

OBJECTIVES

1. To assess the pretest level of knowledge regarding prevention of Five F's disease transmission among mothers of under-five children.
2. To evaluate the effectiveness of Structured Teaching Program regarding prevention of Five F's disease transmission among mothers of under-five children.
3. To find the association between posttest level of knowledge regarding prevention of Five F's Disease transmission among mothers of under-five children with selected demographic variables.

Research Hypothesis:

- H1:-** There will be significant difference between the mean pretest and posttest knowledge scores of mothers regarding prevention of five F's disease transmission in children.
- H2:-** There will be significant association between the posttest level of knowledge of mothers regarding prevention of five F's disease transmission in children with their selected socio-demographic variables.

Assumptions

The study is based on the following assumptions

- Mothers may have some knowledge on prevention of five F's disease transmission in children
- Education may enhance the knowledge of mothers regarding prevention of five F's disease transmission in children.
- Mothers act on the basis of cognitive information they receive or perceive.

METHODS AND MATERIALS

In the view of the nature of the problem and to accomplish the objectives of the study Quasi- experimental Research design (one group Pre-test Post-test Research Design) was used to evaluate the effectiveness of structured teaching program on knowledge regarding prevention of Five F's disease transmission among mothers of under five children at selected rural areas of Jamuhar, Sasaram, Rohtas, Bihar.

Sampling Technique

Sampling technique defines the process of selecting the group of people or other elements with which to conduct a study. Purposive sampling technique was adopted to select the samples for the present study based on inclusion criteria.

Sampling Criteria

Inclusion criteria

The study includes mothers who

- are residing in selected rural areas of Jamuhar.
- can communicate in Hindi
- are willing to participate in the study.

Exclusion criteria

The study excludes mothers who:

- participated for pilot study
- have attended any educational program regarding prevention of five F's disease transmission in children within 6 months.
- are health personnels.

An approval to conduct the study at Jamuhar village was obtained from Dean cum Principal, College of Nursing and the Head of the village Panchayat. Then an approval to conduct a study was obtained from Nursing Research Monitoring Committee for student's project (Ethical reference number-NNC/NRMC/BSC/2022/2586).

Description Of The Tool

The tool used to collect the data is a structured questionnaire in order to assess the knowledge of mothers regarding prevention of Five F's disease transmission in children.

It consists of two parts. Part I and Part II.

Part I- Socio demographic data

It consists of demographic variables of mothers such as age, religion, type of family, education, occupational, family monthly income, number of children, age of children, history of infectious disease in children, length of infection in children, how often mothers wash hands, how often children wash hands, waste disposal, drainage system and sources of information regarding prevention of 5F's disease transmission.

Part II- Structured knowledge questionnaire

It consists of items on knowledge related to prevention of 5 F's disease transmission in children, which consists of multiple-choice questions having four responses with one right answer. Structured knowledge questionnaire includes six aspects of infectious disease as follows:

- General information of infectious disease
- Prevention of foodborne disease
- Prevention finger borne disease
- Prevention of water borne disease
- Prevention of fly borne disease
- Prevention of faeces borne disease

Scoring And Interpretation

The knowledge regarding prevention of Five F's disease transmission in children among mothers would be measured in terms of knowledge score. It consists of four responses each with one right answer. Each correct answer was given a score of one and a wrong answer was given score of zero. The total attainable score in the knowledge questionnaire is 30. Tool and structured teaching program content were validated by six experts in the field of nursing and members of ethics committee. The Investigators modified the final tool based on experts' suggestions and results of pilot study. The tool was translated from English to Hindi and to confirm the appropriateness of the language used in framing the items.

Data Collection Procedure

The data were collected from mothers of under five children at Jamuhar rural areas, Sasaram. Written permission was sought and obtained from the authorities concerned. The period of data collection was for two weeks. About 60 mothers were selected as per the inclusion criteria with prior informed consent were taken to participate in the study. Initially good rapport was maintained with the mothers and the purpose of the study was explained to them. Mothers were made comfortable and the privacy was maintained. Instructions to answer the questionnaire were given. Pretest was conducted through structured knowledge questionnaire to assess the mother's knowledge on prevention of Five F's disease transmission in children.

Then structured teaching program on prevention of Five F's disease transmission in children was taken to the mothers. After 10 days of administering of STP, post test was conducted for the mothers with the same structured knowledge questionnaire to assess their knowledge. The collected data were analyzed by using descriptive and inferential statistics. The level of significance for the study was fixed as $p < 0.05$ level.

RESULTS

Study among 60 mothers revealed that 27(45%) of them were between 26-30 years of age, 13(22%) of them were between 31-35 years of age, 1(2%) of them were 36 years or above and 19(32%) of them were between 20-25 years of age.

According to religion, 47(78%) of mothers were Hindus, 11(18%) of them were Muslims and 1(2%) of them were Christians, 1(2%) of them belonged to other religion. Based on the educational status of mothers, 7(12%) of them were undergraduates, 2(3%) of them were postgraduates or above, 26(43%) of them had secondary education and 25(42%) of them had primary education.

In concern to type of family, among 60 mothers, majority 35(58%) of them belonged to nuclear family and 21(35%) of them belonged to joint family, 3(5%) of them belonged to extended family, (2%) of them belonged to other categories. According to occupation, it was observed that, among 60 mothers, 27(45%) of them were private employees, 9(15%) of them were homemakers, 20(33%) of them were government employees and 4(7%) of them were self-employed.

With regard to the number of children 22(37%) of them had 1 child, 30(50%) of them had 2 children and 2(3%) of them had 3 or more

children. In relation with age of the children, 35(58%) of mothers had children between 1-3 years of age, 15(25%) of mothers had children less than 1 year of age, 8(13%) of mothers had children between 3-5 years of age and 2(3%) of mothers had children between 5 years or above of age.

With regard to the family monthly income of mothers, 16(27%) of them had Rs. 20,001-30,000, 34(57%) of them had less than Rs. 20,000, 8(13%) of them had Rs. 30,001-40,000 and 2(3%) of them had more than Rs.40,000 of monthly income. It was observed that, 31(52%) of mothers had children with previous history of infectious disease and 29(48%) of mothers had children with no previous history of infectious diseases.

With regard to the waste disposal methods, 19(32%) of mothers were dumping their waste and 14(23%) of them were burning their waste and 27(35%) of them used other methods of disposal. It was recorded that, 26(43%) of mothers had open drainage system and 34(57%) of them had facility of closed drainage system. The data regarding the source of information showed that among 60 mothers, 39(65%) of them did not get any information regarding Five F's disease transmission in children, 21(35%) of them got information from mass media.

With regard to the water supply among 60 mothers, 23(38%) of them used tap water, 33(55%) of them used hand pump and 4(7%) of them used RO water. With regard to the availability of sanitary latrine at home among 60 mothers, 48(80%) of them had sanitary latrine at home and 12(20%) of them sanitary latrine was available at home.

The overall pretest knowledge scores on prevention of Five F's disease transmission in children among mothers, 20(33%) of them had inadequate level of knowledge and 40(67%) of them had moderate level of knowledge and none of them had adequate level of knowledge regarding prevention of Five F's disease transmission in children.

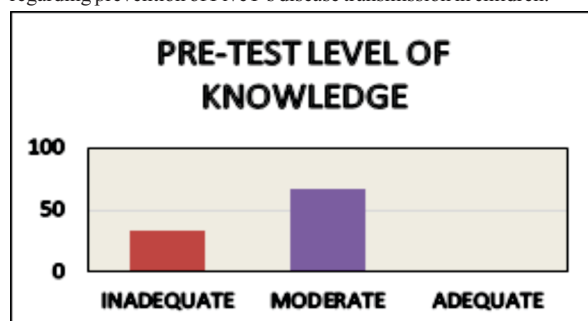


Figure: -1: Classification of sample on pre-test level of knowledge.

The post test result revealed that, 34(57%) of them had adequate level of knowledge, 26(43%) of them had moderate level of knowledge and none of them had inadequate level of knowledge regarding prevention of Five F's of disease transmission in children.

The classification of pretest and posttest mean, SD and mean difference level of knowledge of mothers regarding prevention of Five F's of disease transmission in children, among 60 mothers the pretest mean score was 12.36 with SD of 3.38 and the posttest mean score increased to 20.95 with SD of 2.47. The mean difference identified was 8.6 which was statistically significant at $p < 0.05$ level.

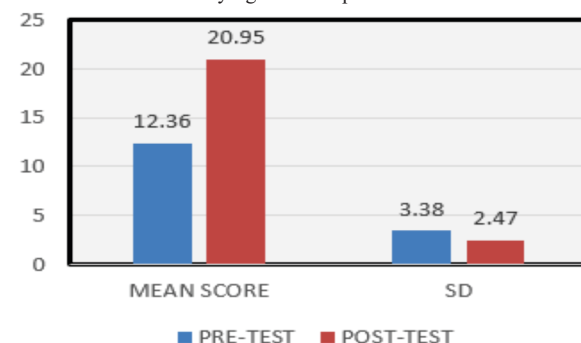


Figure: - 2: Classification of sample on pretest and posttest mean and SD knowledge score.

There was no significant association between socio demographic variables of mothers such as age, education, occupation, number of children, history of infectious disease, and source of information with post-test level of knowledge regarding prevention of Five F's disease transmission in children.

This study was well supported by a descriptive study conducted to assess the knowledge and practice regarding water, sanitation and hygiene among 300 mothers in selected villages of Udupi district. Among samples 40% had good knowledge, 42% had average knowledge and 18% had poor knowledge on water sanitation and hygiene. 89.3% of mothers draw water from well, 66.3 used handled jug to take water, 70% uses boiled or filtered water for drinking, 83.7 cleans water storing vessels daily. 70% practiced hand washing with soap and water. Study highlighted that there is significant association between knowledge and practice at $p < 0.05$ and the teaching program was effective in improving knowledge of mothers.

CONCLUSIONS

This study concluded that the structured teaching program was found to be effective in improving the knowledge of mothers regarding prevention of Five F's disease transmission and highlighted that the nurse educator should give importance for giving information to mothers in the community about prevention of Five F's disease transmission in children. Community health programs should also be initiated as to impart knowledge of prevention of Five F's disease transmission in children to the general public on a large scale with the utilization of mass media.

Acknowledgement

The authors wish to thank the management of Gopal Narayan Singh University for facilitating the research work.

REFERENCES:

1. <https://en.wikipedia.org/wiki/Hygiene>
2. Oni GA, Schumann DA, Oke EA. Diarrhoeal disease morbidity, risk factors and treatments in a low socioeconomic, J Diarrhoeal Dis Res 2013;9:250-7.
3. Heller L, Colosimo EA, Antunes CMF. Setting priorities for environmental sanitation interventions based on epidemiological criteria: J Water Health 2015; 3:271-81.
4. Gorter AC, Sandiford P, Pauw J, Morales P, Perez RM, Alberts H. Hygiene behaviour in rural Int J Epidemiol 2013;27:1090-100.
5. Duncan Mara, Jon Lane, Beth Scott, David Trouba. Sanitation and Health, Journal of PLOS medicine, November 16, 2010 <http://dx.doi.org/10.1371/journal.pmed.1000363>
6. Nguyen TV, Van PL, Huy CL, Gia KN, Weintraub A. Etiology and epidemiology of diarrhea in children, Int J Infect Dis 2016;10:298-308.
7. Duncan Mara, Jon Lane, Beth Scott, David Trouba. Sanitation and Health, Journal of plos medicine, November 16, 2010 <http://dx.doi.org/10.1371/journal.pmed.1000363>
8. http://esa.un.org/iys/docs/1%20fact-sheet_health.pdf
9. Charu Kohli, Suneela Garg. Food safety in India: An unfinished agenda, MAMC journal of medical science, 2015 | Volume: 1 | Issue: 3 | Page: 131-135
10. <https://sanitationupdates.wordpress.com/tag/joint-monitoring-programme>