

## Effectiveness of Planned Teaching Programme on Knowledge Regarding Lower Urinary Tract Infection among Adult Females

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### Abstract

**Background:** Good health is the fundamental right of every human being and it is essential to lead a successful life. Women's health in India can be examined in terms of multiple indicators, which vary by geography, socioeconomic standing and culture. To adequately improve the health of women in India multiple dimensions of wellbeing must be analyzed in relation with global health averages and also in comparison to men in India. Currently, women in India face a multitude of health problems, which ultimately affect the aggregate economy's output. Urinary tract infections are a serious health problem affecting millions of people each year. Women are especially prone to Urinary Tract Infections for reasons that are not yet well understood. One woman in five develops a Urinary Tract Infection during her lifetime. **Objective:** To assess the pretest and posttest knowledge regarding Lower Urinary Tract Infection among adult females. To evaluate the effectiveness of Planned Teaching Programme on knowledge regarding Lower Urinary Tract Infection among adult females. To associate the knowledge score with selected demographic variables. **Methodology:** This study was based on quantitative approach. The research design used in this study was pre experimental one group pretest and posttest design. The sampling technique used in the study was non probability convenient sampling and the sample size of 60 adult female (18-60 year). **Result:** The analysis reveals that posttest mean knowledge score was higher 25.75 with SD of  $\pm 1.94$  when compared with pretest mean knowledge score value which was 10.86 with SD of  $\pm 4.17$ . The calculated t value 29.06 is greater than table value 2.00 at 0.05 level of significance. Thus the  $H_1$  is accepted and  $H_0$  is rejected. **Conclusion:** the study concluded that planned teaching programme was effective in improving the knowledge regarding Lower Urinary Tract Infection among adult female. Only age was associated with the knowledge of adult female regarding Lower Urinary Tract Infection.

**Keywords:** Assess; Effectiveness; Knowledge; Lower Urinary Tract Infection; Adult Female.

### Introduction

Good health is the fundamental right of every human being and it is essential to lead a successful life. The preamble to the WHO constitution also affirms that, one of the fundamental rights of every human being is to enjoy "The highest attainable standard of health". Moreover, emphasis is based on health promotion and preventive health care [1].

Women's health in India can be examined in terms of multiple indicators, which vary by geography, socioeconomic standing and culture. To adequately improve the health of women in India multiple dimensions of wellbeing must be analyzed in relation with global health averages and also in comparison to men in India. Health is an important factor that contributes to human wellbeing and economic growth. Currently, women in India face a multitude of health problems, which ultimately affect the aggregate economy's output [2].

Urinary tract infections are a serious health problem affecting millions of people each year. Infections of the urinary tract are the second most common type of infection in the body. Urinary tract infections account for about 8.3 million doctor visits each year. Women are especially prone to Urinary Tract Infections for reasons that are not yet well understood. One woman in five develops a Urinary Tract Infection during her lifetime. Urinary Tract

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Received on 11.08.2018, Accepted on 31.08.2018

Infections in men are not as common as in women but can be very serious when they do occur [3].

Urinary tract infections are one of the most common infections causing morbidity in community and health care setup. Women in reproductive age group (15-49 yrs) are more prone to Urinary Tract Infection [4].

Prevention of urinary tract infection is therefore the key aspect to render good health among women in the country.

#### *Background and Need of the study*

Today, Infections of the urinary tract (UTI) are the second most common infectious disease in women after gastrointestinal disorders [5].

More than 1, 00,000 people are hospitalized annually because of urinary tract infection and it is an important cause of morbidity and mortality in Indian subjects. Young age and female sex are the two important factors that contribute to the development of urinary tract infection [6].

According to Indian study Urinary Tract Infection, commonly known as Urinary Tract Infection, affects as many as 50% women at least once during their lifetime. All individuals are susceptible to Urinary Tract Infection (UTI); however the prevalence of infection differs with age, sex and certain predisposing factors [7].

A study was conducted to find out the knowledge on urinary tract infection among 200 women in Poraiyur village, Tamil Nadu by using Quasi-experimental research design. Result of the study showed that 176 (88%) women had inadequate knowledge and 24 (12%) women had moderate knowledge. Data suggested that awareness programme about the urinary tract infection should be given to women in order to avoid complication during their old age [8].

Women share a greater portion of population. Urinary tract infection is common among women due to shorter urethra, unsanitary pads during menstruation, practicing improper anal washing technique, having vaginal discharge, using bad toilets, using diaphragm and having gynecological morbidity. Thus the investigator felt that risk of Lower Urinary Tract Infection to adult females is very high and common and the educational intervention will improve their knowledge hence the investigator planned to conduct Planned Teaching Programme on Lower Urinary Tract Infection among adult females.

#### *Objectives*

- To assess the pre test and post test knowledge regarding Lower Urinary Tract Infection among adult females.
- To evaluate the effectiveness of Planned Teaching Programme on knowledge regarding Lower Urinary Tract Infection among adult females.
- To associate the knowledge score with selected demographic variables.

#### *Operational definition*

*Assess:* In this study assess means, the organized systematic continuous process of collecting data from adult female regarding Lower Urinary Tract Infection.

*Effectiveness:* In this study effectiveness means, the desired change brought about by the planned teaching programme on knowledge regarding Lower Urinary Tract Infection.

*Planned teaching programme:* In this study planned teaching programme means, systematically providing information regarding Lower Urinary Tract Infection among adult female

*Knowledge:* In this study knowledge means, responses obtained from the adult females regarding their knowledge on Lower Urinary Tract Infection.

*Lower Urinary Tract Infection:* In this study the Lower Urinary tract infection means, infection of urethra and bladder among the adult females.

*Adult Females:* In this study adult female means the female who are between the age group of 18 year to 60 years.

*Delimitation:* Present study is delimited to adult females residing in selected areas of the city.

*Hypothesis:* Is tested at 0.05 level of significance

$H_0$ : there will be no significant difference between pre and posttest level of knowledge score regarding Lower Urinary Tract Infection among adult females.

$H_1$ : there will be significant difference between pre and posttest knowledge score regarding Lower Urinary Tract Infection among adult females.

#### *Conceptual framework*

The conceptual framework selected for the study was based on Ersestine Wiedenbanch's "Prespective Theory" [9].

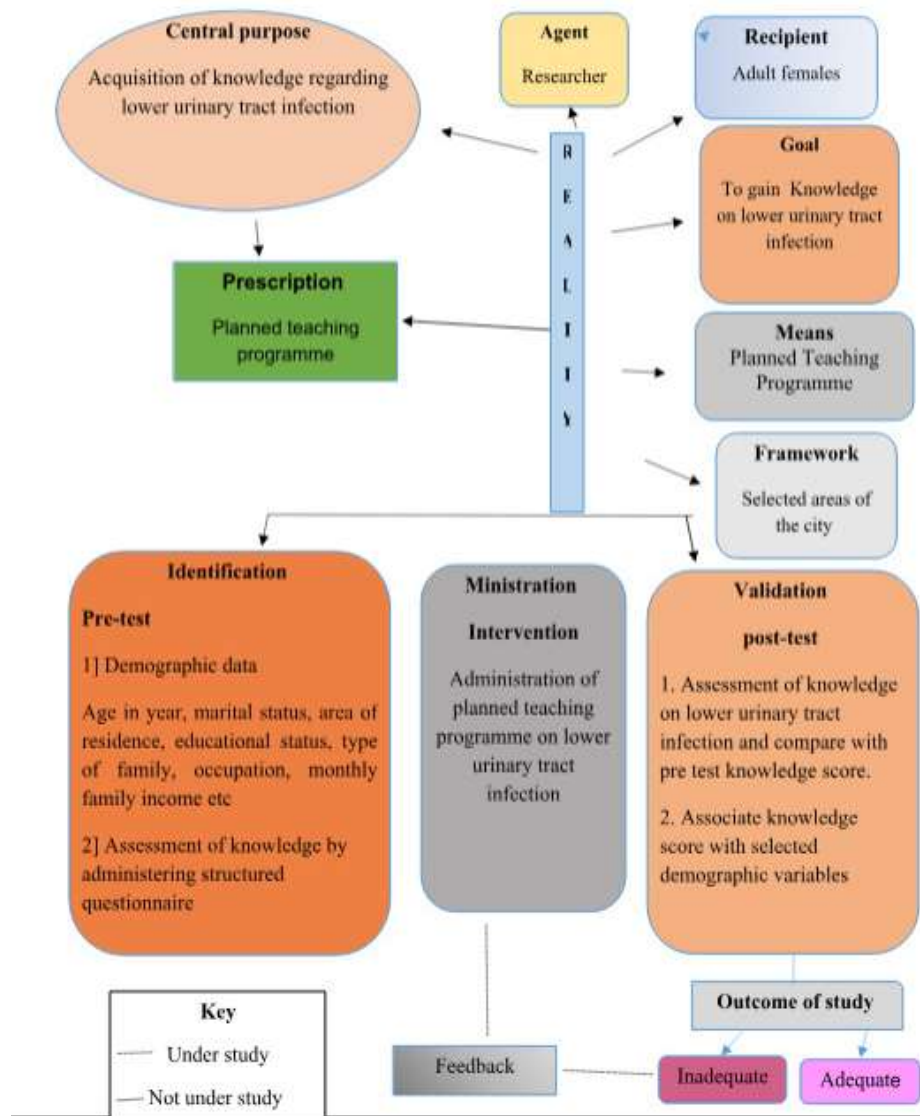


Fig. 1: Conceptual framework based on modified Widenbench Perception Theory

*Review of literature*

In the present study the literature reviewed has been organized into the following categories:

1. Literature related to Urinary Tract Infection.
2. Literature related to adult females knowledge regarding Lower Urinary Tract Infection.
3. Literature related to effectiveness of planned teaching programme.

**Methodology**

*Research approach:* Quantative research approach

*Research Design:* Pre-Experimental one group pretest posttest design

*Setting of the study:* Selected areas of the Nagpur

*Variables*

- *Independent variables:* Planned Teaching Programme on knowledge regarding Lower Urinary Tract Infection.
- *Dependent variables:* Knowledge regarding Lower Urinary Tract Infection among adult females.
- *Demographic variable:* Age, Marital Status, Area of Residence, Educational Status, Type of Family, Occupation, Monthly Family Income of females, awareness of lower urinary tract infection and source of information.

### Population

*Target population:* all adult females residing in selected areas.

*Accessible population:* adult female residing in selected areas of the city who were available at the time of data collection and who were fulfilling the inclusive criteria.

*Sample Size:* 60

*Sampling technique:* Non-Probability; Convenient Sampling Technique.

### Sampling criteria:

*Inclusive criteria:* Inclusive criteria was, Females who are;

1. Between the age group of 18 year to 60 years.
2. Able to read & write
3. Willing to participate in study.
4. Available at the time of data collection

**Exclusive criteria:** Exclusive criteria was, Females who are;

1. Less than 18 yr and above 60 yr of age
2. Health professionals

### Tool and technique of data collection

The tools used in this study consist of two sections:

#### Section-I

A - Semi structured questionnaire on demographic Variable.

B - Semi structured questionnaire on medical data

#### Section II: Self structured Knowledge Questionnaires

Self structured questionnaire on knowledge regarding Lower Urinary Tract Infection consist of 30 questions.

- Planned teaching programme

*Validity:* For the content and construct validity the tool was determine by 27 experts; including medical surgical nursing specialist, MD Medicine, statistician etc.

*Reliability:* Karl Pearson correlation coefficient formula was used for reliability. The correlation coefficient 'r' of the questionnaire was 0.855, which is more than 0.8. Hence the questionnaire was found to be reliable.

*Pilot study:* Permission was taken from concern authority. Pilot study was conducted from 04-12-17 to 12-12-2017 for a period of 7 days. A sample of 6 adult females was selected from the residential area. The pilot study was feasible in terms of time, money, material and resources.

*Data collection:* The main study data was gathered from 14 December 2017 to 13 January 2018. Permission was obtained from the Sarpanch of concerned gram panchayat. The samples were approached in small groups on a daily basis. Before giving the questionnaire self introduction was given by the investigator and the purpose of the study mentioned. Consent of the samples were taken. The pre-test questionnaires were distributed and collected back after 40 minutes. After collecting the Pre-test score, the investigator administrated the treatment (planned teaching programme on lower urinary tract infection). After 7 days posttest was taken on the same subjects.

### Result

The analysis and interpretation is given in the following section:

*Section I:* Description of adult females with regards to demographic variables

After the analysis of demographic variable of the sample the majority of sample 65% were 18-27 yrs of age, 55% were unmarried, their area of residence was equal 50% from urban and 50% from rural, 63% were graduates, 51.7% belongs to joint family, majority was student, 40% were having monthly family income more than 20,000rs, and 50% samples were already aware of lower urinary tract infection by mass media and medical booklets.

*Section II:* Description on pretest and posttest knowledge of adult females regarding lower urinary tract infection.

*Section III:* Description on the effectiveness of planned teaching programme on knowledge of adult females regarding lower urinary tract infection.

*Section IV:* Description on association on knowledge score with selected demographic variables.

Analysis reveals that there is association of knowledge score with age. While none of the other demographic variable were associated with knowledge score.

**Table 1:** Table showing frequency and percentage wise distribution of adult females according to their demographic characteristics.

n=60

Sr .no	Demographic Variables	Frequency (f)	Percentage (%)	
1.	Age (in years)	18-27 yrs	39	65
		28-37 yrs	8	13.3
		38-47 yrs	11	18.3
		48 yrs	2	3.3
		Married	21	35
2.	Marital status	Unmarried	33	55
		Divorced	4	6.7
		Separated	1	1.7
		Widow	1	1.7
3.	Area of residence	Rural	30	50
		Urban Slum	0	0
		Urban	30	50
4.	Educational Status	Primary	4	6.7
		Secondary	10	16.7
		Graduation	38	63.3
		PG	7	11.7
5.	Type of family	Other	1	1.7
		Nuclear	21	35
		Joint	31	51.7
6.	Occupational Status	Extended	8	13.3
		Govt .Service	3	5
		Private Service	13	21.7
		Homemaker	18	30
		Self Employed	4	6.7
		Other	22	36.7
7.	Monthly Family Income(Rs)	10000>Rs	8	13.3
		10001-15000 Rs	14	23.3
		15001-20000 Rs	14	23.3
		20000<Rs	24	40
8.	Aware of lower urinary tract infection	Yes	30	50
		No	30	50
9.	Source of information	Family	6	20
		Friends	4	13.4
		Relatives	2	6.6
		Health Workers	5	16.6
		Mass Media	6	20
		Other	7	23.4

n=30

**Table 2:** Table showing comparison of pretest and posttest grading score

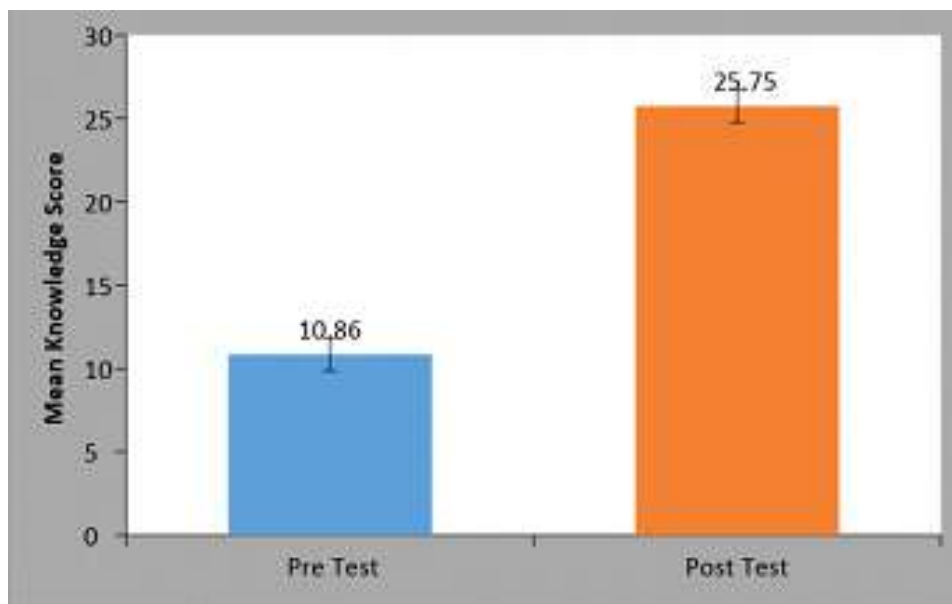
n=60

Grading	Pretest		Posttest	
	Frequency	Percentage	Frequency	Percentage
Excellent	2	3.33%	49	81.67%
Very Good	1	1.67%	11	18.33%
Good	11	18.33%	0	0%
Average	40	66.67%	0	0%
Poor	6	10%	0	0%

**Table 3:** Table showing effectiveness of planned teaching programme in knowledge score of pretest and post test of adult females regarding lower urinary tract infection

n=60

Test	Mean	SD	Mean Difference	Calculated t-value	DF	Table value	p-value
Pre Test	10.86	4.17	14.88	29.06	59	2.00	0.0001
Post Test	25.75	1.94					Highly significant

**Fig. 2:** Bar diagram representing effectiveness of planned teaching programme in knowledge score of pretest and post test of adult females regarding lower urinary tract infection

## Discussion

Vijay Purbia, Himanshu Vyas, Maneesh Kumar Sharma, Devashri Rathore. Have conducted a study on the effectiveness of planned teaching program on knowledge of staff nurses regarding prevention of urinary tract infection among patients with indwelling catheter. The sample consisting of 90 staff nurses was selected by using simple random sampling. The tool comprised of structured self-administered questionnaire. The mean score of post-test knowledge 21.53 (71.76%) was apparently higher than the mean score of pre-test knowledge 13.51 (45.03%), suggesting that the planned teaching programme was effective in increasing the knowledge of the staff nurses regarding prevention of urinary tract infection among patients with indwelling catheter. The mean difference 8.02 between pre-test and post-test knowledge score of the staff nurses was found to be significant [10].

In above study it is shown that planned teaching programme was effective in increasing

the knowledge of staff nurses. In present study also planned teaching programme was effective in improving the knowledge of adult female regarding lower urinary tract infection

Sirjana Adhikari, Rojana Dhakal. (2015) Have conducted a descriptive research for the study and data was collected through direct face to face interview schedule. Most of the respondents 102 (41.46%) were in between the age group of 22 - 25 years and the mean age was 23.5 years. Most of respondents 174 (70.73%) were lived in urban region. Majority of respondents 201 (81.70%) follows the Hindu religion. Majority of respondents 221(89.84%) had got formal education. One hundred and fifty nine (64.63%) of women had no information about Urinary tract infection. Regarding knowledge on urinary tract infection 60 (24.39%) had poor knowledge, 160 (65.05%) had average knowledge and 26 (10.56%) of respondents had good level of knowledge. Statistically significant relationship was found on level of knowledge with age of women ( $\chi^2= 8.53$ ) [11].

Above study reveals that age was associated with the level of knowledge. In present study also association was found between age of the women and knowledge score.

### Conclusion

The study reveals mean pretest knowledge score was 10.86 and the mean posttest knowledge score was 25.75. The calculated t value 29.06 is greater than tabulated value 2.00 at 0.05 level of significance. Hence, it is statistically interpreted that planned teaching program on knowledge regarding lower urinary tract infection was effective. Thus the  $H_1$  is accepted and  $H_0$  is rejected. Analysis also reveals that there is association of knowledge score with age of adult females while none of the other demographic variables were associated with knowledge score.

#### *Implication of the study*

The findings of this study have implications for nursing practice, nursing education, nursing administration, and nursing research

#### *Nursing practice*

- Health care services are an essential component of community health care nursing, the role of the personnel is to conduct the project and participate in national programs to update the knowledge regarding lower urinary tract infection among adult females.
- It will also help the nurses to keep update knowledge regarding various aspects of Lower Urinary Tract Infection.
- When professional liability is recognized, it defines the parameters of the profession and the standards of professional conduct. Nurses should therefore enhance their professional knowledge.
- The planned teaching program can be used for imparting knowledge regarding various aspects of Lower Urinary Tract Infection to health team members.
- Planned teaching program would serve as a ready reference material for the health team members. The information is particularly useful for the nurses for educating the adult females and other health team members the benefits of Lower Urinary Tract Infection.

#### *Nursing education*

- Nurse who are up to date with the knowledge regarding lower urinary tract infection are the better person to impart their knowledge to the nursing student which will ultimately update the knowledge regarding lower urinary tract infection.
- Now a days, much emphasis is given on comprehensive care in the nursing curriculum. So this study can be used by nursing teachers as an informative illustration for nursing students.
- Planned teaching program could help educators to use it as a tool for teaching.
- Students must be given clinical field assignment, in which they must be given opportunity to interact with people and create awareness regarding lower urinary tract infection.
- Teacher training programs must also include the topic of lower urinary tract infection.

#### *Nursing administration*

- Findings of the study can be used by the nursing administrator in creating policies and plans for providing education to the staff nurses and health professionals.
- It would help the nursing administrators to be plan and organize in giving continuing education to the nurses and to others for applying and updating the knowledge regarding lower urinary tract infection.
- In-service education must be conducted for the nurses to create awareness regarding lower urinary tract infection.
- The result of the study contributes to the body of knowledge of nursing.

#### *Nursing research*

- The findings of the study have added to the existing body of the knowledge on lower urinary tract infection which will enhance the knowledge and would help to keep it updated.
- Other researchers may utilize the suggestions and recommendations for conducting further study.
- The tool and technique used has added to the body of knowledge and can be used for further references.

*Limitations*

- The study was conducted only on adult females.
- The sample size was small to generalize the findings of the study.
- The study was limited to measure the knowledge of adult females residing in selected areas of the city.
- The tool for data collection was prepared by investigator herself. Standardized tool was not used

*Recommendations*

- A similar study can be replicated on a larger population for a generalization of findings.
- A study may be conducted to evaluate the effectiveness of planned teaching program versus information booklet on lower urinary tract infection.
- A comparative study can be done to assess the knowledge of lower urinary tract infection in rural and urban areas.
- A descriptive study can be conducted on the awareness of lower urinary tract infection among adult females.
- A similar study can be carried out to evaluate the effectiveness of video assisted teaching program on lower urinary tract infection.

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