A Study to Assess the Effectiveness of Structured Teaching Programme on Knowledge Regarding Prevention of Urinary Tract Infection in Pregnant Women in Selected Rural Areas of Indore, Madhya Pradesh

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ABSTRACT

Urinary tract infection is considered as one of the most frequent health problems in women and pregnant women are more susceptible to it and according to the potential effects on women and the foetus, it is considered very important. Comparing to the Urban population most of the pregnant women belonging to Rural area are still not aware about this. To our knowledge, there are limited studies in Rural areas that addresses this crucial subject. Based on the aforementioned gap, this study was therefore carried out at selected Rural areas of Indore. The current study aims to assess the Knowledge regarding prevention of Urinary Tract Infection in Pregnant Women in selected Rural areas of Indore, Madhya Pradesh.

In pre - test conducted among the 40 respondents 32 (80%) have Inadequate knowledge, 8 (20%) of them have moderate knowledge and none of them have adequate knowledge. The post-test was conducted to the same respondents after one week of time. During post-test 27 (67.55) respondents have adequate knowledge, 13 (32.5%) respondents have moderate knowledge and none of them have inadequate knowledge.

The average mean score of the knowledge is 8.57 and the average means score of post-test is 21.70. The difference between the pre-test and post-test is 13.13 score. The SD of pre-test is 4.09 and post-test is 4.51. The SD difference is 0.42. The 't' value is 13.6317 and df score is 78.

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KEYWORDS: Urinary Tract Infection, Pregnant Women, Rural areas, Knowledge

INTRODUCTION

Pregnancy is physiological and biological stressful even for healthy women. Problems like Hyperemesis Gravidarum, bleeding, Anemia, Hypertensive disorder, Diabetes mellitus, infection like Rubella, Toxo plasmosis, Group B streptococcus, Urinary Tract Infection (UTI) will complicate the pregnancy. Urinary Tract Infections (UTIs) are frequently encountered in Pregnant women. During pregnancy, there is anatomical changes in the urinary system, it is due to the increased progesterone level as it relaxes the wall of the ureter and its allows kinking and dilatation and also by the pressure from the enlarged uterus. So Urinary Tract Infection is the most common medical complication of pregnancy after anemia [1]. Urinary tract infections (UTIs) affect all age groups, but women particularly pregnant women are more susceptible than men, due to short urethra, pregnancy, easy contamination of urinary tract with fecal flora and various other reasons. [2]

According to the World Health Organization (WHO) report, 20%–50% of gravid females will experience bacteriuria during child-bearing, with about 5%–10% of these cases been vulnerable in their primigravida.[3] Worldwide, UTIs prevalence in pregnancy ranges between 13% and 33% with symptomatic bacteriuria occurring in 1%–18% while asymptomatic cases are observed in 2%–10% of females.[4] The commonest (80%–90%) causative organism of UTIs among

pregnant women is *Escherichia coli* while the remaining (10%–20%) cases are ascribed to *Klebsiella* and *Enterobacter*.[5]

Pregnant women with UTI are more likely to develop hypertensive diseases of pregnancy, anemia, chronic renal failure, prematurity, and low birth weight babies. [6-8] Untreated urinary tract infection can lead to complication such as abortion, prematurity, low birth weight baby, still birth, preterm labour, preeclampsia, chronic pyelonephritis and rarely kidney failure. If it is treated early, then it will not harm the baby. The upper UTIs in particular may lead to significant morbidity for both the mother and the fetus.[9,10]

Need for the Study

Urinary tract infection considers one of the most frequent health problems in women and pregnant women are more susceptible to it and according to the potential effects on women and the foetus, it is considered very important. Comparing to the Urban population most of the pregnant women belonging to Rural area are still not aware about this. To our knowledge, there are limited studies in Rural areas that addresses this crucial subject. Base on the aforementioned gap, this study was therefore carried out at selected Rural areas of Indore. The current study aims to assess the Knowledge regarding prevention of Urinary Tract Infection in Pregnant Women in selected Rural areas of Indore.

Objectives

1. To assess the knowledge and practices regarding preventive aspects of Urinary Tract Infection in Pregnant Women in selected rural areas of Indore

2. To find out the effectiveness of STP regarding UTIs on Attitude score.

3. To determine the association between knowledge on UTI and selected Demographic variables.

Materials and methods

A. Research Approach: The approach of the study is quantitative research approach.

B. Research Design: In this study descriptive research design is used to assess the level of knowledge regarding prevention of Urinary Tract Infection among Pregnant Women.

C. Research of the Study: The setting of the study is selected community area, Rural Indore

D. Population: The target population for this study is Pregnant Women of age group 21 to 35 in a selected community area of Rural Indore.

E. Sample Size: In this study sample size will be 40 Pregnant Women.

F. Sampling Technique: A non-probability purposive sampling technique used in this study.

A self-structured questionnaire was developed in Hindi and English. The questionnaire was divided into two parts i.e., first part questions were related to Bio – demographic data and the second part questions were related to knowledge on UTI. The total questions were 30 and the maximum score was 30 for knowledge. To interpret the level of knowledge, the score was distributed as a) 0 – 10, Inadequate b) 11 – 20 and Moderate c) 21 – 30 Adequate.

Result:

Table 1: Frequency and percentage distribution of respondents according to demographic variables

S. No	Demographic Variable	Category	No	Percentage
1	Age	21 - 25	21	52.5
		26 - 30	18	45.0
		31 - 35	01	2.5
2	Religion	Hindu	38	95.0
		Muslim	02	5.0
3	Food Habit	Vegetarian	29	72.5
		Non Vegetarian	11	27.5
4	Type of Family	Joint	16	40
		Nuclear	24	60
5	Education	Below High School	22	55.0
		High School	11	27.5
		Higher Secondary	06	15.0
		Degree	01	2.5
6	Gestational age	First Trimester	17	42.5
		Second Trimester	16	40.0
		Third Trimester	07	17.5

7	Parity	Primipara	21	52.5
		Multipara	19	47.5
8	Occupation of Husband	Coolie	28	70.0
		Self	08	20.0
		Private	03	7.5
		Government	01	2.5

Demographic distribution of the participants is presented in Table 1. In the demographic variable Age, it is being categorized into 3 categories i.e., 21-25, 26-30 and 31-35. Majority of the respondents (52.5%) comes under the age group 21-25 followed by the age group 26-30 (45%) and only 2.5% of variables are there in the age group 31-35. In the demographic variable Religion, majority (95%) are Hindus and 2 (5%) are Muslims. In the Food habit of the respondents 72.5% are vegetarians and 27.5% are Non- vegetarians.

The demographic variable Type of family, it consists of 2 categories Nuclear family and Joint family. Majority of them are under the category Nuclear Family (60%) and remaining (40%) are joint family. The demographic variable Education it is categorized into 4 sections based on their level of education. Majority of them falls under the category Below High School (55%), followed by High school (27.5%), Higher secondary school (15%) and only Degree (2.5%).

The demographic variable Gestational age categorized into 3 categories, first trimester (42.5%), second trimester (40%) and third trimester (17.5%). The parity of the women consists of 2 categories namely Primipara and Multipara. 52.5% of the variables are Primipara and 47.5% are Multipara. In occupation of Husband majority of them are under the category Coolie (70%), 20% are Self- employed, 7.5% are Private and 2.5% are Government employee.

Table 2: Analysis and interpretation of data regarding knowledge of prevention of Urinary Tract Infection in Pregnant Women.

Level of Knowledge	Pre Test		Post Test	
	Frequency	Percentage	Frequency	Percentage
Inadequate	32	80	0	00
Moderate	8	20	13	32.5
Adequate	0	00	27	67.5

The level of knowledge is being presented in Table 2. When pre-test was conducted among the 40 respondents 32 (80%) have Inadequate knowledge, 8 (20%) of them have moderate knowledge and none of them have adequate knowledge. The post-test was conducted to the same respondents after one week of time. During post-test 27 (67.55%) respondents have adequate knowledge, 13 (32.5%) respondents have moderate knowledge and none of them have inadequate knowledge.

Table 3: Overall comparison of Pre-test and post-test mean knowledge level of prevention of Urinary Tract Infection in Pregnant Women.

Variables	Mean	Mean difference	SD	SD difference	't' Value	df
Pre-test	8.57	13.13	4.09	0.42	13.6317	78
Post-test	21.70		4.51			

This table shows the average mean score of the Pre- test and Post- test knowledge. The average mean score of the knowledge is 8.57 in Pre – test and the average means score of post-test is 21.70. The difference between the Pre-test and Post-test is 13.13 score. The SD of Pre-test is 4.09 and Post-test is 4.51. The SD difference is 0.42. The 't' value is 13.6317 and df score is 78

Table 4: Association between knowledge level of prevention of Urinary Tract Infection in Pregnant Women with their selected demographic variables.

S. No	Demographic Variable	Category	No	P- Value	Chi Square
1	Age	21 - 25	21	0.0599 S	9.048
		26 - 30	18		
		31 - 35	01		
2	Religion	Hindu	38	S	0.526
		Muslim	02	0.7963	

3	Food Habit	Vegetarian	29	S	0.032
		Non Vegetarian	11	0.9841	
4	Type of Family	Joint	16	S	0.026
		Nuclear	24	0.9871	
5	Education	Below High School	22		
		High School	11	S	4.393
		Higher Secondary	06	0.6237	
		Degree	01		
6	Gestational age	First Trimester	17		
		Second Trimester	16	0.0496	9.509
		Third Trimester	07	NS	
7	Parity	Primipara	21	S	3.032
		Multipara	19	0.2196	
8	Occupation of Husband	Coolie	28		
		Self	08	0.3830	6.37
		Private	03	S	
		Government	01		

In the present study the demographic variable Gestational age is Not significant and the remaining all variables such as Age, Religion, Food habit, Type of family, Education, Parity and Occupation of husband is having significant relationship with the knowledge of UTIs.

Discussion

The incidence of UTI is higher in women than in men where nearly 81% of UTI diagnosed in women, with a highest rate between 16 and 35 years. About 27% of women with a first experience of UTI had recurrence within 6 months, and 48% within the first year. [11] The study results showed that none of the participated pregnant women had adequate knowledge level about UTI. Studies conducted in third world countries such as Nepal, shown that 4.46% of participants were in between the age group of 22 and 25years and another in Brazil reported that 67% of the gravid mothers were in the age group of 20–29 years. [12] Our present study shows that none of the pregnant women had adequate knowledge and only 20% of them have moderate knowledge regarding UTI. Hence this study recommends that educational programs should be designed and implemented to increase awareness on UTIs and decrease the susceptibility of UTIs among pregnant Women population in rural areas. Secondly, there should be knowledge enhancement program related to UTIs in the course of pregnancy which may help in attitudinal change.

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