



“A STUDY TO EVALUATE THE EFFECTIVENESS OF INFORMATION, EDUCATION AND COMMUNICATION (IEC) ON KNOWLEDGE REGARDING PREVENTION OF URINARY TRACT INFECTION AMONG ADOLESCENT GIRLS IN SELECTED SCHOOL AT VISNAGAR CITY”.

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Abstract

INTRODUCTION: Urinary tract infection (UTI) commonly affects the adolescent girls because of the onset of menarche, dysfunctional voiding patterns, use of synthetic underwear, tight jeans, and poor hygiene. The infection in the urinary tract will produce the signs and symptoms like fever, dysuria, urgency and suprapubic pressure or discomfort, flank pain, chills, etc. Acute uncomplicated urinary tract infection is more prevalent among adolescent girls and is the fourth main reason for out-patient visit among this group. It is estimated that 150 million occur yearly on a global basis, resulting in more than six billion dollars in direct health care expenditures.

STATEMENT:“A Study to Evaluate the Effectiveness of Information, Education and Communication (IEC) on Knowledge Regarding Prevention of Urinary Tract Infection among Adolescent Girls in Selected School at Visnagar City”

OBJECTIVES:1. To assess the pre-test and post-test knowledge regarding prevention of urinary tract infection among adolescent girls in selected school at Visnagar.

2. To assess the effectiveness of information education and communication on prevention of urinary tract infection among adolescent girls in selected school at Vinegar.

3. To determine the association between post test level of knowledge regarding prevention of urinary tract infection among adolescent girls with their selected demographic variables.

METHODOLOGY: The study was carried out in the Nootan Sarva Vidyalaya, Visnagar. Quasi experimental research design was chosen for the investigation. Random sampling technique was employed to collect 150 samples of participants who met the inclusion criteria. The pre-test was conducted using the structured knowledge questionnaire. That questionnaire consist 30 questions and Score value of (1) was allotted to each correct response. The total knowledge score was 30. A structured teaching tool Regarding Prevention of Urinary Tract Infection among Adolescent used for intervention of this study. post -test conducted with structured knowledge questionnaire. The data were examined using the mean, standard deviation, and chi square test.

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DOI: - 10.48047/ecb/2023.12.si10.00543

RESEARCH APPROACH

Polit and Hungler (2004) defined research approach as, “A general setup orderly discipline in procedure used to acquire information”.

In this study quantitative approach was used to determine the effectiveness of Information Education and Communication (IEC) on awareness about knowledge regarding prevention of urinary tract infection among adolescent girls

RESEARCH DESIGN

Polit and Hungler (2004) defined research design as “overall plan for addressing research questions. The researcher adopted in this study one group pre-test post-test quasi experimental design.

VARIABLES OF THE STUDY

According to Denise F. Polit (2011) Variable is defined as “An attribute that varies, that is, takes on different values”.

Variables are measurable characteristics of a concept and consists of logical group of attributes.

DEPENDENT VARIABLES

In this study, the dependent variable is the level of knowledge regarding prevention of urinary tract infection.

INDEPENDENT VARIABLES

In this study, the independent variable is the information education and communication regarding prevention of urinary tract infection.

SETTING OF THE STUDY

Polit and Hungler (2005) stated that “The physical location and condition in which the data collection has taken place in a study is the seeking of the study”.

The study was conducted among adolescent girls in Nootan Sarva Vidyalaya at Visnagar.

In that school, approximately 1500-2000 are girls studying per year. The school is selected on the basis of: Geographical proximity, Feasibility of conducting the study, Availability of the sample etc.

POPULATION

Polit and Hungler (2005), “A population is the entire aggregation of cases in which a researcher is interested”.

TARGET POPULATION

The sample for the present study was adolescents girls in the age group of 13- 16 years in a selected school, Visnagar

ACCESSIBLE POPULATION

The study was adolescent girls who are 13-16 years in Nootan Sarva Vidyalaya at Visnagar. 3

SAMPLING TECHNIQUE

According to Burns and Groove (2005) “Sampling technique is the process of selecting a portion of the population to represent the entire population”. The sampling technique used for the study randomized sampling technique. It is found to be appropriate and the samples were selected using lottery method.

SAMPLE

In this study, samples were selected from adolescent girls Nootan Sarva Vidyalaya at Visnagar.

SAMPLE SIZE

The total sample size was 150 adolescent girls selected based on inclusion and exclusion criteria.

CRITERIA FOR SELECTION INCLUSION CRITERIA

- Adolescent girls those who are studying 13-16 years old.
- Adolescent girls who can speak English and Gujarati.
- Adolescent girls who are willing to participate in the study.
- Adolescent girls who are present during the time of data collection

EXCLUSION CRITERIA

- Adolescent girls who were not interested to participate in the study.
- Adolescent girls who were not available at the time of the study.
- Adolescent girls who had not attained menarche.

DEVELOPMENT OF THE TOOL

Treece and Treece (1986) emphasized that the instruments selected in research should as far as possible be the vehicle that could best obtain data for drawing conclusion The research instrument was developed based on information gathered from the relevant extensive review of literature, suggestions and expert opinion. It has two sections- Demographic variables and the structured self-administered knowledge questionnaire.

The tool was prepared by referring the literature on the topic, suggestion and guidance from the expert in English. Then, the tool was translated into Gujarati language and submitted to the Gujarati expert for validation. After that, the tool

was used to evaluate the level of awareness regarding knowledge regarding prevention of urinary tract infection among adolescent girls.

DESCRIPTION OF THE TOOL The tool consists of two Sections.

SECTION I

It consists of demographic data which includes age, religion, education of the mother, education of the father, type of family, area of living, source of information and previous history of urinary tract infection.

SECTION II

It consist of 30 multiple choice structured self-administered questionnaire to assess the knowledge on prevention of urinary tract infection. The question was related to urinary tract, urinary tract infection, causes, signs & symptoms, investigations, treatment and prevention of urinary tract infection.

SCORING PROCEDURE

For every correct answer was scored ‘1’ mark and wrong answer ‘0’. The maximum possible score was ‘30’ and minimum possible score was ‘0’. Based on the score, level of knowledge is graded into 3 categories. They are adequate, 27 moderate and inadequate.

- 0-7 = Inadequate knowledge
- 8-22 = Moderately Adequate knowledge
- 23-30 = Adequate knowledge

INFORMATION ,EDUCATION AND COMMUNICATION

According to Burns and Groove (2005) “Information, education and communication defined as an approach which attempts to change or reinforce a set of behaviour in a target audience regarding a specific problem in a predefined period of time”. It was developed by review of literature and by obtaining expert’s opinion. The Information Education and Communication (IEC) held for 45 minute duration comprised the overall objectives, specific objectives, content, teacher-learner activities, summary and conclusion. It is comprised of the following aspects related to urinary tract infection.

- Definition of Urinary tract infection
 - Causes of Urinary tract infection
 - Signs and symptoms of Urinary tract infection
 - Treatment of Urinary tract infection
 - Prevention of Urinary tract infection
 - Complication of Urinary tract infection
- The method of Information Education and Communication (IEC) was given by lecture cum

discussion in Gujarati language by Liquefied Crystal Display (LCD) projector using Audio Visual aids.

CONTENT VALIDITY

According to Burns and Groove. (2005) “The validity of an instrument is the determination of the extent to which the instrument reflects the abstract Construct that is being examined”. The tool was given to the expert from medical surgical nursing department for obtaining validity. Based on expert’s evaluation of the tool regarding the 28 adequacy of content and the sequence in framing the questions and their valid suggestions, reframing of the tool was done.

RELIABILITY

According to De vos, (1998) “Reliability refers to the accuracy and consistency of a measuring instrument”. An instrument can be considered reliable if it yields similar results on separate occasions. The reliability co-efficient was calculated by test re-test method and co-efficient correlation score was 0.77 and found highly reliable.

PILOT STUDY

Pilot study was conducted among 30 adolescent girls in Nootan Sarva Vidyalaya at Visnagar. Study period was 2 weeks, after obtaining the written consent, the pre-test level of knowledge regarding prevention of urinary tract infection among adolescent girls was assessed by administering structured self-administered questionnaire followed which the Information Education and Communication was given for 45 minutes on day 2. In 5 days of interval, again structured self-administered knowledge questionnaire was administered to assess the post-test level of knowledge on the 6th day. The result revealed that setting, tool and samples are feasible to conduct the main study.

DATA COLLECTION PROCEDURE

According to Polit and Hungler,(1999) “Data collection is the gathering of information needed to address a research problem”.

Before proceeding with the study, formal permission was taken from the respected authorities of Nootan Sarva Vidyalaya at Visnagar.

The objectives of the study will be explained to the principal of Nootan Sarva Vidyalaya at Visnagar. We gave necessary information about the study to the subjects, after obtaining the willingness to participate in the study, we obtained

consent from the participants and the questionnaire was distributed to the subjects. We asked them to answer it 29 and truly explained that the responses would be kept confidential. The subjects were given 30 minutes to complete the questionnaire. After that, a information education and communication programmed was given by (Liquefied Crystal Display) in Tamil language, following which doubts were clarified. The post- test was conducted to evaluate the knowledge of all the participants on the 6th day of the intervention by giving same structured knowledge questionnaire.

PLAN FOR DATA ANALYSIS

The following methods were planned to analyze the data:

- The demographic variables were analyzed by using descriptive measures (frequency and percentage).
- The relationship between the knowledge and selected demographic variables were Mean, Standard deviation,
- Mean deviation were used to evaluate the effectiveness of information education and communication programme.
- Effectiveness of the study measured by “t” test.

PROTECTION ON HUMAN RIGHTS

The study was conducted after the approval of respected authorities of Nootan Sarva Vidyalaya at Visnagar.. The nature and purpose of the study was explained to the subjects. The anonymity of the sample was maintained throughout the period of the study

RESULTS AND DISCUSSION:

Regarding Knowledge Regarding Prevention of Urinary Tract Infection among Adolescent Girls in Selected School at Visnagar City The mean pre-test observation score was 14.1 and the mean post test score was the 5.62 and the mean different 11.04 No. of sample 150 and the Standard Deviation was 5.62 in pre- test and 3.20 in post test score, also the calculated “t” value was 27.00 and the “p” value was 0.05..Thus, table revealed that mean post test knowledge score was higher than the mean pre test knowledge score. And the calculated “t” value (27.00) is greater than the table value so the research hypothesis was accepted.. The Chi-square test shows that there is significance association between the post-test knowledge score and selected demographic variables like as Age, Religion, Education for Mother, Education for Father, Area of living, Type of Family, Have You got information about urinary tract infection, Previous history Of urinary tract in year, attending any programme in past, Frequency of patients in ward.

DATA ON THE FREQUENCY AND PERCENTAGE DISTRIBUTION OF SELECTED DEMOGRAPHIC VARIABLES AMONG ADOLESCENT GIRLS. Frequency and Percentage wise distribution of Sample by their Data Demographic (N=150) shows that the frequency and distribution of adolescent girls in their selected demographic variables on prevention of urinary tract infection.

SR. NO.	DEMOGRAPHIC VARIABLES	FREQUENCY	PERCENTAGE	
1	Age	10Years	29	19.3%
		11-14Years	35	23.3%
		15-16Years	50	33.3%
		17-19Years	36	24%
2	Religion	Hindu	106	70.7%
		Christian	28	18.7%
		Muslim	16	10.6%
3	Education Of Mother	No formal education	17	11.3%
		Primary school	42	28%
		Middle school	43	28.7%
		Higher secondary school	34	22.6%
		Graduate or equivalent	14	9.3%
4	Education Of Father	No formal education	16	10.7%
		Primary school	27	18%
		Middle school	44	29.3%
		Higher secondary school	43	28.7%
		Graduate or equivalent	20	13.3%
5	Types Of Family	Nuclear family	87	58%
		Joint family	41	27.3%

		Extended family	22	14.7%
6	Area of living	Urban	114	76%
		Rural	36	24%
7	Have You got information about urinary tract infection	Yes	45	30%
		No	105	70%
8	Previous history Of urinary tract	Yes	51	34%
		No	99	66%

Table: 1 shows that the frequency and distribution of adolescent girls in their selected demographic variables on prevention of urinary tract infection.

Data On Effectiveness Of Information Education Communication On Knowledge Regarding

Prevention Of Urinary Tract Infection Among Adolescent Girls.

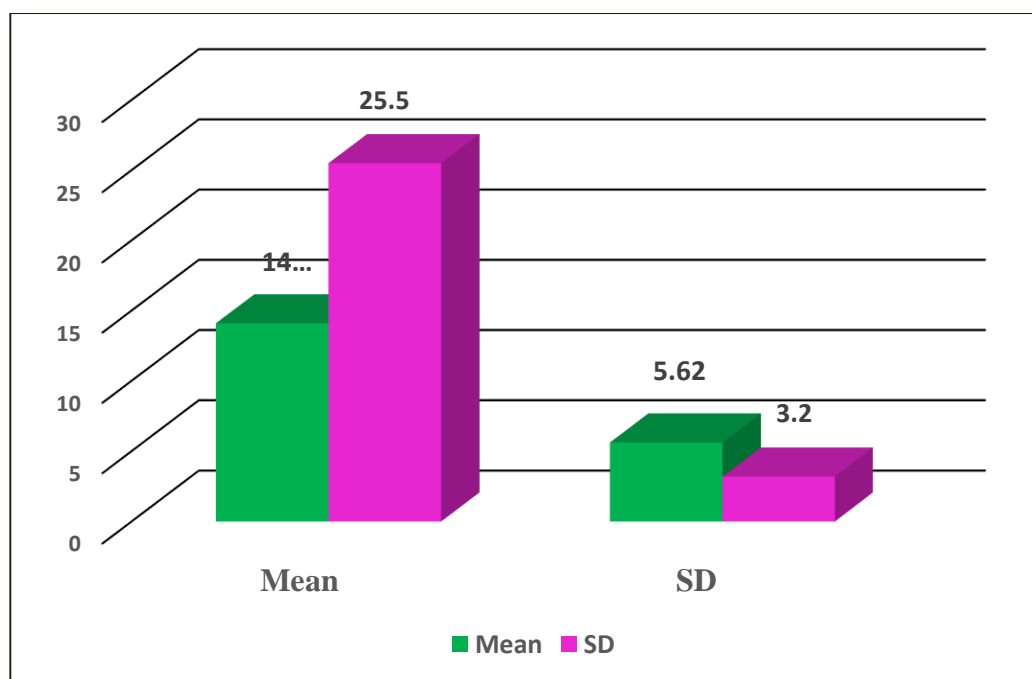
Analysis and Interpretation of the Data Collected on of the Knowledge Samples (N=150)

S.No	Level of Knowledge	Mean	Standard deviation	Mean deviation	t-value
1	Pretest	14.1	5.62	11.4	*27.00
2	Post test	25.5	3.20		

*Significant at 0.05 level Table:3 Show that the mean, standard deviation, mean deviation and t-value of pretest and post test level of knowledge regarding prevention of urinary tract infection among adolescent girls.

Mean score of knowledge in pre test was 14.1 and post test was 25.5, standard deviation pretest was 5.62 and post test was 3.20 and mean deviations core was 11.4. The obtained 't'-value is 27.00. There was significant at $p < 0.05$ level.

It is inferred that there was difference between the pre test and post test knowledge regarding prevention of urinary tract infection. Hence that stated hypotheses (H_1) accepted



Mean, Standard deviation of pre test and post test on level of prevention of urinary tract infection among knowledge adolescent girls.

Among got information, 12 (8%) adolescent girls had moderately adequate knowledge, 33 (22%) adolescent girls had adequate knowledge, about no information of 14 (9.3%) adolescent girls had moderately adequate knowledge, and

91 (60.7%) adolescent girls had adequate knowledge. The obtained chi-square value is 3.907 and it was not significant at $p < 0.05$ level and thus hypotheses is not accepted.

Among previous history of urinary tract infection, 19 (12.7%) adolescent girls had moderately adequate knowledge, 32 (21.3%) adolescent girls

had adequate knowledge ,no history of urinary tract infection, 7(4.7%) adolescent girls had moderately adequate knowledge, and 92(61.3%) adolescent girls had adequate knowledge. The obtained chi-square value is 21.401 and it was significant at $p < 0.05$ level and thus hypotheses is accepted

DISCUSSION

In pre-test, majority 101(67.3%) of the staff nurses had moderate knowledge and 35(23.3%) staff nurses had inadequate knowledge, but in post-test the staff nurses 26(17.3%) had moderate knowledge, 124 (82.7%) had adequate knowledge. The present study supports that the Pre-test mean 14.1 and standard deviation score was 5.62 and Post-test mean 25.5 and standard deviation score was 3.20, the calculated 't' value of 27.00 which was greater than the tabulated value at $t > 0.05$ level. Hence research hypothesis H1 was accepted. It clearly shows that the planned teaching program was effective in improve the level of knowledge among staff nurses.

The association of pre-test level of knowledge among the Staff nurses with selected demographic variables such as working department, previously attend an educational programme and frequency of patients in their ward at $p < 0.05$.

CONCLUSION:

The main conclusion drawn from the present study was that most of the adolescent girls had inadequate level of knowledge regarding prevention of urinary tract infection. After information education and communication, it was found that they had significantly improved in level of knowledge regarding prevention of urinary tract infection among adolescent girls. Samples became familiar and found themselves comfortable and also expressed satisfaction.

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