Kufa Journal for Nursing Sciences
Open Access Full Text Article

Publisher
University of Kufa, Faculty of Nursing

Received: 08 February, 2023
Accepted: 15 March, 2023
Published: 17 March, 2023
Vol. 13(1), 2023: 19 – 25

https://doi.org/10.36321/kjns.vi20231.11273

ORIGINAL RESEARCH

Knowledge of Pregnant Women toward Prevention of Urinary Tract Infection in Kirkuk City

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ABSTRACT

Objectives: To assess the pregnant women knowledge toward prevention of urinary tract infection, and find out the relationship between pregnant women knowledge toward prevention UTI and some socio-demographic characteristics.

Methodology: A descriptive study was conducted from 1st of November 2013 and up to the 19th of August 2014 in five typical primary health care centers at Kirkuk City. A non -probability (convenient sample) was used to select the sample of 180 pregnant women aged (15-44) years. A constructed questionnaire format was constructed and comprised (9 items) to assess pregnant woman's knowledge toward prevention of urinary tract infection. Descriptive statistical (Frequency & percentage) and inferential statistics)ANOVA) were used to analyze the data by using SPSS (version 17).

Results: The results of the study revealed that the majority of the study sample within age groups (20-24) and (25-29) years respectively, was primary school graduated, housewife, and living in urban area, and insufficient in socioeconomic status.

Conclusion: The most of pregnant women had adequate knowledge in the most items toward prevention of UTI. In addition, there is a significant difference between the women knowledge toward prevention of UTI and their level of education and occupation.

Recommendations: Implementing an instructional program to raise the knowledge of pregnant women on the causes, symptoms, prevention, and treatments of UTIs as well as distributing scientific journals, booklets, and brochures on the subject.

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Keywords: Knowledge, Pregnant Women, Prevention, Urinary Tract Infection.

How to Cite: Shakoor, M. (2023). Knowledge of pregnant women toward prevention of urinary tract infection in Kirkuk City. *Kufa Journal for Nursing Sciences, 13*(1). https://doi.org/10.36321/kjns.vi20231.11273

INTRODUCTION

The most prevalent bacterial illness during pregnancy is urinary tract infection (UTI), which can have serious consequences for the newborn of such moms if improperly diagnosed and treated [1]. Nearly 150 million people die each year from urinary tract infections and their related consequences globally. There are two classifications for pregnancy UTIs: symptomatic and asymptomatic [2]. The most frequent cause of UTI during pregnancy is the involvement of the lower urinary tract, which results in silent bacteriuria. Acute Pyelonephritis, which is caused by upper urinary tract involvement, is characterized by symptomatic bacteriuria [3]. According to studies that have been done, 17.9% of pregnant women have a symptomatic urinary tract infection, and 13% have an asymptomatic type. If an infection that is currently asymptomatic is not treated, it may result in some clinical signs in the mother and the newborn. Symptoms are typically brought on by sexual activity [4]. Serious maternal-fetal problems during pregnancy caused by this type of infection include Chorioamnionitis, pre-eclampsia, endometritis, preterm, low birth weight, and neonatal mortality.

According to Ocher et al. (2014) [5], there is a prevalence rate of 31.0% for UTI among pregnant women who visit prenatal clinics. It was discovered to be greater than the 21.7% recorded in a study to ascertain the prevalence of asymptomatic bacteriuria in pregnancy in Ibadan, Oyo State, but lower than the 32.7% and 55% reported by the study [6], respectively. Asymptomatic bacteriuria increases the risk of infection by 25%, previous history of UTI increases it by 50%, and abnormalities in the renal tract are discovered in roughly 25% of cases [7]. Pregnancy-related UTIs are linked to abortion, low birth weight, maternal anemia, hypertension, premature labor, phlebitis, thrombosis, and chronic pyelonephritis. The physiology of a woman's body undergoes many changes around the sixth week of pregnancy, which increases the risk of UTIs. Urinary stasis and the upward movement of urine from the bladder into the ureters are increased by hormonal and physical changes. Pregnant women are more likely to get urinary tract infections due to these changes and an already small urethra (around 3 to 4 cm in females) [8]. Pregnant women should be screened for UTIs to reduce complications associated with untreated UTIs, and prompt treatment of symptomatic UTIs and asymptomatic bacteriuria is recommended in pregnant women. Untreated UTIs can result in serious obstetric complications, poor maternal and prenatal outcomes, such as pyelonephritis, low birth weight infants, premature delivery, and, occasionally, stillbirth [9]. Routine culture screening for all pregnant women attending antenatal clinics has been recommended, even in the absence of UTI symptoms, to avoid mother and child from any complications that may emerge due to infection.

AIMS OF THE STUDY

To assess the pregnant women knowledge toward prevention of urinary tract infection, and find out the relationship between pregnant women knowledge toward prevention UTI and some socio-demographic characteristics.

METHODOLOGY

Research Design: A descriptive study was carried out from 1st November 2013 to 19st August 2014 in order to achieve the objectives of the present study.

Setting of the study: The study was conducted in five typical primary health care centers (PHCCs) at Kirkuk City.

Sample of the study:

- The target population of the study for the year 2013 consisted 15389 pregnant woman aged 14- 44 years, who were distributed among the (5) PHCCs.
- Sample size: Size of the study sample was determined as the researchers considered percent

(14%) of the target population a representative sample size for the study.

- To determine the sample size for each typical PHCCs, the researcher used (Proportional Method).

Participant: The study sample included 180 pregnant women aged (15-44) years that were selected randomly from the five typical PHCCs at Kirkuk City

Administration Arrangement

The researcher obtained a formal administrative permission from the Kirkuk Health Directorate / Center of Training & development of faculty prior the data was collected, in order to formally access the primary health care centers to conduct the present study.

Ethical consideration:

Prior beginning to collect data from the sample who are participating in the study, the researcher gave a brief explanation about the purpose of conducting it and what is the role of the pregnant women who participate in this study, to give them a complete and clear concept about the study to be carried out. On the other hand, the researcher emphasized that all pregnant women who are participating in the study had the right to not complete their participation and withdraw from this if they feel uncomfortable or annoyed with some of the items in the questionnaire that was prepared as a research tool or the researcher's method of collecting data or anything else, and inform them it is used for research purpose only, then they confirmed their agreement to participation in the study.

Procedure: For the purpose of the present study, a constructed questionnaire was format to assess the pregnant woman's knowledge toward prevention of urinary tract infection based on the review of literature and related previous studies. The study instrument was comprised (9 items) regarding prevention of UTI. Two Likert scales " Yes" for right response and " No " for wrong response, was rated (2 point) for Yes and (1 point) for No.

Assessment of women's knowledge about prevention of UTI based on cut of point, So knowledge item scored ≥ 1.5 assessed as " adequate " knowledge, and item scored < 1.5 assessed as " inadequate " knowledge of the studied sample.

The data had been collected through an interview technique with the pregnant woman in the primary health care centers as a means of data collection process. Each study sample spends approximately (15-20 min) to response to the questionnaire's items.

Data analysis: Descriptive statistical (Frequency & percentage) and inferential statistics ANOVA) were used to analyze the data by using SPSS (version 17).

RESULTS

Table (1) Distribution of the Study Sample (N=180) according to their Demographic characteristics:

Table (1) show that the highest percentages (31.1%) of pregnant women were within age groups (20-24) and (25-29) years respectively. Regarding the level of education the highest percentage (32.2%) of pregnant women was primary school graduated. In relation to Occupational status the highest percentage (83.3%) of pregnant women was house-wife. Regarding to residence the highest percentage (98.9%) of pregnant women was livening in urban area. In relation to Socioeconomic status the highest percentage (65.0(% of pregnant women was from insufficient socioeconomic status.

Table (2) Grand Mean Score and Assessment of women's knowledge toward prevention of UTI: Table (2) show that the overall grand mean of score out of this table was adequate knowledge in most of the items toward prevention of UTI among pregnant women, with Grand mean score was (1.63).

Table (3) Association between the women knowledge toward prevention of urinary tract infection and their sociodemographic characteristics:

Table (3) demonstrates that there is significant association between study variables (Level of Education, Occupation) and pregnant women knowledge toward prevention of UTI. On the other hands, there is no significant association between study variables (Age, Socioeconomic status) and pregnant women knowledge toward prevention of UTI at P. Value ≤ 0.05.

DISCUSSION

The current study revealed that the majority of UTI patients were young, with an average age of (21-29) years and a standard deviation of (29.2±1.33). All research on the prevalence of UTIs and antibiotic sensitivity among expectant mothers at Khartoum North Hospital in Sudan came to the conclusion that the sample's average age was 27.5 years old [10]. The results of this study also support a study by [11] that looked at the incidence and risk factors for urinary tract infections in pregnant women at Abha General Hospital. According to the study, 253 respondents (63%) with a mean age of 27.175.18 years had pregnant ladies ranging in age from 19 to 29 years old. The higher sexual activity of women in this age group may have predisposed them to UTI, which accounts for the greater incidence of UTI in this age group. The data analysis reveals that, at a P. value of 0.05, there is no correlation between women's awareness of UTI prevention and their age.

Housewives made up the majority of women (83.3%). The results of this study are consistent with one on the incidence and antibiotic susceptibility pattern of UTI among pregnant women in Nigeria. [14] According to the study's findings, the majority of the women were (77.3%) housewives.

Most women (32.2%) only had a primary school graduation as their highest level of education. This outcome conflicts with a study that evaluated 110 pregnant women who were sent to health and treatment centers in Behbahan city for UTI according to the components of the health belief model. The study found that 41% of women have a high school diploma, which is the majority of women's educational level [12]. A different study in Thailand revealed that a lower education level was cited as the only risk factor that influences UTI, despite earlier studies in Pakistan and Iran showing that educational level is not one of the factors that influence the prevalence of UTI [13].

The vast number (99%) of the study sample's residents were from urban areas. The results of this study contrast those of Stanly [14] who stated that the majority of the participants under study (63.6%) resided in rural regions and that urinary tract infections (UTIs) among pregnant women in Nigeria were common and exhibited a pattern of antibiotic susceptibility. The current study found that, at a P. value of 0.05, there is a significant relationship between women's knowledge of UTI prevention and their educational achievement. Additionally, there was a significant association between women's knowledge of UTI prevention and their work (P. value 0.05). Additionally, with a p value of 0.05, there is no relationship between women's knowledge of UTI prevention and residence.

The results of this study show that the poor socioeconomic status of 65.0% of the study population. The results are consistent with those under the study, a cross-sectional study that was conducted on 180 pregnant women who visited Karaj health centers in 2013 and revealed that poor socioeconomic status was one of the characteristics that were significantly associated with increased UTI [15]. On the other hand, some studies revealed a negligible link between economic status and UTI prevention [13]. Furthermore, a P. value of 0.05 indicated that there was no relationship between women's economic class and their knowledge of UTI prevention. Finally, the results of this study showed that women had "adequate" understanding about UTI prevention. GMS=1.63, which was the grand mean

score [16]. Pregnancy-related UTIs have been linked to reported factors like sexual activity, washing genitalia before and after ovulation, and washing genitalia from back to front.

CONCLUSION

The majority of the study sample within age groups (20-24) and (25-29) years respectively, was primary school graduated, housewife, and living in urban area, and insufficient in socioeconomic status. The most pregnant women had adequate knowledge in the most items toward prevention of UTI. In addition, there is a significant difference between the women knowledge toward prevention of UTI and their level of education and occupation. Also, the result concluded there is no significant difference between the women knowledge toward prevention of UTI and their age, and socioeconomic status.

RECOMMENDATION:

Implementing an instructional program to raise the knowledge of pregnant women on the causes, symptoms, prevention, and treatments of UTIs as well as distributing scientific journals, booklets, and brochures on the subject.

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TABLES AND FIGURE

Table (1): Distribution of the Study Sample (N=180) according to their Demographic Characteristics.

Demographic characteristics		Frequency	Percentage
Age / years	15-19	21	11.7
	20- 24	56	31.1
Mean ± SD = 29.2±1.33	25- 29	56	31.1
	30- 34	22	12.2
	35- 39	14	7.8
	40 -44	11	6.1
	Total	**180**	**100**
Level of education	Not read & write	29	16.1
	Read &write	25	13.9
	Primary school graduate	58	32.2
	Intermediate school graduate	23	12.8
	Secondary school graduate	14	7.8
	Institute graduate	14	7.8
	College graduate & more	17	9.4
	Total	**180**	**100**
Occupational status	Employed	22	12.2
	House wife / Unemployed	150	**83.3**
	Student	7	3.9
	Free work	1	0.6
	Total	**180**	**100**
Residence	Urban	178	**98.9**
	Rural	2	1.1
	Total	**180**	**100**
Socioeconomic status	Sufficient	10	5.6
	Barely Sufficient	53	29.4
	Insufficient	117	65.0
	Total	**180**	**100**

Table (2): Grand Mean Score and Assessment of women's knowledge toward prevention of UTI.

No.	UTI Knowledge	GMS	Assessment
1	**Prevention of UTI**	**1.63**	**Adequate**

Table (3): Association between the women knowledge toward prevention of urinary tract infection and their sociodemographic characteristics

Variables	Source of Variance	Sum of Squares	D.F	Mean Square	F	Sig.
Age	Between Groups	33.033	179	6.607	2.09	**0.267**
	Within Groups	885.917		5.091		**N.S**
	Total	**918.950**				
Level of Education	Between Groups	134.001	179	22.334	1.94	**4.922**
	Within Groups	784.949		4.537		**S**
	Total	**918.950**				
Occupation	Between Groups	58.440	179	19.480	2.37	**3.984**
	Within Groups	860.510		4.889		**S**
	Total	**918.950**				
Socioeconomic status	Between Groups	13.585	179	6.793	2.60	**1.328**
	Within Groups	905.365		5.115		**N.S**
	Total	**918.950**				

DF= Degree of Freedom, F. = Fisher, S = Significance, NS= No Significant.