SUMMARY

# Self-management skills for preventive measures against urinary tract infections among pregnant women

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AUTHORS' CONTRIBUTION: (A) Study Design  $\cdot$  (B) Data Collection. (C) Statistical Analysis  $\cdot$  (D) Data Interpretation  $\cdot$  (E) Manuscript Preparation  $\cdot$  (F) Literature Search  $\cdot$  (G) Funds Collection

**Background**: One of the most prevalent infections in pregnant women and the most prevalent urinary tract illness in women of all ages is Urinary Tract Infection (UTI). Up to 50% of women will experience uTI at some point in their lives.

**Objective:** Our study was to assess self-management skills for preventive measures against urinary tract infections among young women.

**Methods:** Baseline cross-sectional data from 200 women who participated in Study between 8 January 2021 and 15 April 2021 were analyzed. A self-administered questionnaire inquiring about demographic foruteen Six questions concerning the symptoms and indicators of urinary tract infections, as well as prevention strategies.

**Results:** A total of 200 Urinary Tract Infection (UTI) women (Mean and ST:) completed the questionnaire. Highest for Urinary tract infection age group 87(43.5%) 20-30, The highest Urinary tract infection " (38.5%) of study sample Bachelor's degree or above, income (19.5%) of study prep, (77%) of the study sample lived in an urban area, the largest percentage (69.5%) were housewives or unemployed, and over half lacked self-management skills related to preventing urinary tract infections.

**Conclusion:** Only a small percentage of women report UTIs to a medical practitioner and take antibiotics, despite the fact that the majority of them get them at some point in their lives. Women's main source of information concerning urinary tract infections may be publicly accessible online medical services under professional supervision.

Keywords: Self-management; Skill; Preventive; Measures; Urinary tract infection; Pregnant women

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### **INTRODUCTION**

People of all ages and genders are susceptible to urinary tract infections (UTIs), which are a prevalent global health issue. They frequently arise from harmful germs invading and growing within the urinary system [1]. If untreated, UTIs can develop into serious complications such pyelonephritis and septicemia, which can result in substantial morbidity and healthcare costs [2]. In most women, UTIs are accompanied by symptoms such as dysuria, urgency, frequent urination, suprapubic pain and hematuria [3]. In postmenopausal women, however, genitourinary symptoms are not necessarily related to uncomplicated UTI [4]. Recent studies have identified several risk factors for recurring UTI: wiping back to front, delayed or premature voiding, straining to void, not voiding urine within 15 minutes after intercourse, using soap to clean after urination and chronic constipation [5-8]. In order to reduce the usage of antibiotics, prevention methods other than antibiotic prophylaxis should be taken into consideration because they have a low risk of side effects and do not increase bacterial resistance [3,9-11]. Therefore, to prevent recurrent UTIs, it is crucial to understand what women currently know and do. Nevertheless, there aren't many researches on how women see preventing recurrent UTIs.

#### **METHODOLOGY**

A study design cross-sectional was conducted to assess the self-Management skills for prevention urinary tract infections among pregnant women in the wards of Bint Al-Huda Hospital in the city of Nasiriyah, and the original source was all women at risk UTI. The following were the requirements for inclusion: Iraqi Arab residents of Al-Nasiriyah who are at least eighteen years old and prepared to give their informed consent. Women with cognitive impairments or language barriers that might make it difficult for them to accurately complete the surveys or questionnaires were excluded, as were women who were unable or unwilling to give informed consent, non-Iraqi Arab citizens, or those who did not reside in Al-Nasiriyah. Participants were given questionnaires to complete in order to gather data for this study. The questions were created using a survey of the literature and the opinions of subject-matter experts. It started from the 15/November /2022 end 1/February/2023. It took roughly fifteen to twenty minutes to complete the questionnaire for each interview. Every participant in the study who was part of the sample is interviewed. The questionnaire was divided into two parts: part I: Socio-Demographic Data which includes (Place of residence, marital status, occupational status, family income, number of pregnancies, and duration of pregnancy education level). Part II includes (diseases sign and symptoms. medical history, Self-management skills).

#### **Ethical consideration**

Before conducting interviews, the researchers gave each lady an explanation of the study's goal, and before any data was collected, each study sample gave their verbal consent. Women were given the assurance that the data would be used for research and that the study would be anonymous, voluntary, and confidential

#### Statistical cnalysis

Following a completeness check, the data was coded, totalled, and computed using scientific methods. Inferential diagnosis (Chi-Square) and descriptive analysis (frequency and percentage) were performed. Tables, graphs, figures, and numerical summary measures were used to present the results.

## RESULTS

#### Socio-demographic data

Two hundred women completed the questionnaire. The proportions of women 20-30 years 43.5 and women younger than 20 were 18.5. Education levels of women 38.5 were graduated from Bachelor's degree or above, while those 19.5 women graduated from High school. The result showed that 70% of women were housewives and around more than half of them were enough income families 48% (Tab. 1.).

Fig. 1. 2. & 3. represent distribution of samples according income, occupation and residence.

| Tab. 1. Distribution of the | No. | Variables                  | F   | Р    |  |  |  |
|-----------------------------|-----|----------------------------|-----|------|--|--|--|
| (200) women study sample    |     | Age                        |     |      |  |  |  |
| based on socio-demographic  |     | <20                        | 37  | 18.5 |  |  |  |
| information.                | 1.  | 20-30                      | 87  | 43.5 |  |  |  |
|                             |     | 31-40                      | 34  | 17   |  |  |  |
|                             |     | 41-50                      | 26  | 13   |  |  |  |
|                             |     | >50                        | 16  | 8    |  |  |  |
|                             |     | Education                  |     |      |  |  |  |
|                             |     | Illiteracy                 | 22  | 11   |  |  |  |
|                             |     | Read and write             | 16  | 8    |  |  |  |
|                             |     | Primary school             | 25  | 12.5 |  |  |  |
|                             |     | Secondary school           | 21  | 10   |  |  |  |
|                             |     | High school                | 39  | 19.5 |  |  |  |
|                             |     | Bachelor's degree or above | 77  | 38.5 |  |  |  |
|                             | 4.  | Occupation                 |     |      |  |  |  |
|                             |     | Employed                   | 170 | 30   |  |  |  |
|                             |     | Unemployed                 | 130 | 70   |  |  |  |
|                             |     | Total                      | 200 |      |  |  |  |







#### Signs and symptoms

Findings of study indicated that 200 participants (61%) had experienced presented with lower abdominal pain and lower back pain. Among them, (58.5%) reported having frequent urination. Of those with UTIs, (9.6%) had abdominal pain, (21%) percent reported bood in their urine, (54%) had a fever, and (57.5%) reported uncomfortable urination (Tab. 2.).

### **History of medical diseases**

Findings Tab. 3. revealed that among the participants,

31% with chronic diseases, 33.5% with Medical history, 41% refuse to answer about sexual activity, 61% Taking antibiotics, and 61% asking for help form doctor .

Tab. 4. preventive measures for urinary tract infections reveals that the largest proportion (88%) of the research population at women who urinate entirely empty their bladders. However, women (76.5%) wear cotton underwear, and women (74.5%) change their sanitary napkins every five to six hours.

As shown **Tab. 5**. revealed statistically there is no association between socio-demographic data with prevention against urinary tract infections.

Tab. 2. Distribution of the (200) women study sample based on signs and symptoms.

| Na   | Cines and summeries              | Yes |      | No  |      |  |
|------|----------------------------------|-----|------|-----|------|--|
| INO. | Signs and symptoms               | F   | Р    | F   | Р    |  |
| 1.   | Pain during urination            | 115 | 57.5 | 85  | 42.5 |  |
| 2.   | presence of blood when urinating | 42  | 21   | 158 | 79   |  |
| 3.   | lower abdominal pain             | 122 | 61   | 78  | 39   |  |
| 4.   | lower back pain                  | 122 | 61   | 78  | 39   |  |
| 5.   | frequent urination               | 117 | 58.5 | 83  | 41.5 |  |
| 6.   | High temperature                 | 108 | 54   | 92  | 46   |  |

| Tab. 3. Distribution of sample (200) ac- |     |                           | Yes    |      | NO    |      | Refuse to answer                     |      |  |
|------------------------------------------|-----|---------------------------|--------|------|-------|------|--------------------------------------|------|--|
| cording to medical history.              | No. | Histoy                    | F      | Р    | F     | Р    | F                                    | Р    |  |
|                                          | 1.  | chronic diseases          | 62     | 31   | 138   | 69   |                                      |      |  |
|                                          | 2.  | Medical history           | 67     | 33.5 | 132   | 66   |                                      |      |  |
|                                          | 3.  | sexual activity in women  | 70     | 35   | 48    | 24   | 82                                   | 41   |  |
|                                          | 4.  | Taking antibiotics        | 122    | 61   | 78    | 39   |                                      |      |  |
|                                          | 5.  | Asking for help for women | Doctor |      | Nurse |      | Not affiliated with the health Field |      |  |
|                                          |     |                           | 122    | 61   | 55    | 27.5 | 23                                   | 11.5 |  |

| on of the (200) women    | No. | Calf Management Chille                                      | Yes |      | No  |      |
|--------------------------|-----|-------------------------------------------------------------|-----|------|-----|------|
| ed on self-management    |     | Selt-Management Skills                                      |     | Р    | F   | Ρ    |
| on against urinary tract | 1.  | The method of wiping from the mother to the back in women   | 134 | 67   | 66  | 33   |
|                          | 2.  | The use of powders and sprays in the genital areas in women | 73  | 36.5 | 127 | 63.5 |
|                          | 3.  | Drink plenty of fluids, especially water for women          | 141 | 70.5 | 59  | 29.5 |
|                          | 4.  | Bladder emptying every 3 hours for women                    | 121 | 60.5 | 79  | 39.5 |
|                          | 5.  | Women's use of antibiotics                                  | 61  | 123  | 77  | 38.5 |
|                          | 6.  | Changing the sanitary napkin from 5 to 6 hours for women    | 149 | 74.5 | 51  | 25.5 |
|                          | 7.  | Wearing cotton underwear for women                          | 153 | 76.5 | 47  | 23.5 |
|                          | 8.  | Emptying the bladder urinating for women completely when    | 176 | 88   | 24  | 24   |
|                          |     |                                                             |     |      |     |      |

**Tab. 5.** Association between socio-demographic data with prevention against urinary tract infections.

| No.         | Variables                                                                                                                 | Social demographic data/ prevention measures | Df | Asymptotic significance |  |  |  |
|-------------|---------------------------------------------------------------------------------------------------------------------------|----------------------------------------------|----|-------------------------|--|--|--|
| 1.          | Age                                                                                                                       | 29.086                                       | 32 | .615                    |  |  |  |
| 2.          | Residence                                                                                                                 | 5.913                                        | 8  | .657                    |  |  |  |
| 3.          | Education                                                                                                                 | 33.001                                       | 40 | .776                    |  |  |  |
| 4.          | Occupation                                                                                                                | 5.995                                        | 8  | .648                    |  |  |  |
| 5.          | Income                                                                                                                    | 13.015                                       | 16 | .672                    |  |  |  |
| The<br>if P | The chi-squared test is used to determine statistical significance; a difference is considered significant if $P < .05$ . |                                              |    |                         |  |  |  |

## DISCUSSION

**Tab. 4.** Distribution study sample base skills of prevention infections.

This study's main goal was to investigate slefmanagemant skills in precautions against urinary tract infections in women whp refering to Bint Al-Huda Teaching hospital in Thi-Qar, Iraq, and to examine the association of self-management skills with socidemographic data. One of the most significant public health issues is the frequency of UTIs in women of all ages. Therefore, as Tab. 1. illustrates, it is imperative to enhance preventive practices for UTIs. According to the survey, the largest proportion (43.5%) of the study group is between the ages of 20 and 30. This result contradicts a research that found between 25% and 35% of women aged 20 to 40 had experienced an episode that their doctor diagnosed as a urinary tract infection [12]. (38.5%) of women who participated in the study are Bachelor's degree or above and this disagree with study conducted by Almukhtar (2018) who stated Educational levels were bachelor (24.3%) [13]. According to Fig. 3., 72% of the study sample resided in an urban area, whilst 28% did so in a rural one. The study's findings concur with those of a study by Ameen & Hummade [14]. As seen in Fig. 1., the majority of the study sample (69.5%) was housewives, meaning they did not have occupations. This result agrees with study conducted by Ameen & Hummade [14]. Who stated the highest percentage (67%) were in housewife. Total income for the month. According to Fig. 1., the current survey found that the largest majority of women (53%) said that their income was sufficient, whereas 25% of the study sample said that their monthly income was barely adequate, and 21.5% said that their income was with frequent urination and (57.5%) with pain during urination. According to studies, "painful urination,' "urgency," and "red urine" were among the most often reported UTI symptoms [15]. (33.3%) from sample had history of medical disease. We see Medical disease lead to urinary tract infections that favor bacterial growth or weaken the body's ability to fight infection. Sexual activity can lead to UTI due to several factors as introduce bacteria from genital or anal area into the urethra. Young healthy, sexually active women are particularly at risk of acute uncomplicated (or community-acquired) urinary tract infections. Community-acquired UTIs are rare before to sexual debut and/or adolescence. By the age of 24, almost one-third of women will have a UTI that necessitates antibiotic treatment [16]. Doctors were the most often cited first source of knowledge on managing UTIs, followed by nurses in third place and non-health professionals in (11.5%). Studies show most common source of information was the internet (250, 63.8%) [17]. (61%) from sample taking antibiotics to prevent UTI. Numerous studies have shown that younger women are receiving fewer antibiotic prescriptions for recurrent UTIs. The authors ascribe this to heightened awareness of bladder discomfort syndrome or interstitial cystitis, which can manifest similarly to recurrent UTIs but does not necessitate antibiotic therapy. Additionally, a decreased rate of prophylactic antibiotic dispensing has been noted [18]. Additionally, new study indicates that a significant percentage of women are prepared to accept suboptimal care in some areas in order to

insufficient. (61%) from sample with UTI presented with

lower abdominal and back pain, While (58.5%) presented

avoid using antibiotics to treat UTIs. According to these findings, women with higher levels of education are more resistant to antimicrobial treatment and want to avoid it, On the other hand, younger women or those who had only experienced one UTI before valued timely complaint response more [19]. Distinct actions of females during a urinary tract infection. A greater proportion of sample emptying the bladder completely when urinating, while significantly more women chose cotton underwear. Increasing fluid intake and switching the sanitary napkin from 5 to 6 hours was the most common way for women to prevent UTIs. According to a Dutch study, about a third of women increased their fluid intake and looked for self-management resources online before visiting a doctor for UTI symptoms, while 15% of women took analgesics and increased their fluid consumption. It was estimated that between 20% and 90% of people were aware of several preventive behavioral interventions. Wearing occlusive underwear, douching, wiping from back to front after defecating, and consuming less fluid, post-coital urination, delaying urination, and increased external sphincter tone during micturition are some of the behaviors that are believed to increase the risk of recurrent UTIs [20]. Statistically there is no association between socio-demographic data with prevention against urinary tract infections. We see that the more educated women are, the more knowledge there will be about urinary tract infections among women living in the city. The higher the monthly income, the more it leads to the use of healthy water, a healthy environment, etc., all of which lead to a reduction in the incidence of urinary tract infections.

## CONCLUSION

Our study's conclusion highlights the necessity of raising Nasiriyah, Iraq, residents' awareness and understanding of UTIs. To lessen the prevalence of UTIs in the community, it is crucial to dispel myths, highlight preventative measures and precise symptoms, and encourage suitable care techniques. Creating focused educational initiatives and public health campaigns can raise awareness of UTIs and, in turn, improve healthcare outcomes.

## RECOMMENDATION

Recommend women with symptoms of urinary tract infection to go to the specialist doctor or any health care provider to take the appropriate treatment and adhere to the following prevention methods: Bladder emptying every 3 hours for women, Wearing cotton underwear for women, The method of wiping from the mother to the back in women, Don't use of powders and sprays in the genital areas in women, Drink plenty of fluids, especially water for women.

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