



Ministry of Higher Education

University of Basrah

College of Nursing



## **A Study to Evaluate Knowledge of Nursing College Students about the Preventive Measures of Urinary Tract Infection**

**A research project**

**Submitted to the Council of the College of Nursing at the University of Basrah  
as part of the requirements for obtaining a Bachelor's degree in Nursing  
Sciences**

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# بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

(أَمَّنْ هُوَ قَانِتٌ آنَاءَ اللَّيْلِ سَاجِدًا وَقَائِمًا يَحْذَرُ الْآخِرَةَ وَيَرْجُو رَحْمَةَ رَبِّهِ ۗ قُلْ هَلْ يَسْتَوِي الَّذِينَ يَعْلَمُونَ  
وَالَّذِينَ لَا يَعْلَمُونَ ۗ إِنَّمَا يَتَذَكَّرُ أُولُو الْأَلْبَابِ)

((صدق الله العلي العظيم))  
سورة الزمر - الآية ٩

# الاهداء

إلى من أفضلها على نفسي ولم لا فلقد ضحت من أجلي، ولم تدخر جهداً في سبيل إسعادي  
على الدوام (أمي الحبيبة).

نسير في دروب الحياة، ويبقى من يسيطر على أذهاننا في كل مسلك نسلكه.  
صاحب الوجه الطيب والأفعال الحسنة، فلم يبخل علي طيلة حياته (والدي العزيز).  
إلى أصدقائي وجميع من وقفوا بجواري وساعدوني بكل ما يملكون وفي أصدمة  
كثيرة.

أقدم لكم هذا البحث وأتمنى أن يجوز على رضاكم.

## **Supervisor's support**

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I certify that this research project Prepared under my supervision at the College of Nursing,  
The University of Basra partially fulfills the conditions Bachelor's degree in Nursing Sciences

### **Supervisor**

Abdul Amir Abdullah Al-Musawi

University of Basrah

Faculty of Nursing

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## **Acknowledgement**

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## Abstract

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**Background:** UTI is a common bacterial infection known to affect the different parts of the urinary tract and the occurrence is found in both males and females. It's the most common site of nosocomial infection, accounting for greater than (40%) of the total number reported by hospital and affecting about (600,000) patients each year. The objective of this study is to assess the knowledge of regarded preventive measures among nursing college students and to determine the association between their knowledge and selected demographical data.

**Objective of study:** Assessment of knowledge related to preventive measures for students of the Faculty of Nursing and to determine the association between their knowledge and selected demographical data.

**Results:** The results of the current study showed that the percentage of respondents for ages (20-30) was 91%, as for gender, the percentage was 41% for males, 59% for females, and the percentage of single people was 78% .

**Conclusions:** The study concluded that the general level of knowledge among the participants was (64%) of (100) participants have an average level of knowledge, while (36%) of them have weak knowledge about preventive measures from urinary tract infection.

**Recommendations:** Based on the results or according to what you want, prepare educational programs for the students of Basra University to develop their knowledge of the seriousness of urinary tract diseases, as well as establish units dedicated to counseling and healthy nutrition.

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## List of abbreviations

<b>Abbreviation</b>	<b>Words</b>
<b>UTIs</b>	Urinary tract infections
<b>HCAI</b>	Health care associated infections
<b>CAUTI</b>	Catheter Associated Urinary tract infection
<b>NHSN</b>	National Health care Safety Network

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# CHAPTER ONE

**1.1 Introduction**

**1.2 Importance of the study**

**1.3 Objectives of the study**

**1.4 Statement of the study**

UTI is an infection of the urinary system that may involve the lower urinary tract or both the lower and upper urinary tract. <sup>[1]</sup> UTIs are considered as the most frequent bacterial infections worldwide. <sup>[2,3]</sup> UTI is a common bacterial infection known to affect the different parts of the urinary tract and the occurrence is found in both males and females. Urinary tract infections (UTIs) are caused by pathogenic microorganisms in urinary tract (the normal urinary tract is sterile above the urethra). UTIs are generally classified as infections involving the upper or lower urinary tract and further classified as uncomplicated or complicated depending on other patient related conditions. <sup>[4,5]</sup> The urinary tract is the most common site of nosocomial infection, accounting for greater than 40% of the total number reported by hospital and affecting about 600,000 patients each year. <sup>[6,7]</sup> Manifestations of (UTI) account for more than 7 million health care visits and 1 million hospital admission annually in United States and The incidence of UTI is second only that of upper respiratory infection in primary care. <sup>[8,9]</sup> In this study, we aimed to assess the students' knowledge of regarded preventive measures of UTIs, and to determine the association between socio- demographical data and their knowledge regarding prevention of UTI. <sup>[9]</sup>

Healthcare associated infections (**HCAI**) or nosocomial infections constituting a major health problem worldwide; among them the major one is Catheter Associated Urinary Tract Infection (**CAUTI**) and it occurs after the admission of the patient in hospital due to the reason of other than that infection. <sup>[10]</sup> A urinary tract infection (**UTI**) is an infection involving any part of the urinary system, including urethra, bladder, ureters and kidney. As per National Healthcare Safety Network (**NHSN**) report among UTIs acquired in a hospital, approximately 75% are associated with urinary catheter. <sup>[11]</sup> the other hand, catheter

associated urinary tract infection is related to the presence of catheter in bladder for a long period of time and not present at the time of admission. <sup>[12]</sup>

## **1.2 Importance of the study:**

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This study aims to assess the knowledge of nursing college students about the prevention of urinary tract infection.

## **1.3 objectives of the study:**

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1- Assessment of knowledge related to preventive measures for students of the Faculty of Nursing.

2- to determine the association between their knowledge and selected demographical data.

## **1.4 Statement of the study:**

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A study on evaluating the knowledge of nursing college students about the preventive measures of urinary tract infection.

# **CHAPTER TWO**

**2.1 Literature review-**

**2.2 Causes of Urinary tract infection**

**2.3 Symptoms of Urinary tract infection**

**2.4 Treatment of Urinary tract infection**

**2.5 Epidemiology**

**2.6 Urinary tract infection during pregnancy**

Urinary tract infection (UTI)--a broad term used to describe bacterial infection of the urethra, bladder, and kidneys--is a problem frequently encountered by health care providers today. In addition to bacteria, viruses and fungi are other infectious agents that colonize the urinary tract. Traditionally, UTIs are categorized as uncomplicated or complicated, or by site of infection. Infections may be symptomatic or asymptomatic. Lower UTIs include urethritis and cystitis, and upper tract infections include pyelonephritis and renal abscesses. Acute infections are usually associated with a single pathogen; chronic infections are usually polymicrobial. <sup>[13]</sup>

## **2.2 Causes of Urinary tract infection:**

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Most UTIs are caused by the bacteria *Escherichia Coli* (E.coli) that is naturally found in the digestive system.

The risk factors for developing a UTI?

- Gender: Females are at higher risk.
- Sexual intercourse may be one of the reasons for the bacteria to pass to the bladder since many UTIs occur after sexual activity. During intercourse, bacteria may move from the vagina or the anus into the urethra and then to the bladder or even higher in the urinary tract. However, you don't have to be sexually active to get a UTI.
- Childhood: UTI is very common in children especially girls.
- Menopause: The urinary tract becomes more susceptible to infection

due to changes in hormones after menopause.

- Pregnancy and the use of birth control pills.
- A urinary catheter used in urinating.
- Poor hygiene (such as wiping from back to front in girls and women).
- A suppressed immune system caused by certain diseases like diabetes mellitus.
- Waiting too long to urinate. This will allow more germs to grow in the bladder. Also refraining from urinating may lead to the swelling of the bladder and may affect the proper functioning of the bladder muscles. This can cause voiding problems (not complete emptying) which exposes the bladder to infection. <sup>[14]</sup>
- A congenital abnormality in the urinary tract.
- Obstruction in the urinary tract, such as that caused by a kidney stone or enlarged prostate. <sup>[14]</sup>

### **2.3 Symptoms of Urinary tract infection:**

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Symptoms are similar among the sexes: Dysuria (painful urination), urgency, hesitancy, polyuria, and incomplete voiding may all be associated with acute cystitis. Urinary incontinence, hematuria, and suprapubic or low back pain may also be present. Typically, females with acute dysuria have one of three types of infections: acute cystitis; acute urethritis due to *Chlamydia trachomatis*, *Neisseria gonorrhoeae*, or herpes simplex virus; or vaginitis due to *Candida* or *Trichomonas*. <sup>[15]</sup>

Symptoms that indicate pyelonephritis include fever, costovertebral angle pain, nausea, and vomiting. Hematuria may occur in any UTI, but it is more suggestive of nephrolithiasis when accompanied by flank pain. In the pediatric population during the first 8 to 12 weeks of life, UTI may be associated with bacteremia. Symptoms in infants up to 2 years old may include difficulty with feeding, nausea and vomiting, or failure to thrive. Children ages 2 to 5 may demonstrate fever and abdominal pain. Children under 5 are at risk for renal scarring. <sup>[15]</sup>

Children older than 5 may have the same symptomatology as adults. As many as 25% of young children without pyelonephritis have renal bacteriuria. As in other age groups, urine culture is the goal standard for diagnosis of UTI. However, an adequate sterile urine culture is often difficult to obtain in the pediatric patient. The urinalysis will support the presumptive diagnosis of UTI. Markers for infection in a urinalysis are the presence of nitrites, leukocytes esterase, bacteria, or white blood cells. An infant who is evaluated for fever may require lumbar puncture, in addition to blood cultures, to evaluate UTI with secondary bacteremia. <sup>[16]</sup>

## **2.4 Treatment of Urinary tract infection:**

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UTIs are commonly treated with antibiotics for a period of seven to ten days. Your doctor will ask you to run urine tests (analysis and culture) to identify the type of bacteria you have. Certain types of bacteria may be resistant to some antibiotics (i.e. they will not respond to the antibiotic) due to a previous excessive use of the antibiotics. Your doctor will prescribe the antibiotic that best treats the bacteria you have. Treating a UTI upon the appearance of the first symptoms may prevent the infection from reaching the kidneys, especially during pregnancy. <sup>[14]</sup>



## **2.5 Epidemiology:**

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Up to 60% of women have at least one symptomatic UTI during their lifetime. Around 10% of women in the United States have one or more episodes of symptomatic UTIs each year. Young, sexually active women 18–24 years of age have the highest incidence of UTIs. About 25% of these women have spontaneous resolution of symptoms, and an equal number become infected (Sobel 2014). The prevalence of UTIs in men is significantly lower than in women, occurring primarily in men with urologic structural abnormalities and in older adult men. <sup>[17]</sup>

## **2.6 Urinary tract infection during pregnancy:**

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The prevalence of symptomatic and asymptomatic bacteriuria among women during pregnancy is very common and the previous history of the infection is a major risk factor. The effect of asymptomatic UTI can be subsided by employing suitable treatment which in turn prevents the adverse consequences of its progress. Urinary tract infection is a consequence of poor diagnosis during pregnancy and this in turn enhances the scope of infection and pregnant women under such circumstances are susceptible to serious complication. Their study has revealed the occurrence of the infection to be 56% among women during pregnancy and the incidence was up to 50% during the second trimester among the pregnant women. Women within the age group of 15-32 were prone to the infection and pregnancy has in turn enhanced the susceptibility rate among women. UTI is considered as the most common hospital acquired infection constituting up to 35% of nosocomial infection and is regarded as a vital factor for the outbreak of bacteremia among

hospitalized patients. Despite the fact, that *E. coli* is considered as the prime perpetrator, studies have validated the significance of *S. aureus* in conferring the infection. <sup>[18]</sup>

## **2.7 Etiology:**

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Most uncomplicated UTIs are due to a single bacterial pathogen, with *E. coli* isolated in 75% to 95% of cases.<sup>7</sup> Another 5% to 15% of cases may be due to the gram- positive organism *Staphylococcus saprophyticus* (which is almost exclusively associated with uncomplicated cystitis and not pyelonephritis), while the remaining cases are usually due to other enteric gram-negative bacteria such as *Klebsiella* species, *Proteus* species, and others. The etiology of complicated UTIs is usually more varied and is less predictable than uncomplicated UTIs. As well, the possibility of mixed infections with two or more organisms may occur. Although *E. coli* remains the most common pathogen isolated in complicated UTIs, it is found in only 50% of cases. Other, generally more resistant organisms such as *Proteus* species, *Klebsiella* species, enterococci, *Pseudomonas aeruginosa*, and even yeast may be isolated. <sup>[19]</sup>

## **2.8 Mechanism of action:**

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### **In the vagina**

Circulating oestrogens in premenopausal women encourage vaginal colonization with lactobacilli. Increased vaginal oestrogen levels have also been shown to increase the proportion of glycogen-producing vaginal epithelial cells, and treatment with depot medroxyprogesterone acetate has been shown to reduce the thickness of the glycogen-

bearing epithelial layers, suggesting a role of oestrogens in the promotion of glycogen storage within the vaginal epithelium.<sup>[20]</sup> allowing lactobacilli to thrive. The conversion by lactobacilli of glycogen into lactic acid, hydrogen peroxide and antimicrobial peptides (such as bacteriocin) maintains a low (acidic) vaginal pH (pH < 4.5) and inhibits the growth of uropathogens.<sup>[20,21]</sup> The rise in vaginal pH (above pH 4.5) after the menopause results in reduction in numbers of lactobacilli and an increase in vaginal colonization by gut organisms (such as *E. coli*). A randomized controlled trial.<sup>[22]</sup> Investigated the effect of intravaginal estriol cream versus placebo on the incidence of UTIs in 93 postmenopausal women with a history of recurrent UTI. A significantly reduced rate of UTI was observed in the estriol group compared with placebo (0.5 versus 5.9 episodes per patient-year;  $P < 0.001$ ). Lactobacilli were completely absent in all vaginal cultures at the start of the study but returned in 61% of patients in the estriol cream group versus none in the placebo group after 1 month of treatment ( $P < 0.001$ ). The mean decrease of vaginal pH was from 5.5 to 3.8 in the estriol group versus no change with placebo. Vaginal colonization with Enterobacteriaceae also declined from 67% to 31% compared with no difference in the placebo group. The authors concluded that the use of intravaginal estriol cream helps to reduce the incidence of UTIs through its effects on the vaginal pH and microflora. However, 20% of patients in the estriol group withdrew owing to adverse effects (vaginal irritation, burning or itching), compared with 9% in the placebo group. Thus, women should be counselled about these possible adverse effects before initiation of therapy in order to improve compliance, as this treatment has been shown to be successful in the prevention of recurrent UTI in postmenopausal women.<sup>[22]</sup>

# CHAPTER THREE

**3.1 Methodology**

**3.2 Design of study**

**3.3 Setting of the study**

**3.4 Sample the study**

**3.5 Project instrument**

This chapter present the research design that is used in present study, and steps of study include the administrative arrangement, instrument construction setting of the study , sample selection, method of data collection and statistical data analysis.

**3.2 Design of study:**

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Quantitative research, a “cross- sectional” study was carried out to achieve the objectives of study among the nursing college students.

The present study was conducted in Basrah University at the College of Nursing. sample of (100) students (males and females) from the nursing college students, were included in the study. To assess the knowledge of the students, a questionnaire consisting of 22 questions was prepared The researchers interviewed all students, and each student was given a time period between (10- 15) minutes to answer the questions.

**3.3 Setting of the project:**

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The project was implemented at Basrah University, College of Nursing, on December 13, 2021 for the morning and evening studies. The study ended on April 15, 2022

1-Third stage

2-fourth stage

### **3.4 Sample of study:**

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**The sample was collected in (December 13, 2021)**

Samples were collected on campus from students of the College of Nursing, University of Basrah .

### **3.5 Project instrument:**

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In order to the study aim and objectives, the structured knowledge questionnaire toward the preventive measures of UTIs were given and filled questionnaires were obtained from the subjects, which is composed of two parts:- Part One: Demographic Characteristics Sheet that include information related

Student demographics sheet, which includes (age, gender, marital status, and monthly income). While the second part is a questionnaire that takes care of the data to assess their knowledge, and it consists of (22) items. Each item has three options: Agree, Neutral, or Disagree. The researchers used three points to measure each item on the knowledge sheet. (3) for the correct answer (I agree), (2) for the neutral answer, (1) for the wrong answer (I disagree). The general level of students' knowledge was divided into three levels according to the average score. The level of poor knowledge was (less than 2), the average knowledge level ranged from (2 - 2.5), and the good knowledge level ranged from (more than 2.5 - 3). Excel (version 2010) was used for data analysis. The demographic characteristics of the study samples were recorded using descriptive statistics (frequencies, percentages, and mean). Average scores were compared by independent t-test and one-way ANOVA. The validity of the knowledge test tool content was determined in consultation with a team of (7) experts in different disciplines. They all agreed that the questionnaires were clear,

relevant and adequate. Minor changes were made based on their recommendations and suggestions. Data were collected through direct interviews with samples using a questionnaire prepared for the period from December 13, 2021 to March 3, 2022.

# CHAPTER FOUR



## 4.1 Results



**Table (4.1) : Demographic characteristics of participants (n=100)**

<b>age</b>				
<b>Valid</b>	<b>Frequency</b>	<b>Percent</b>	<b>Valid percent</b>	<b>Cumulative percent</b>
20-30 years	91	91.0	91.0	91.0
>30 years	9	9.0	9.0	100.0
<b>Total</b>	<b>100</b>	<b>100.0</b>	<b>100.0</b>	
<b>Gender</b>				
Male	41	41.0	41.0	41.0
Female	59	59.0	59.0	100.0
<b>Total</b>	<b>100</b>	<b>100.0</b>	<b>100.0</b>	
<b>Stage</b>				
Third stage	31	31.0	31.0	31.0
Fourth stage	69	69.0	69.0	100.0
<b>Total</b>	<b>100</b>	<b>100.0</b>	<b>100.0</b>	
<b>Social Marital</b>				
Single	78	78.0	78.0	78.0
Married	20	20.0	20.0	98.0
Divorced	1	1.0	1.0	99.0
Widower	1	1.0	1.0	100.0
<b>Total</b>	<b>100</b>	<b>100.0</b>	<b>100.0</b>	

According to Table 1, among the 100 participants, 91% of the respondents were between (20-30) years old, and 9% were over 30 years old, With regard to gender, the percentage of females was 59%, which is the largest percentage, while the percentage of males was 41%, and as for marital status, 78% of the samples were unmarried and 20% were married.

**Table (4.2) : Knowledge of students about the prevention of urinary tract infection**

<b>Valid</b>	<b>Frequency</b>	<b>Percent</b>	<b>Valid percent</b>	<b>Cumulative percent</b>
Moderate income	36	36	36.0	63.0
Good	64	64	64.0	100.0

<b>knowledge</b>				
<b>Total</b>	<b>100</b>	<b>100</b>	<b>100.0</b>	

Table 2 shows that a total of 64% of the 100 participants have good knowledge which is the highest percentage, while (36%) of the participants have medium knowledge.

**Table (4.3) : A table showing the percentage of knowledge and its relationship to demographic factors**

		count			
		ms(Binned)		Total	sig
		Moderate knowledge	Good knowledge		
<b>Age</b>	<b>20-30 years</b>	<b>34</b>	<b>57</b>	<b>91</b>	
	<b>&gt;30 years</b>	<b>2</b>	<b>7</b>	<b>9</b>	<b>0.367</b>
	<b>Total</b>	<b>36</b>	<b>64</b>	<b>100</b>	
<b>Gender</b>	<b>male</b>	<b>13</b>	<b>28</b>	<b>41</b>	
	<b>female</b>	<b>23</b>	<b>36</b>	<b>59</b>	<b>0.456</b>
	<b>Total</b>	<b>36</b>	<b>64</b>	<b>100</b>	
<b>Stage</b>	<b>Third stage</b>	<b>12</b>	<b>19</b>	<b>31</b>	
	<b>Fourth stage</b>	<b>24</b>	<b>45</b>	<b>69</b>	<b>0.705</b>
	<b>Total</b>	<b>36</b>	<b>64</b>	<b>100</b>	
<b>Social status</b>	<b>Single</b>	<b>32</b>	<b>46</b>	<b>78</b>	
	<b>married</b>	<b>2</b>	<b>18</b>	<b>20</b>	<b>0.016</b>
	<b>divorced</b>	<b>1</b>	<b>0</b>	<b>1</b>	
	<b>widower</b>	<b>1</b>	<b>0</b>	<b>1</b>	
	<b>Total</b>	<b>36</b>	<b>64</b>	<b>100</b>	
<b>Monthly income</b>	<b>Low income</b>	<b>8</b>	<b>13</b>	<b>21</b>	<b>0.112</b>
	<b>Moderate income</b>	<b>20</b>	<b>24</b>	<b>44</b>	
	<b>High income</b>	<b>8</b>	<b>27</b>	<b>35</b>	
	<b>Total</b>	<b>36</b>	<b>64</b>	<b>100</b>	

Table 3 shows the knowledge and demographic data, where the average knowledge for the age group (20-30) was 34% and good knowledge was 57%. As for gender, the average knowledge for males was 13% and for females 23%, while the good knowledge for males was 28% and for females 36%, as well as the social status associated with knowledge, the percentage was 32%, average knowledge for the unmarried, and the good knowledge for the unmarried was 46%.

**Table (4.4) : Distribution of study sample According to knowledge about prevention of UTIs**

<b>No .</b>	<b>Questions</b>	<b>frequency</b>	<b>percent</b>
<b>1</b>	<b>Bathing in rivers or swimming pools increases urinary tract infection .</b>	<b>13</b>	<b>26%</b>
<b>2</b>	<b>Wearing tight clothes (capoe) increases urinary tract infection</b>	<b>17</b>	<b>34%</b>
<b>3</b>	<b>Urinating 4-5 times reduces urinary tract infection</b>	<b>1</b>	<b>2%</b>
<b>4</b>	<b>Use deodorant as a preventative measure to prevent UTIs</b>	<b>10</b>	<b>20%</b>
<b>5</b>	<b>Empty the bladder completely by frequent urination reduces urinary tract infection</b>	<b>10</b>	<b>20%</b>
<b>6</b>	<b>Delayed emptying of the bladder or delayed urination increases urinary tract infection</b>	<b>14</b>	<b>28%</b>
<b>7</b>	<b>Emptying the bladder after marital relationship reduces urinary tract infection</b>	<b>40</b>	<b>80%</b>
<b>8</b>	<b>Avoid foods that contain salt, spices and spices that reduce inflammation Urinary Tract</b>	<b>22</b>	<b>44%</b>
<b>9</b>	<b>Pregnancy and breastfeeding increase urinary tract infection</b>	<b>17</b>	<b>34%</b>
<b>10</b>	<b>Urinating before going to sleep reduces urinary tract infection</b>	<b>5</b>	<b>10%</b>
<b>11</b>	<b>Using raspberry juice as a preventive measure reduces urinary tract infection</b>	<b>7</b>	<b>14%</b>
<b>12</b>	<b>The use of antibiotics reduces urinary tract infection</b>	<b>3</b>	<b>6%</b>

This table shows the questionnaire for each question, the number of repetitions and the favorable percentage for it. Among the percentages, the highest percentage was 80%, as this question had the most answers.

# CHAPTER FIVE

## 5.1 Discussion

There is no doubt the urinary tract infection it is consider the common problem which are affected in male and female.<sup>[23,24]</sup> We as a health care provider should be educate the community how to deal with that disorder to prevent complications. In general, about 50% of clinical training should take place in the nursing school curriculum.<sup>[25]</sup> In recent study objectives the researchers assess the effectiveness of knowledge and examined it they focus on engagement and motivation as necessary factors for knowledge gain and learning transfer, relation between learning outcomes and behavior.<sup>[26]</sup> To study the results distributed by the participants according to on the demographic characteristics of the respondents Age, in relation to the sex samples and in relation to Social status. Put all of these variables to be elected to Know what factors influence it their knowledge. In Table (2) we divide the level of Knowledge is divided into three categories: good, average Most of the participants had average knowledge To prevent UTIs because that's good Relationship of the sample with their friends. Peer support Good relationships with peers are Contributing factors to a positive learning attitude.<sup>[27,28]</sup>

Students in the current study were also prepared to learn, which will support academic self-efficacy in their educational environment. Since the health professions based on theoretical knowledge and practice, Candidates of healthcare professionals must receive Education in an integrated clinical environment with Theoretical courses.<sup>[29]</sup> It is important for students Actively participate in healthcare services The analyzes explain in detail the How to prevent urinary tract infection, but The researcher shows the differences between each other It was average and the last good, studies Demonstrated that time management training programs Overall, students' time management skills increased and Copy time compression.<sup>[30]</sup>

Curriculum for Adequate education for undergraduate nursing students For the age, social, culture and environment of the students.<sup>[31]</sup> In the demographic table researchers believe

marital The condition and gender of the sample play an important role To strengthen the precautionary wallpaper and To prevent infection, there are several important things Areas of UTImanagement that are outside the scope of our study. Urinary tract infection is managed during pregnancy Not covered here in great detail, this is an area It is usually administered during prenatal care. other regions Outside the scope of this document include long-term Prevention of urinary tract infection and acute or chronic prostatitis Urinary tract infection in pediatric patients clarifies many articles There was a high incidence of UTIs in female while there is no statistical significance between male and Feminine Knowledge. <sup>[31]</sup> This study concluded that (91%) of the respondents ranged in age from (20-30). years, most of them (59%) are females, and (41%) are males of the samples were single. More

than half (64%) Out of (100) participants with average knowledge, While (36%) of them have poor knowledge about Preventive Measures of Urinary Tract Infection: There are no significant differences between students' knowledge regarding their age and marital status, respectively. There are no significant differences in the students' knowledge scores with respect to gender. Based on the results of the study, the researchers recommended the necessity of preparing educational programs for Basra University students to develop their knowledge of the seriousness of urinary tract diseases, as well as establishing units for health guidance and counseling.

This study was compared with the University of Mosul about prevention, and it was concluded from this comparison that the University of Mosul took 120 samples, where the percentage of knowledge they had was 63%. As for the marital status, it was 86.7% of the samples were single, and with regard to age, their ages ranged (20-22) and the percentage was 48 %

# CHAPTER SIX

**6.1 Conclusion**

**6.2 Recommendation**

## **6.1 Conclusions :**

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The study concluded that the general level of knowledge of the participants is (64%) of the (100) participants have a good level of knowledge, while (36%) of them have medium knowledge of preventive measures from urinary tract infection.

## **6.2 Recommendations:**

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Based on the results or according to what you want, prepare educational programs for the students of Basra University to develop their knowledge of the seriousness of urinary tract diseases, as well as establish units dedicated to counseling and healthy nutrition.



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# APPENDICES

## Appendix 1

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characteristics	category
Age	20-30
	>30
Gender	Male
	Female
Stage	Third stage
	Fourth stage
Social status	Single
	Married
	Divorced
	Widower

Q1/Bathing in rivers or swimming pools increases urinary tract infection

- Agree      Neutral      I don't agree

Q2/Wearing tight clothing (capoi) increases urinary tract infection

- Agree      Neutral      I don't agree

Q3/ Urinating 4-5 times reduces urinary tract infection

- Agree      Neutral      I don't agree

Q4/ Use deodorant as a preventative measure to prevent UTIs

- Agree      Neutral      I don't agree

Q5/ Emptying the bladder completely by frequent urination reduces urinary tract infection

- Agree      Neutral      I don't agree

Q6/ Delayed emptying of the bladder or delayed urination increases urinary tract infection

- Agree    Neutral    I don't agree

Q7/ Bladder emptying after intercourse reduces urinary tract infection

- Agree    Neutral    I don't agree

Q8/ Avoiding foods that contain salt, spices and spices reduce urinary tract infection

- Agree    Neutral    I don't agree

Q9/ Pregnancy and breastfeeding increase urinary tract infection

- Agree    Neutral    I don't agree

Q10/ Urinating before going to bed reduces urinary tract infection

- Agree    Neutral    I don't agree

Q11/ Using raspberry juice as a preventative measure reduces urinary tract infection

- Agree    Neutral    I don't agree

Q12/ The use of antibiotics reduces urinary tract infection

- Agree    Neutral    I don't agree

Q13/ Female condoms or condoms can be used to reduce UTIs

- Agree    Neutral    I don't agree

Q14/ Refraining from eating red meat reduces urinary tract infection

- Agree    Neutral    I don't agree

Q15/ Cleaning the genital area when urinating and defecate reduces urinary tract infection

- Agree    Neutral    I don't agree

Q16/ Exercising and a healthy diet reduce urinary tract infection

- Agree    Neutral    I don't agree

Q17/ Eating foods rich in vitamin C reduces urinary tract infection

- Agree    Neutral    I don't agree

Q18/ Urinary tract infection can occur after taking preventive measures

- Agree    Neutral    I don't agree

Q19/ Drinking water before breakfast in the morning reduces urinary tract infection

- Agree    Neutral    I don't agree

Q20/ Smoking cessation reduces urinary tract infection

- Agree    Neutral    I don't agree

Q21/ Drinking fluids other than water reduces urinary tract infection

- Agree    Neutral    I don't agree

Q22/ Not changing underwear for a long time, especially in summer, increases urinary tract infection

- Agree    Neutral    I don't agree



## Knowledge of Nursing College Students about the Prevention of Urinary Tract Infection

معرفة طلبة كلية التمريض حول الوقاية من التهاب المسالك البولية

العمر:

الجنس:

انثى ذكر

الحالة الاجتماعية :

اعزب متزوج ارملة مطلق

المرحلة الدراسية :

ثالثة رابعة

س١\ الاستحمام في الانهار او المسابح يزيد من عدوى المسالك البولية

- اوافق محايد لا اوافق

س٢\ ارتداء الملابس الضيقة (الكابوي) يزيد من عدوى المسالك البولية

- اوافق محايد لا اوافق

س٣\ التبول من ٤-٥ مرات يقلل من عدوى المسالك البولية

- اوافق محايد لا اوافق

س٤\ استخدام مزيل العرق كأجراء وقائي لمنع التهاب المسالك البولية

- اوافق محايد لا اوافق

س٥\ افراغ المثانة بالكامل عن طريق تكرار التبول يقلل من عدوى المسالك البولية

- اوافق محايد لا اوافق

س٦\ التأخر في تفريغ المثانة او التأخر في التبول يزيد من التهاب المسالك البولية

- اوافق محايد لا اوافق

س٧\تفريغ المثانة بعد العلاقة الزوجية يقلل من التهاب المسالك البولية

- اوافق محايد لا اوافق

س٨\تجنب الاطعمة التي تحتوي على الاملاح والتوابل والبهارات تقلل من التهاب المسالك البولية

- اوافق محايد لا اوافق

س٩\الحمل والارضاع يزيدان من التهاب المسالك البولية

- اوافق محايد لا اوافق

س١٠\التبول قبل الذهاب الى النوم يقلل من التهاب المسالك البولية

- اوافق محايد لا اوافق

س١١\استخدام عصير التوت كأجراء وقائي يقلل من التهاب المسالك البولية

- اوافق محايد لا اوافق

س١٢\استخدام المضادات الحيوية يقلل من التهاب المسالك البولية

- اوافق محايد لا اوافق

س١٣\يمكن استخدام العازلات الانثوية او الواقيات الذكرية لتقلل من التهاب المسالك البولية

- اوافق محايد لا اوافق

س١٤\الامتناع من تناول اللحوم الحمراء تقلل من التهاب المسالك البولية

- اوافق محايد لا اوافق

س١٥\تنظيف منطقة الاعضاء التناسلية عند التبول والتبرز يقلل من التهاب المسالك البولية

- اوافق محايد لا اوافق

س١٦\ممارسة الرياضة والاتباع بنظام غذائي صحي يقلل التهاب المسالك البولية

- اوافق محايد لا اوافق

س١٧\تناول الاطعمة الغنية بفيتامين سي تقلل من التهاب المسالك البولية

- اوافق محايد لا اوافق

س١٨\ يمكن الاصابة بالتهاب المسالك البولية بعد اتباع التدابير الوقائية

- اوافق محايد لا اوافق

س١٩\ يعتبر شرب الماء قبل الفطور صباحاً يقلل من التهاب المسالك البولية

- اوافق محايد لا اوافق

س٢٠\ يعتبر الاقلاع عن التدخين يقلل من التهاب المسالك البولية

- اوافق محايد لا اوافق

س٢١\ شرب السوائل غير الماء يقلل من التهاب المسالك البولية

- اوافق محايد لا اوافق

س٢٢\ عدم تبديل الملابس الداخلية لفترة طويلة خاصة بالصيف يزيد من التهاب المسالك البولية

- اوافق محايد لا اوافق

## Appendix 3

### جدول الخبراء الذي تم عرض الاستبيان عليهم

ت	الاسم	اللقب العلمي	الشهادة والاختصاص	مكان العمل
1	سجاد سالم عيسى	استاذ	بور د طب اسره	كلية التمريض جامعة البصرة
2	سميرة محمد ابراهيم	استاذ	دكتوراه طب مجتمع	كلية التمريض جامعة البصرة
3	سندس باقر داود	استاذ مساعد	دكتوراه تمريض نسائية	كلية التمريض جامعة البصرة
4	عبد الكريم سلمان	استاذ	دكتوراه تمريض بالغين	كلية التمريض جامعة البصرة
5	زينب علك حسن	استاذ مساعد	ماجستير احياء مجهرية	كلية التمريض جامعة البصرة

إجريت الدراسة الحالية في كلية التمريض جامعة البصرة داخل الحرم الجامعي من تاريخ ١٣ كانون الثاني الى ١٥ نيسان ٢٠٢٢

بهدف تقييم معرفة طلبة الكلية حول الوقاية من التهاب المسالك البولية حيث تم جمع بيانات من خلال استبيان مكون من ١٠٠ عينة (٤١ ذكور و ٥٩ اناث) اشتمل على محورين المحور الاول المعلومات الديموغرافية والمحور الثاني كان يحتوي على اساله مكونه من ٢٢ سؤال وكانت الاساله شامله حول موضوع الوقاية

استنتجت الدراسة إلى أن المستوى العام للمعرفة لدى المشاركين هو (٦٤٪) من (١٠٠) مشارك لديهم مستوى جيد من المعرفة ، بينما (٣٦٪) منهم لديهم معرفة متوسطة بالإجراءات الوقائية من عدوى المسالك البولية

#### التوصيات:

بناء على النتائج اعداد برامج تعليمية لطلبة كلية التمريض لتنمية معرفتهم بخطورة امراض المسالك البولية وكذلك انشاء وحدات مخصصة للاستشارة والتغذية الصحية



جامعة البصرة  
كلية التمريض



تقييم معرفة طلبة كلية التمريض حول الوقاية من التهاب المسالك البولية

دراسة مقدمة الى

مجلس كلية التمريض كجزء من متطلبات الحصول على شهادة البكالوريوس في علوم التمريض

من قبل الطلبة :

ياسر فرحان عبد الرحمن

محمد حسن جبل عطية

محمد ناظم احمد

المرحلة الرابعة ٢٠٢١-٢٠٢٢

بإشراف الاستاذ الدكتور

عبد الامير عبدالله الموسوي

٢٠٢٢/٠٤/١٦

# وفيق الحتام

لحمد لله الذي قد وفقنا في تقديم بحثنا العلمي لحضراتكم، حيث تحدثنا في موضوع (الوقاية من التهاب المسالك البولية)، وحاولنا بكل جهدنا حتى يظهر البحث بشكله النهائي أمام حضراتكم، ونرجو ألا يكون البحث قد أهدر من وقتكم، بل نأمل أن يكون قد نال هذا البحث العلمي اعجابكم، ولا نقول أن هذا البحث كامل، فإن الكمال من صفة الله عز وجل، بل أننا سوف ننتظر تعليقات الأساتذة الأفاضل وملاحظاتكم، وعلى أن يكون البحث قد نال جزء من الرقي الذي يليق بكم، فإن وفقنا فمن الله الرحمن الكريم، وإن أخفقنا فمنا، ويكفينا شرف المحاولة، وأخيراً نرجو من الله عز وجل أن يوفقنا لما يحبه ويرضاه، وأن يعجبكم هذا النقاش، صلى الله

على محمد رسول الله صلى الله عليه واله وسلم

تم بحون الله تعالى