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#### **Abstract**

**Background:** One of the most prevalent bacterial illnesses during pregnancy is urinary tract infection that is caused by a number of physiological and anatomical changes that occur during pregnancy. Pregnant women generally had a 2-10% liable of getting a urine tract infection. The aim of this study: Was to assess of knowledge regarding prevention of urinary tract infection among pregnant women. Research design: This study was carried out using a descriptive research approach. Setting: Benha University Hospital, Obstetrics and Gynecological Outpatient Clinic served as the study's site. Sample: A convenient sample used in the study, it included 140 pregnant women. Tools: Two tools were used. Tool I: A structured interviewing questionnaire. Tool II: Women knowledge questionnaire. Results: Nearly more than half of the studied women (60%) had inadequate total knowledge about urinary tract infection.in addition. There were a highly statistically significance relation between the total knowledge score of the studied women and educational level, and there was no statistically significance relation between total knowledge and general characteristics occupation, monthly income, residence and family type. Conclusion: Two thirds of the studied women had unsatisfactory knowledge regarding urinary tract infection. Also there was a highly statistically significance relation between the total knowledge score of the studied women and studied women educational level. Recommendations: The study recommended that raising pregnant women knowledge regarding urinary tract infection during antenatal visits through continuous educational program.

Keywors: Pregnant women, Urinary tract infection.

#### Introduction

The risk of Urinary Tract Infection (UTIs) rises during pregnancy. The ureters start to dilate during week six of pregnancy as a result of the physiological changes that occur throughout pregnancy. This condition, also referred to as "hydronephrosis of pregnancy," peaks between weeks 22 and 26 and lasts till birth. During pregnancy, progesterone and estrogen levels rise, which will result in a decrease in bladder and ureteral tone. Pregnancy-related fluctuations in plasma volume result in lower urine concentrations and higher. (Balachandran, 2021).

Additionally, ureteral dilatation, increased bladder tone, and reduced ureteral tone occur in pregnant women, increasing the risk of uterine reflux and urine stasis. As well as up to 70% of expectant mothers experience glycosuria, which promotes the development of germs in the urine. Pregnancy-related UTIs might arise as a result of all these circumstances (Jaramillo et al., 2020).

Urinary tract infection is an infection in the urinary tract caused by the presence of pathogenic bacterial organisms within the genitourinary tract, which can be identified by investigating the urine and symptoms in a

laboratory. Lower abdominal pain, foul-smelling urine, and fever of unclear cause are just a few of the numerous possible clinical manifestations. The most frequent cause of UTIs in pregnant women is Escherichia coli, which is detected in 80–90% of cases, followed by Klebsiella and Enterobacter (Schneeberger et al., 2023).

Urinary tract infections are infections of the urinary tract that are brought on by pathogenic bacterial organisms in the genitourinary tract. They can be identified by symptoms and laboratory testing of the urine. The symptoms can include lower abdomen pain and a bad odor, though there are many different clinical manifestations. Urine dribbling, partial voiding, and frequent micturition are further signs (Smaill, 2017).

According to an 18-year retrospective investigation, E. coli was the cause of pyelonephritis in pregnant individuals in 60% to 82.5% of cases. Klebsiella pneumonia (11%), Proteus (5%), Staphylococcus, Streptococcus, and Enterococcus species are additional bacteria that could be seen (Wing et al., 2020).

Although they are rare pathogens, Gardnerella vaginalis and urea plasma can be identified, particularly in women have underlying kidney illness. In the third trimester of pregnancy, Group B Streptococcus (GBS) is frequently isolated from urine cultures and may even be more prevalent than E. coli (Friel, 2021).

Low socioeconomic status, age, parity, sickle cell anemia, pregnancy, frequency of sexual activity, poor personal hygiene, low educational attainment, inadequate water intake, unhealthy food, smoking, and alcohol consumption are risk factors for urinary tract infections (El Sayed, 2021).

Four percent to eight percent of pregnancies involve asymptomatic bacteria. (ASB). One percent of expectant mothers

experience acute cystitis. One to two percent end pregnancies in pyelonephritis. Complications from urinary tract infections include preterm labor, chronic pyelonephritis, hypertension, low birth weight babies, abortion, stillbirth, prematurity, and in rare cases, kidney failure. Therefore, the newborn will suffer if the UTI is not treated in right away (Barry et al., 2023). Urinary tract infection prevalence In Egypt, Ismailia City had roughly 29%, the Suez Governorate had 30.29%, and Zagazige had between 22% to 35% (Mohamed et al., 2018).

#### Significance of 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 fetus, it is considered very important. Thus, this study aimed to assess pregnant women' knowledge regarding urinary tract infection.

**Aim of the study:** This is study aimed to assess of knowledge regarding prevention of urinary tract infection among pregnant women.

#### Study questions

- 1. What is the level of knowledge among pregnant women regarding Urinary tract infection?
- 2. What is the correlation between pregnant women's knowledge and sociodemographic characteristics?

#### **Study design:**

A descriptive design was utilized to conduct this study.

#### **Study Setting:**

Benha University Hospital's obstetrics and gynecological outpatient clinic served as the study's site. This clinic offers family planning services in addition to obstetrics and gynecological care for women.

#### Sample:

#### Sample type:

A convenient sample was used in the study

**Sample size**: The study subjects consisted of (140) pregnant women was available at the time of data collection.

Sample technique: The researchers visited the study setting and explained the purpose of the study to pregnant women and this was repeated 3 times for six months from the beginning of April 2023 to the end of September 2023,

**Tools of data collection**: Two tools were used for data collection.

**Tool I:-** A structured interviewing questionnaire: this tool was constructed by the researchers after reviewing a related literature (Santiano et al., 2018; Toth, 2019), and consisted of three parts:

**Part (1):** General characteristics of study sampling (5 items) (age, residence, education, job, and income)

Part (2): Obstetric history of a pregnant woman, including six items: gravidity, parity, gestational age, abortion, and delivery method.

**Tool II:** Pregnant women's knowledge of urinary tract infection prevention is evaluated using nine items, including the description of a urinary tract infection (UTI), its symptoms and signs, diagnosis, self-management, risk factors, and complications.

The scoring system was as follows: each item received a score of (2) for a fully accurate response, a score of (1) for an incompletely correct response, and a score of (0) for an unknown response.

The right answers received a score of "one," while the wrong and unknown answers received a score of "zero." The percentage score was calculated from these scores.

The following was used to compute the score:

An adequate knowledge:  $\geq 60\%$  of total score (6-9 score).

**Inadequate knowledge:** <60% of total score (1-5 score).

#### **Tool validity:**

Three jurors with backgrounds in obstetrics and gynecological nursing from Benha University examined the data collection tools to make sure they were accurate, complete, and pertinent. Changes were made in response to insightful feedback, including removing a few ambiguous wording **Tool reliability:** 

Reliability: was done by cronbach"s alpha coefficient test which revealed that each item of the utilized tools consisted the internal consistency of knowledge was 0.89.

#### **Ethical consideration:**

Prior to beginning the study, the following considerations were taken account: The study was approved by the University faculty of nursing's scientific research ethical committee. (REC-OBSN-P83) The chosen research sites formally granted permission for the study to be conducted. Before using the tools, the researchers gave a brief explanation of the study's purpose and significance in order to win the trust and confidence of the women. Women gave their agreement to participate in the study, and confidentiality was guaranteed. There were no dangers to the women's physical, social, or mental health during the trial. The women might leave the research at any moment.

#### Preparatory phase:

The study's initial step was an examination of relevant local, historical, and international literature. Moreover, theoretical comprehension of several study aspects through the creation of data collection tools

via books, papers, journals, magazines, and the internet. To assess the tools' suitability, comprehensiveness, and simplicity significance, and application, three obstetrics and gynecological nursing professionals from Benha University's faculty were given access to them. The jury's verdict was rendered.

#### Administrative design:

Before beginning data collection, the researchers interviewed each study participant and obtained their oral informed consent after receiving formal approval to conduct the study from the Dean of the Faculty of Nursing to the Director of Benha University Hospital. This approval covered the study's purpose, participants, and duration.

Pilot study: To test the tools' clarity, objectivity, feasibility, relevance. applicability as well as to identify any potential obstacles or issues that might arise for the researchers and inhibit data collection, a pilot study was carried out on 10% of the sample, or 14 women. The pilot study's findings led to the addition, modification, missing details and correction of several things. It also aided in figuring out how long interviews would take and assessing if the locations were appropriate for conducting the interviews. And it was excluded from total number of the study sample.

#### Fieldwork:

Before starting data collection, the director of Benha University Hospital granted formal permission and all pregnant women gave oral agreement after being informed of the study's goal and asked for their assistance. From early April 2023 to the end of September 2023, the real fieldwork was conducted. During the six-month data collection period, the researchers visited the aforementioned setting from 9 a.m. to 12 p.m., three days a week. The average time spent on each interview was between 30 and 45 minutes, and the average number of

pregnant women per day was between two and three

#### Statistical analysis:

Computerized data entry and statistical analysis were done using (SPSS) Version 25 Descriptive statistics were first applied (numbers, frequency, percentages, tables, figures, diagrams and standard deviation) then other statistical tests such as chi square.

Statistical significance was considered at:

- P- Value <0.05 Not significant (NS).
- P- Value < 0.05 Significant (S).
- P- Value < 0.001 highly significant (HS)

#### **Results:**

**Table (1):** Shows that (50.4%) the studied women were in age group 25<35 years old with the mean age of 28.44±5.86 years, (54.6%) of the studied women had secondary education, (58.8%) of the studied women were house wife. While, most of the studied women (64.4%) had not enough income and (51.8%) of the studied women were lived in rural area.

**Table (2):** Displays that (81.4%) had gestational age between 10-12 weeks with a mean gestational age of 9.93±1.15 in addition (55.7%) of studied women were primigravida. Also, (52.8%) were nulliparous. Moreover, out of primipara and multipara women, the mode of last delivery of (76.7%) of studied women was Cesarean Section.

**Figure (1):** Shows that (40.0%) of the studied women had adequate total knowledge about urinary tract infection.

**Table (3):** Clarifies that, there was a highly statistically significant relation between total knowledge score regarding urinary tract infection and only the educational level of the women in the study group at post-intervention phase ( $p \le 0.001$ ). While, there was no statistically significant relation between total knowledge score and general

characteristics of them at pre-intervention phase (P > 0.05).

Table (1): Distribution of studied sample according to their general characteristics (n= 140)

General characteristics	Study sample (n=140)							
Age (in year)	No	%						
<25	25	27.2						
25 -<35	103	50.4						
≥35	12	21.4						
Residence								
Rural	103	51.8						
Urban	37	47.1						
<b>Education level</b>								
Read and write	22	15.7						
Primary education	13	7.1						
Secondary education	80	54.6						
University education	25	21.5						
Occupation								
Employee	57	40.0						
Housewife	83	58.8						
Monthly income								
Enough	40	34.3						
Not enough	100	64.4						

Table (2): Distribution of studied sample according to their obstetric history (n= 140)

Obstetric history	Study sample (n=140)						
Gestational age in weeks	No	%					
6-7 weeks	10	2.9					
8-9 weeks	22	15.7					
10-12 weeks	108	81.4					
Gravida							
Primigravida	70	50.0					
Multigravida	70	50.0					
Parity							
Nulliparous	77	52.8					
Primipara	30	18.6					
Multipara	33	28.6					
Mode of last delivery							
Normal vaginal delivery	40	30.3					
Cesarean section	100	76.7					

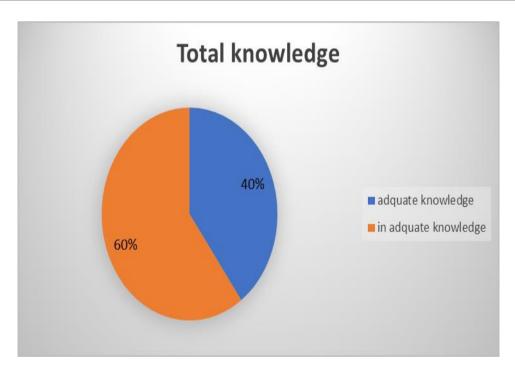


Figure (1): Total knowledge of studied sample regarding urine tract infection (n=140)

Table (3): Relation between total knowledge score regarding urinary tract infection and general characteristics of studied sample (n=140)

	Total knowledge					
General characteristics	Adequate (n=84)		Inadequate (n=56)		X <sup>2</sup>	P-value
	No.	%	No	%		
Age:						
<25	17	26.4	14	29.4	0.202	0.904
25 -<35	41	50.9	33	52.9		
≥35	26	22.7	9	17.7		
Residence:						
Rural	45	50.9	10	58.8	0.321	0.571
Urban	39	49.1	7	41.2		
Level of education:						
Read and write	5	5.7	13	47	16.74	0.0001**
Primary education	11	7.5	10	5.9		
Secondary education	50	62.3	16	35.3		
University education	18	24.5	17	11.8		
Occupation:						
Employee	29	39.6	21	41.2	0.013	0.909
Housewife	55	60.4	35	58.8		
Monthly income:						
Enough	30	34.0	20	35.3	0.10	0.990
Not enough	54	66.0	36	64.7		

#### **Discussion**

According the demographic to of the studied characteristics women. According to the current survey, over half of them were between the ages of 25 and under 35. This finding ran counter to that of **Bhat et** al., (2017), who studied urinary infections during pregnancy and relationship to low back pain vs nursing interventions in Brazil. They discovered that over half of the pregnant women were between the ages of 20 and 29. This could be because this is the ideal age to get married, and it could also because of the period during which the study was carried out. contrary the majority of women with UTI infections

during pregnancy were under thirty years old, according to **Rajani Dube**, (2022), study on the prevalence, clinico-bacteriological profile, and antibiotic resistance of symptomatic urinary tract infections in pregnant women.

Concerning the level of the women's educational attainment, the current study found that over half of the women more than half had completed secondary school. This result was consistent with research on pregnant women conducted by **El Sayed**, (2021). Perception of urinary tract infections, revealed that over half of the women in the study had completed secondary school. This result is in contrast to that of. **Busra**, (2024), who investigated urinary tract infections,

isolates' patterns of antibiotic sensitivity, and related variables in women who had fistulas at public health institutions. This may be due to the fact that the majority of rural families would rather marry their daughters than see them finish their schooling

In relation to occupation, the majority of the sample under study was housewives. Daniala et al., (2024), investigation of the association between genital practices and UTIs in pre-pregnancy and first-time mothers supports this conclusion. Santoso et al., (2023),who performed study Knowledge and Attitudes of Pregnant Women regarding Urinary Tract Infection and stated that the majority of the studied women were housewives. In addition there is a study similar this finding which performed by Scoullar et al., (2022), about Mycoplasma genitalium and Other Reproductive Tract Infections in Pregnant Women, Papua New Guinen.

The results of the current study showed that the majority of the women under examination—nearly two-thirds—had monthly incomes that were insufficient, and that over half of them lived in rural areas. These findings were corroborated by This result was consistent with that of a study on the prevalence of urinary tract infection and its associated factors among pregnant women in Ethiopia by Getaneh et al., (2021), which found that two third of the pregnant women's monthly income was insufficient, In contrast, Mohamed, (2020), who conducted a study on the self-efficacy and practices of pregnant women with symptomatic urinary tract infection, discovered that about half of the pregnant women in the study had adequate monthly income.

Regarding the history of urinary tract infections in the women under research throughout their current pregnancy, the current study's findings revealed that over

one-third of the women had gestational ages between 10 and 12 weeks, and over half of them were primigravida. Additionally, urinary tract infections affect over half of the women in the study during the second trimester. This result is consistent with Larri et al., (2022), study, "Maternal Age and Pregnancy Stage as Determinants of UTI in Pregnancy: A Case of Tamale, Ghana," which found that the first trimester of pregnancy had a higher rate of UTI less than half In accordance to the researchers, this has to do with the first trimester of pregnancy and the quick changes in hormone production that occur during that time. However, this finding contradicts the findings of a study on urinary tract infections in pregnancy and their effects on maternal and perinatal outcomes conducted Balachandran et al., (2021). Additionally, this finding contradicts that of Alejandra, (2023), investigation into the social risk factors associated with UTIs in expectant mothers. women that were pregnant, and found that fewer than half of the women in the study were in the first trimester. More over half of the women in the study were nulliparous in terms of parity. This result is consistent with that of Sheffield, (2019), who reported that more than half of women were nulliparous. Additionally, this finding is consistent with Balachandran et al., (2021), observation that nulliparous women experienced urinary infections at a higher rate than multiparous women. However, Vicar, (2022), found that over half of the study and control group of the studied sample were This finding contradicts multipara. findings of a study on urinary tract infection and associated factors among pregnant women receiving antenatal care at a primary health care facility in the Northern Region of Ghana.

Regarding the last birth method, the current study showed that a caesarean section

was performed on two thirds of the women in the study. According to Ashour et al., (2022), who studied the impact of applying selfefficacy nursing guidelines on pregnant women's performance with regard to urinary tract infections, over half of the study sample had previously given birth via caesarean section. From the researchers's perspective, this was associated with a higher level of sedentary lifestyle and a lower level of exercise. In the meanwhile, this result contradicts Jacob et al., (2021), who carried out study on Pilot study exploring the incidence of lower urinary tract symptoms during pregnancy in a district general hospital in Northern Ireland.

Regarding total knowledge the current study revealed that, less than one third of the studied women had adequate total knowledge about urinary tract infection., this finding in the same line with Elfatah, (2021), who studied that knowledge and Attitudes of Pregnant Women regarding Urinary Tract Infection, and revealed that Less than three quarters of the studied women had average total knowledge about urinary tract infection, meanwhile this finding was in contrast with Esan, (2023), who found that there that most of the respondents have knowledge of urinary tract infection and are also aware of the various preventive measures which serves as impediment to UTI occurrence.

Concerning the correlation between the studied women's total knowledge and educational level finding of the current study showed that there was a highly statistically significant relation between the total knowledge and educational level of the studied women

This finding was agree with Alhaj, (2025), who found that there higher knowledge levels were associated with higher educational qualification and more proactive

and appropriate health behaviors, such as seeking medical attention promptly drinking more water. Continuous medical education can significantly contribute to understanding and enhancing attitudes towards urinary tract infections (UTIs) in order to minimize avoidable Education level was significantly (p= 0.003) associated with UTI knowledge as Individuals with higher educational qualifications, such bachelor's degree or postgraduate studies, displayed a lower percentage of poor knowledge about UTIs (34% and 21% respectively). Moreover, the highest percentage (41%) of high-knowledge individuals was found in the postgraduate group. Marital status also exhibited a significant (p = < 0.05)

#### **Conclusions:**

More than half of the women in the study had in adequate overall knowledge about urinary tract infections, and there was a highly significant relation between the women's total knowledge score and educational level.

#### **Recommendations:**

- -A regular educational program for women in obstetric departments and outpatient clinic is required in order to increase and update their knowledge regarding urinary tract infections during pregnancy.
- -Frequent organized education activities to be included during antenatal care about urine tract infections during pregnancy, that focus on proper self-care practices as (personal hygiene, genital hygiene, particularly urination habits, and nutritional habits) that prevent UTI during pregnancy.

#### **Recommendations for further researches:**

-Further studies should be conducted to replicate the study on a larger sample of pregnant women for generalization of results

#### References

Alejandra, W. (2023). Social risk factors related to urinary tract infections in pregnant women, available at https://scielo.isciii.es/scielo.php?script Enferm. glob. vol.22 no.72 Murcia oct. 2023 Epub 04-Dic-2023

Alhaj, S., Allami, S., Mohamadiyeh, A., Agha, A., Ali, A., Habbal, J., and Saee, B. (2025). Knowledge, attitudes, and practices regarding urinary tract infections among women in the United Arab Emirates(2025):. PLoS One. 2025 Jan 10;20(1):e0298993. doi: 10.1371/journal.pone.0298993. PMID: 39792816; PMCID: PMC11723537.

**Ashour, E., Mohamed, F., and Elhomosy, S. (2022).** Effect of Applying Self-efficacy Nursing Guidelines on Pregnant Women's Performance regarding Urinary Tract Infections. Available at https://ejnsr.journals.ekb.eg/article\_247199.ht ml

Balachandran, L., Al Awadhi, R., Lamia, O., Khlood, M., and Lakshmi, P. (2021). Urinary Tract Infection in Pregnancy and Its Effects on Maternal and Perinatal Outcome. Retrived from https://www.cureus.com/articles/77265

DOI: 10.7759/cureus.21500

Barry, R., Houlihan, E., Knowles, S., Eogan, M., and Drew, R. (2023). Antenatal pyelonephritis: a three-year retrospective cohort study of two Irish maternity centres. Eur J Clin Microbiol Infect Dis. 2023 Jul;42(7):827-833.available at https://pubmed.ncbi.nlm.nih.gov/

Bhat, A., Pradna, V., Prakash, A., Prema, M., and Geeta, E. (2017). Knowledge and attitude regarding urinary tract infection (UTI) and its prevention during pregnancy. Journal of Nursing and Health Science; 6(6): PP. 53-55.

Busra, M., Guzin, L., and Zeren, O. (2024). Evaluation of the relationship between genital

behaviors and urinary tract infection in prepregnancy and first trimester of pregnancy European Journal of Human Health 4(2),36-46.

**Daniala, K., Khurram, A., and Ahmed K.** (2024). Urinary tract infection among urogenital fistula patients at Abbasi Shaheed Hospital, Karachi, Pakistan. Ann Punjab Med Coll 2024 9(4): 184–188.

El Sayed, H., (2021). Effect of Self Learning Package Based on Health Belief Model on Cervical Cancer Prevention among Female University Students. IOSR Journal of Nursing and Health Science (IOSR- JNHS),; 3 (6): PP77-88

Elfatah, A. (2021). Knowledge and Attitudes of Pregnant Women regarding Urinary Tract Infection retrieved from Journal of Nursing Science - Benha University ISSN 2682 - 3934

Esan, D., Sokan-Adeaga, A., Bello, C., Olabisi, O., Odugbume, B., and Ajayi, P. (2023). Knowledge, attitude and practice of antenatal mothers toward urinary tract infection in selected health facilities in Ekiti state, Nigeria. J Public Health Res. 2023 Sep 12;12(3):22799036231197180. doi: 10.1177/22799036231197180. PMID: 37711729; PMCID: PMC10498713.

Friel, A. (2021). Effect of physiological changes of pregnancy, University of Texas Health Medical School at Houston, McGovern Medical School Medically Reviewed Oct 2021 Modified Sep 2022 Last review/revision Jul 2021 Modified Sep 2022acced on 12 march 2023.5pm

Getaneh, T., Negesse, A., Dessie, G., Desta, M., and Tigabu, A. (2021). Prevalence of Urinary Tract Infection and Its Associated Factors among Pregnant Women in Ethiopia: A Systematic Review and Meta-Analysis. Biomed Res Int. 2021 Dec 1; 2021:6551526.doi:

10.1155/2021/6551526.PMID: 34901276; PMCID: PMC8654570

Jacob, R., Lamia, O., Khlood, M., and Lakshmi, P. (2021). Urinary Tract Infection in Pregnancy and Its Effects on Maternal and Perinatal Outcome. Retrieved from https://www.cureus.com/articles/77265

DOI: 10.7759/cureus.21500

Jaramillo, S., Ordoñez-Aristizábal, L., JiménezLondoño, C., and Uribe-Carvajal, M. (2020). Perfil Clínico E Epidemiológico De Gestantes Com Infecção Do Trato Urinário E Bacteriúria Assintomática Que Consultam Um Hospital De Média Complexidade De Antioquia (Colômbia). Artículo De Investigación. Archivos De Medicina. Volume 21

1 8-23 available at www.science direct. com .School of Medicine

Laari, M., Damyetin, P., Kasim, A., and Abdul, A. (2022). Maternal Age and Stage of Pregnancy as Determinants of UTI in Pregnancy: A Case of Tamale, Ghana. available at https://onlinelibrary.wiley.com/doi/full/10.11 55/2022/3616028

**Mohamed, N. (2020).** Self-efficacy and practices of pregnant women with Symptomatic Urinary Tract Infection adapted from International Journal of Novel Research in Healthcare and Nursing Vol. 7, Issue 3, pp: (96-107), Month: September - December 2020, at www.noveltyjournals.com

Mohamed, N., Hassan, H., and Mohamed, I. (2018). Prevalence and Risk Factors of Urinary Tract Infection among Pregnant Women in Ismailia City, Egypt 2018, IOSR Journal of Nursing and Health Science (IOSR-JNHS) e-ISSN: 2320–1959.p- ISSN: 2320–1940 Volume 6, Issue 3 Ver. VII (May - June 2018), PP 62-72 www.iosrjournals.org DOI: 10.9790/1959-0603076272 www.iosrjournals.org 62 Page Prevalence

and Risk Factors of Urinary Tract Infection among

(2022).Rajani Dube, A. Prevalence, Clinico-Bacteriological Profile. and Antibiotic Resistance of **Symptomatic** Urinary Tract Infections in Pregnant Women. Department of Obstetrics and Gynecology, **RAK** Medical and Health Sciences University, Ras Al Khaimah 11172, United Arab Emirates. (This article belongs to the Special Issue Uropathogens—Antibiotic Resistance and Alternative Therapies, 2nd Edition) retrospective analysis. Am J Obstet Gynecol. 2020 Mar; 210(3):219.e1-6

Santiano, M., Katharine, R., and Daffurn., A. (2018). The basic knowledge assessment tool, volume 7, issue 4, pp

Santoso, I., Surya, R., and Yasmin, A. (2023). The awareness of urinary tract infection management in pregnant women. A qualitative study. Maj Obstet Ginekol 25: 92–96.

Schneeberger, C., Erwich, J., van den Heuvel, E., Mol BWJ, A., and Geerlings, S. (2023). Asymptomatic bacteriuria and urinary tract infection in pregnant women with and without diabetes: Cohort study. Eur J Obstet Gynecol Reprod Biol. Mar;222:176-181.

Scoular, D., Philippe Boeuf, L., Elizabeth, P., and Arthur, E. (2022). Mycoplasma genitalium and Other Reproductive Tract Infections in Pregnant Women, Papua New Guinea, 2015–2017 available at https://pmc.ncbi.nlm.nih.gov/articles/PMC79 20647/#ack1

Sheffield, J., and Cunningham, F. (2019). Urinary tract infection in women. Obstetric Gynecol. Nov; 106 (5 Pt 1):108592. [PubMed] Talha H. Imam, MD, University of Riverside

**Smaill, F. (2017).** Asymptomatic bacteriuria in pregnancy. Best Pract Res Clin Obstet Gynaecol. Jun 2017;21(3):439-50.

**Toth, F., and Aiken, C. (2019).** Obstetrics: Prepare for the MRCOG: Key Articles from the Obstetrics, Gynaecology Reproductive Medicine Journal. UK.

**Vicar, A. (2022).** Urinary Tract Infection and Associated Factors among Pregnant Women Receiving Antenatal Care at a Primary Health Care Facility in the Northern Region of Ghana. available at https://onlinelibrary.wiley.com/doi/full/10.11 55/2023/3727265

Wing, D., Fassett, M., and Getahun, D. (2020). Health-driven mechanism of organic food consumption (2020): A structural equation modelling approach. Heliyon. 2024 Feb 28;10(5):e27144. doi: 10.1016/j.heliyon.2020. e27144. PMID 38449619; PMCID: PMC10915409. Available at www. Google scholar.com

# تقييم المعلومات فيما يتعلق بالوقاية من عدوى المسالك البولية بين السيدات الحوامل رحاب عبد المرضى ابراهيم – سعاد عبد السلام – سميه عودة عبد المنعم

عدوى المسالك البولية من أكثر انواع العدوى انتشارا في الجهاز البولي ونظرا للتغيرات الفسيولوجية اثناء الحمل كتمدد الحالب والكلى وانضغاط الكلى من الرحم كل هذه العوامل تساعد على زيادة التعرض للاصابة بين السيدات الحوامل كذلك بعض العوامل الاخرى كقلة النظافة الشخصية وعدم اتباع التغذية الصحية تسهم بارتفاع معدل الاصابة. لذلك هدفت هذة الدراسة إلى تقييم المعلومات فيما يتعلق بالوقاية من عدوى المسالك البولية بين السيدات الحوامل. وقد أجريت هذه الدراسة باستخدام منهج البحث الوصفي بعيادة التوليد وأمراض النساء الخارجية بمستشفى بنها الجامعي، وتم أخذ عينة ملائمة وشملت ١٤٠ امرأة حامل، وقد أسفرت النتائج على أن ما يقرب من نصف النساء المدروسات (٢٠٪) معرفة إجمالية غير كافية حول عدوى المسالك البولية. بالإضافة إلى ذلك. كانت هناك علاقة ذات دلالة إحصائية عالية بين الدرجة الكلية للمعرفة لدى النساء المدروسات والمستوى التعليمي، ولم تكن هناك علاقة ذات دلالة إحصائية وقد لخصت النتائج أن لدى ثلثي النساء المدروسات معرفة غير مرضية فيما يتعلق بعدوى المسائك البولية. كما كانت هناك علاقة ذات دلالة إحصائية علية بين الدرجة الكلية للمعرفة لدى النساء المدروسات والمستوى التعليمي للنساء المدروسات. وقد أوصت عالية بين الدرجة الكلية للمعرفة لدى النساء المدروسات والمستوى التعليمي للنساء المدروسات. وقد أوصت خلال برنامج تعليمي مستوى معرفة النساء الحوامل فيما يتعلق بعدوى المسالك البولية أثناء زيارات ما قبل الولادة من خلال برنامج تعليمي مستوى معرفة النساء الحوامل فيما يتعلق بعدوى المسالك البولية أثناء زيارات ما قبل الولادة من خلال برنامج تعليمي مستوى مستوى معرفة النساء الحوامل فيما يتعلق بعدوى المسالك البولية أثناء زيارات ما قبل الولادة من خلال برنامج تعليمي مستمر.

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