



**ORIGINAL RESEARCH PAPER**

**Nursing**

**A STUDY TO ASSESS THE KNOWLEDGE REGARDING URINARY TRACT INFECTION (UTI) AMONG ANTENATAL MOTHERS (25-40 WEEKS) IN SELECTED ANGANWADI CENTERS OF BHOPAL CITY, MADHYA PRADESH**

**KEY WORDS:** Antenatal mother, Anganwadi, Urinary tract infections.

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**ABSTRACT**

“Healthy Mothers and Children are the real wealth of Societies.” - (WHO). Urinary tract infections (UTIs) are considered to be the most common bacterial infection during pregnancy. It occurs in approximately 5 to 10 % of all pregnancies. Educating the pregnant women about the urinary tract infection during pregnancy helps to prevent UTI and use measures to prevent development of complications. Urinary tract infection can lead to poor maternal and perinatal outcomes. Investigating the epidemiology of UTI and antibiotic sensitivity among pregnant women is fundamental for care givers and health planners. A woman's health and behavior in pregnancy affect the baby. Mother should not only take good care of her own health, but also go for regular check-up with health care professionals. In modern era, obstetric nursing care begins with antenatal care which is vital for satisfactory perinatal outcomes.

**Introduction**

A report from WHO (13 March 2019) says, “Urinary tract infections are considered to be the leading cause of morbidity and health care expenditures in persons of all ages. Around 50% of women have reported having had a UTI at some point in their lives.” As the severity of the infection rises, people remain unaware of the causes and the serious complications that it can cause.

Pregnancy is biologically, physiologically, and psychologically stressful, even for a healthy woman. Problems like bleeding, hyperemesis gravidarum, Hypertensive disorders, Anemia, Diabetes Mellitus, infections like toxoplasmosis, rubella, group B streptococcus, urinary tract infections etc. Complicate the pregnancy. Among these, urinary tract infection is the most common medical complication of pregnancy occurring in approximately 4-7% of pregnant women. Incidence of UTI during pregnancy in India is 8.8%. UTI usually begins in the 6<sup>th</sup> week and peaks during 22<sup>nd</sup> to 24<sup>th</sup> week. Asymptomatic bacteriuria occurs in 4% to 8% of pregnancies. Pyelonephritis occurs in 1% to 2% of pregnancies and 1% of pregnant women have acute cystitis.

Urinary Tract infection is defined as “the presence of pathogenic microorganisms within the genitourinary tract with concomitant symptoms and is the most common bacterial infection encountered by health care providers. It is the second most common bacterial disease and the most common bacterial infection in women. As the uterus grows, its increased weight can block the drainage of urine from the bladder causing a stagnation of urine which later causes infection. Stagnation or stagnated urine is an excellent medium for the growth of the micro-organisms. Escherichia coli are the most common pathogen causing a urinary tract infection. Several factors cause urinary tract infection which leads to complications during the gestational period, aggravating both maternal and perinatal health outcome. The most common organism that implicates UTI is E.coli (80%), staphylococcus aureus and staphylococcus saprophyticus. Urinary catheterization is a common risk factor for UTI.

Untreated UTI can lead to complications such as abortion, prematurity, low birth weight baby, still birth, preterm labor, preeclampsia, chronic pyelonephritis and rarely kidney failure. If it is treated early, then it will not harm the fetus. Prevention of UTI can be achieved by drinking minimum 8 glasses of water in a day, emptying the bladder before and

after sex, washing of genital area with warm water before sex, take showers instead of bath, avoid tight fitting clothing and pantyhose, and so on. (It is typically treated with cephalexin or nitro furantoin for 7 days).

Urinary tract infection can lead to poor maternal and perinatal outcomes. Investigating the epidemiology of UTI and antibiotics sensitivity among pregnant women is fundamental for care givers and health planners. A woman's health and behavior in pregnancy affects the fetes. The mother should not only take good care of her own health, but also go for regular check-up with health care professionals. In modern era, obstetric nursing care begins with antenatal care which is vital for satisfactory perinatal outcomes. They need to identify high risk factors and should give suitable interventions with care competence. Effective nursing care during UTI enhances maternal and fetal wellbeing and ensures their safety.

**OBJECTIVES**

1. To assess the knowledge regarding urinary tract infection among antenatal mothers (25-40 weeks).
2. To find out the association between the knowledge scores of antenatal mothers (25-40 weeks) with their selected socio demographic variable.

**HYPOTHESES**

- H<sub>1</sub>:** There will be significantly less knowledge regarding Urinary tract infection (UTI) among the antenatal mothers.
- H<sub>2</sub>:** There will be significant association between knowledge regarding Urinary tract infection (UTI) among antenatal mothers with their selected socio demographic variables.

**OPERATIONAL DEFINITIONS:**

**Assess:**

According to Oxford dictionary, Assess means to make a judgment about the nature or quality of somebody or something.

In this study, It is statistical measurement of knowledge of urinary tract infection (UTI) among antenatal mothers (25-40 Weeks).

**Knowledge:**

According to Cambridge Learner's dictionary, the state of knowing about or being familiar with something. In this study, knowledge is the information among the antenatal mothers (25-40 weeks) regarding urinary tract infection (UTI).

**Antenatal mothers:**

According to Medical dictionary, the period of conception to birth when a woman carried a developing fetus in her uterus. In this study, Antenatal mother is a woman with gestational age (25-40 weeks) of pregnancy from a selected anganwadi centers of Bhopal city, Madhya Pradesh

**Urinary tract infection:**

According to Medical dictionary, UTI is the infection of kidney, ureters, or bladder by microorganism that either's ascend from the urethra or that is spread to the kidney from the bloodstream. In this study, it refers to an infection caused by pathogenic micro-organism in the urinary tract occurring during pregnancy.

**Anganwadi:**

According to Wikipedia, Anganwadi is a type of rural mother and childcare center in India. In this study anganwadi refers to rural mother and clinic care center in selected area of Bhopal city, M.P.

**Methods:**

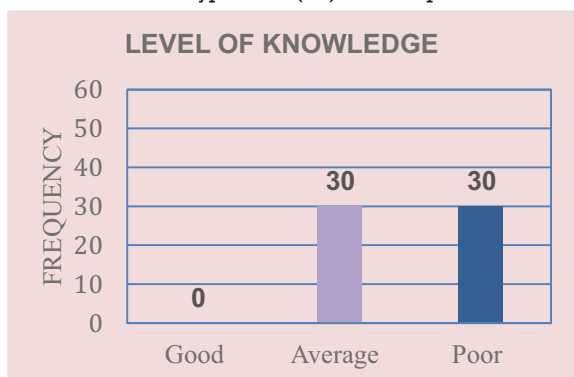
A quantitative research approach with non-experimental univariant research design was used for the assessment of knowledge regarding UTI among 60 antenatal mothers (25-40weeks) of selected anganwadi centers was done by non-probability purposive sampling technique from Bhopal city, Madhya Pradesh. The structured interview schedule was used for the data collection.

**Result & Finding:**

The frequency and percentage distribution of knowledge level of the 60 samples show that no one had good knowledge, 30 (50%) had average knowledge and 30 (50%) had poor knowledge regarding UTI. The mean score was 10.533, mean (%) 17.55 and S.D. is 3.513. The data shows that there is significantly poor knowledge regarding UTI among antenatal mothers. Hence the research hypothesis (H<sub>1</sub>) was accepted.

The result shows that the socio demographic variables such as Gravida, Nutritional Status, Type of Family, Area of Residence have significant association with knowledge of UTI among antenatal mothers (25-40 weeks) whereas Age, Education, Occupation, Marital Status, Religion, Monthly Family Income and Source of Information do not have a significant association with the knowledge level. Hence the hypothesis H<sub>2</sub> is accepted. The findings of the study have revealed implications for nursing practice, nursing education, nursing administration and nursing research and community.

Table shows level of knowledge out of 60 samples no one had good knowledge, 30 (50%) mothers had average knowledge and 30 (50%) mothers had poor knowledge regarding UTI among antenatal mothers (25-40 weeks). The mean score was 10.533, mean percentage 17.55 and 3.513 standard percentage. Hence the data shows that there is significant poor knowledge regarding UTI among antenatal mother. Hence the research hypothesis (H<sub>1</sub>) was accepted.



**FIGURE-distribution of the level of knowledge of antenatal mothers (25-40 weeks) regarding UTI.**

Association between knowledge of antenatal mothers (25-40 weeks) and selected socio demographic variables.

This section deals with findings to find out the association between level of knowledge and selected socio demographic variables.

**Table Association between knowledge of UTI among antenatal mothers and selected demographic variables.**

S. No.	Variables	Good	Average	Poor	Total	df	Chi cal. value	Chi table value	Inference	
1	<b>AGE</b>									
	18-22	0	6	9	15	3	0.137	7.815	NS	
	23-27	0	10	14	24					
	28-32	0	6	9	15					
	33 years and above	0	2	4	6					
2	<b>EDUCATION</b>									
	Illiterate	0	10	10	20	3	0.45	7.815	NS	
	Primary school	0	11	12	23					
	Higher secondary school	0	7	5	12					
	Graduate and above	0	2	3	5					
3	<b>OCCUPATION</b>									
	Home maker	0	9	9	18	3	0.56	7.815	NS	
	Private employee	0	9	10	19					
	Govt. Employee	0	1	2	3					
	Self employee	0	11	9	20					
4	<b>MARITAL STATUS</b>									
	Married	0	13	38	51	2	1.759	5.991	NS	
	Unmarried	0	0	0	0					
	Widowed	0	2	2	4					
	Divorced	0	2	3	5					
5	<b>GRAVIDA</b>									
	Primigravida	0	11	20	31	1	8.47	0.016	S	
	Multi-gravida	0	10	19	29					
6	<b>RELIGION</b>									
	Hindu	0	12	25	37	3	7.50	7.815	NS	
	Christian	0	9	11	20					
	Muslim	0	0	1	1					
	Sikh	0	1	1	2					
	Others	0	0	0	0					
7	<b>NUTRITIONAL STATUS</b>									
	Vegetarian	0	18	20	39	1	2.27	0.016	S	
	Non-vegetarian	0	10	11	21					
8	<b>TYPE OF FAMILY</b>									
	Nuclear	0	2	6	8	1	0.55	0.016	S	
	Joint family	0	0	12	12					
9	<b>MONTHLY FAMILY INCOME</b>									
	< 3000	0	4	7	11	3	1.96	7.815	NS	
	3001-6000	0	12	13	25					
	6001-9000	0	4	8	12					
	9001 and above	0	3	9	12					
10	<b>AREA OF RESIDENCE</b>									
	Rural	0	5	10	15	1	0.63	0.016	S	
	Urban	0	10	35	45					
11	<b>SOURCE OF INFORMATION</b>									
	Health professionals	0	18	25	43					

(Result significant at 0.05 level of significance)

**ABBREVIATIONS**

- MS- Most significant
- NS- Not Significant
- S- Significant
- NP- Not Possible

**IMPLICATIONS**

Since this study reveals that there is less knowledge regarding urinary tract infection (UTI) among antenatal mothers (25-40 weeks), it is necessary to provide education and counseling focusing on enhancing and upgrading the knowledge of antenatal mothers regarding UTI.

The finding of the study has implications in nursing education, nursing practice, nursing administration and nursing research.

**NURSING EDUCATION**

1. Educate the student nurses regarding urinary tract infection (UTI) and encourage them to create awareness among antenatal mothers regarding UTI.
2. Nursing curriculum should provide opportunities for students to conduct health education programmed for antenatal mothers in rural area setting especially for mothers who belong to underprivileged and below poverty level.

**NURSING ADMINISTRATION**

1. Administration is also a function of the nurse. As a nurse administrator she is advocated for providing health care services to improve health status of antenatal mother.
2. As an administrator, the nurse should play a vital role in improving the knowledge of staff nurses regarding urinary tract infection (UTI) during pregnancy and encourage them to use the knowledge in a way doe improving the health status of antenatal mothers and as a result the country will also grow.
3. The nursing administrators can introduce use of different new technology as well as attend in-service education in order to update their knowledge also she has to ensure that the staff nurses may assume responsibility and accountability for the antenatal mother under their care.
4. The nurse administrator should know how to practice nursing on the basis of evidence-based practice and problem-solving approach.
5. The nurse administrator must make various facilities for screening the mothers for high risks during pregnancy in simpler way so, that they can be motivated to avail these facilities.

**NURSING RESEARCH**

1. Nursing research is an essential aspect of nursing as it uplifts the profession and develops new nursing norms and body of knowledge, the research design, findings and the tool can be used as avenues for further researches.
2. Nursing research can broaden the concept and give new ideas and areas where research could be conducted.
3. The nurse can take up research findings on different teaching strategies to enhance the knowledge on antenatal mothers.
4. The research findings of the present study can be used by future researchers.

**LIMITATIONS**

1. The sample size is limited to 60 antenatal mothers (25-40weeks) selected anganwadies centers of Bhopal, Madhya Pradesh. Hence, generalization is possible to the selected settings.
2. Duration of data collection is limited.

**RECOMMENDATIONS**

1. A similar study can be conducted on a larger sample for generalization.
2. The similar study can be conducted by using experimental group and control group.
3. Similar study can be carried out to assess the efficacy of various teaching strategies like pamphlets, leaflets, information booklet, video assisted teaching and computer-assisted instruction on knowledge regarding urinary tract infection (UTI).

**Fig 1: CONCEPTUAL FRAMEWORK BASED ON PENDER 'S HEALTH PROMOTION MODEL**

