

University of Basrah

Collage of Nursing



***A Study on Nursing Students knowledge about Urinary
Tract Infections at Basrah University***

To

***The Council of the College of Nursing University of Basrah in
Partial Fulfillment of the Requirements for The Bachelors
Degree of Sciences in Nursing***

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بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

(وَإِذْ قَالَ رَبُّكَ لِلْمَلَائِكَةِ إِنِّي جَاعِلٌ فِي الْأَرْضِ خَلِيفَةً قَالُوا أَتَجْعَلُ فِيهَا مَنْ يُفْسِدُ فِيهَا وَيَسْفِكُ الدِّمَاءَ وَنَحْنُ نُسَبِّحُ بِحَمْدِكَ وَنُقَدِّسُ لَكَ قَالَتْ إِنِّي أَعْلَمُ مَا لَا تَعْلَمُونَ * وَعَلَّمَ آدَمَ الْأَسْمَاءَ كُلَّهَا ثُمَّ عَرَضَهُمْ عَلَى الْمَلَائِكَةِ فَقَالَ أَنْبِئُونِي بِأَسْمَاءِ هَؤُلَاءِ إِنْ كُنْتُمْ صَادِقِينَ * قَالُوا سُبْحَانَكَ لَا عِلْمَ لَنَا إِلَّا مَا عَلَّمْتَنَا إِنَّكَ أَنْتَ الْعَلِيمُ الْحَكِيمُ)

(سورة البقرة الآية 33)

صدق الله العلي العظيم

الإهداء

إلى من شجعني على المثابرة طوال عمري، إلى الرجل الأبرز في حياتي

(والدي العزيز)

إلى من بها أعلو، وعليها أرتكز، إلى القلب المعطاء

(والدتي الحبيبة)

إلى من بذلوا جهداً في مساعدتي وكانوا خير سندٍ

(إخواني وأخواتي)

إلى أسرتي، إلى أصدقائي وزملائي ...

إلى كل من ساهم ولو بحرف في حياتي الدراسية....

إلى كل هؤلاء: أهدي هذا العمل، الذي أسأل الله تعالى أن يتقبله خالصاً....

Supervisor's support

I certify that this project of research

***" A Study on Nursing Students knowledge about Urinary
Tract Infections at Basrah University"***

was prepared under my

supervision at the College of Nursing, University of Basrah

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Abstract

Background: Urinary tract infection is a common bacterial infection known to affect different parts of the urinary tract. annually affecting 250 million people worldwide.

Objective: To assess the nursing student's knowledge about the causes, sign and symptoms, prevention, diagnosis and treatment of urinary tract infection.

Methodology: A cross-sectional study involving (150) participants from University of Basrah, College of Nursing, the study started from November 2021 till April 2022. A Closed-end questions questionnaire was used for the purpose of data collection. Analysis was made by using SPSS version 26, data was expressed in (frequency, percentage and mean of score).

Results: The range of age of the participants was 21- 23 years old. (97 %) considered difficulty and burning during urination as clinical feature.(67 %) considered the high fever and (86 %) considered the presence of blood and pus in the urine as clinical feature. The highest level of knowledge (95%) regarding the cause considered presence of stones in the kidneys and urinary tract as a cause. (99 %) of the respondents consider urine analysis in the diagnosis of urinary tract infection.

Conclusions: The proportion of students was more female than male. Most of the students lived in urban areas. Most of the student's information were good about the knowledge on urinary tract infection.

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Chapter one

Introduction

1.1 Introduction

The urinary system consists of the kidneys, ureters, urinary bladder, and urethra [1].

The kidneys are two bean-shaped organs, each about the size of a fist. They are located just below the rib cage, one on each side of the spine. Healthy kidneys filter about a half cup of blood every minute, removing wastes and extra water to make urine[2].

The urinary system have two ureters. These narrow tubes carry urine from the kidneys to the bladder. Muscles in the ureter walls continually tighten and relax forcing urine downward, away from the kidneys. If urine backs up, or is allowed to stand still, a kidney infection can develop. About every 10 to 15 seconds, small amounts of urine are emptied into the bladder from the ureters [3].

The urinary bladder is a temporary storage reservoir for urine. It is located in the pelvic cavity, posterior to the symphysis pubis, and below the peritoneum. The size and shape of the urinary bladder varies with the amount of urine it contains and with the pressure it receives from surrounding organs. The final passageway for the flow of urine is the urethra, a thin-walled tube that conveys urine from the floor of the urinary bladder to the outside. The opening to the outside is the external urethral orifice. The mucosal lining of the wall of urethra also contain smooth muscle and transitional epithelium fibers supported by connective tissue [4].

Infection is defined as invasion of an organism's body tissues by diseasecausing agents, their multiplication and the reaction of host tissues to the infectious agents and the toxins theyproduce. Infections can be caused by a widely of pathogens,mostprominently bacteria and viruses. Specific medications used to treat infections include antibiotics, antiviral, antifungal, antiprotozoal and anthelminthic[5].

1.2 Objectives of the Study

The objectives of this study are to assess the nursing student's knowledge about the causes, sign and symptoms, prevention, diagnosis and treatment of urinary tract infection.

Chapter two

REVIEW OF LITERATURES

2.1 Urinary tract infection:

Urinary tract infection (UTI) is a collective term that describes any infection involving any part of the urinary tract, namely the kidneys, ureters, bladder and urethra. The urinary tract can be divided into the upper (kidneys and ureters) and lower tract (bladder and urethra) [6].

Most urinary tract infections occur in the bladder or urethra. Signs and symptoms may include pain or burning during urination, cloudy or bad-smelling urine, blood in the urine, feeling a need to urinate often or right away, pain in the back or lower abdomen, fever, chills, and fatigue. Certain conditions, such as diabetes, hormone changes, kidney stones, an enlarged prostate, or a spinal cord injury, may increase the risk of a urinary tract infection. Other risk factors include radiation therapy or surgery to the pelvis, taking certain types of medicines (such as anticancer drugs), or using a catheter to empty the bladder [7].

2.2 Epidemiology

Urinary tract infections are very frequent bacterial infections in women. They usually occur between the ages of 16 and 35 years, with 10% of women getting an infection yearly and more than 40% to 60% having an infection at least once in their lives. Recurrences are common, with nearly half getting a second infection within a year. Urinary tract infections occur at least four times more frequently in females than males [8].

2.3 Pathophysiology

Urinary tract infection typically start with per urethral contamination by an uropathogen residing in the gut, followed by colonization of the urethra and, finally, migration by the flagella and pili of the pathogen to the bladder or kidney. Bacterial adherence to the uroepithelium is key in the pathogenesis of UTI. Infections occur when bacterial virulence mechanisms overcome efficient host defense mechanisms. Lower UTI, also known as cystitis, are significantly more prevalent in women than in men. This is primarily because of anatomic differences, including shorter urethral length and moist per urethral environment in women. Upper UTI, also known as pyelonephritis, develop when uropathogen ascend to the kidneys by the ureters. Infections can occur when bacteria bind to a urinary catheter, a kidney, or a bladder stone or when they are retained in the urinary tract by a physical obstruction. *Staphylococcus aureus* bacteraemia or endocarditic can lead to haematogenous seeding of the bacteria to the kidneys, causing supportive necrosis or abscess formation within the renal parenchyma. In contrast, gram-negative bacilli rarely cause kidney infection by the haematogenous route. According to an experimental model of pyelonephritis, the main renal abnormality reported is the inability to concentrate the urine. This concentration defect occurs early in the infection and is rapidly reversible with antibiotic therapy. An obstruction can lead to progressive destruction of the affected kidney and subsequent renal insufficiency [9].

2.4 Types of Urinary tract infections

The type of infection depends on where part of urinary tract is infected.

urethritis:an infection of urethra.

Uncomplicated cystitis: A bladder infection in a healthy, no pregnant, premenopausal female with a normal urinary tract.

Complicated cystitis: A bladder infection associated with factors that either increase the risk of serious outcomes or decrease the efficacy of treatment. This includes: cystitis plus a foreign body (such as a catheter or urinary tract stone), recent instrumentation, urinary tract abnormalities, or vesicoureteral reflux. It also includes cystitis in men, pregnant women, and patients with renal transplant or other causes of an immunocompromised state, and UTIs due to atypical organisms or multi-drug resistant bacteria.

Uncomplicated pyelonephritis: A kidney infection that occurs in a healthy no pregnant patient with a normal urinary tract.

Complicated pyelonephritis: A kidney infection that occurs during pregnancy or in a patient with other complicating factors (as noted above, under complicated cystitis), typically requiring hospital admission.

Recurrent UTI: Defined as more than 2 UTI in 6 months or more than 3 UTI in 12 month [10].

2.5 Etiology

Pathogenic bacteria ascend from the perineum, causing the UTI. Women have shorter urethras than men and therefore are far more susceptible to UTI. Very few uncomplicated UTIs are caused by blood-borne bacteria. *Escherichia coli* are the most common organism in uncomplicated UTI by a large margin [11].

2.6 Risk factors

Anyone, male or female, young or old, sexually active or not, can get a UTI. At the same time, certain risk factors that increase the likelihood of developing a UTI. These include:

Age: Older adults are more susceptible to UTIs because they are more likely to have difficulties emptying their bladders. The risk is particularly higher for those 85 and older [12].

Diabetes: Especially if uncontrolled, this condition can weaken the body's immune system to fight off infection.

Sexual activity: Any sexual activity can cause bacteria in the urinary tract, Which can potentially lead to infection? Having sex more frequently or with multiple partners may also increase the risk of UTI.

Spinal cord injuries: A spinal cord injury or other nerve damage can make it difficult to empty your bladder regularly and completely.

Urinary catheters: When this tube is placed in the urethra and bladder to drain urine, it can introduce bacteria into the urinary tract.

Bowel incontinence: People with bowel incontinence are three times more likely to develop a UTI.

Urinary tract blockage: The presence of kidney stones, a tumour, an enlarged prostate, or any other condition can block the flow of urine.

Recent urinary tract procedures: Surgery or a urinary tract exam that involves medical instruments can increase the risk of developing an infection[13].

Certain forms of birth control: Spermicides or unlubricated condoms may cause skin irritations that allow bacteria to invade.

Antibiotics: Although antibiotics are often the first-line treatment for UTI, they can also affect the balance of the natural microflora in your urinary tract. Sometimes this can actually lead to UTI.

Menopause Women: Menopause may also have a greater risk of urinary tract infections, possibly due to hormonal changes that might affect the beneficial bacteria responsible for fighting off harmful microorganisms in the urinary tract.

Pregnancy: Due to pregnancy-related changes in the urinary tract, UTI may also be more common during pregnancy [14].

2.7 Clinical manifestation

Anyone who has ever had a urinary tract infection knows how frustrating and uncomfortable it can be. Even a mild case can cause pain when urinating, an increased urge to urinate, and blood or pus in the urine.[15]

By knowing the signs and symptoms of a UTI, you can seek treatment and avoid many complications of this all-too-common infection [16].

The symptoms of a urinary tract infection are largely defined by their location in the urinary system. There are two types of UTI:

- A lower urinary tract infection occurs in the bladder or urethra. It is commonly referred to as a bladder infection [17].
- An upper urinary tract infection involves the kidneys and ureter.
- An infection of the kidneys is also referred to as pyelonephritis [18].

2.7.1 Lower Urinary Tract (Bladder Infection)

A lower urinary tract infection typically occurs when bacteria enter the urethra and cause an infection in the bladder. When symptoms appear, they often start with a dull ache or discomfort in the pelvis or urethra. Usually, within hours, the UTI will have characteristic symptoms,

Including [19].

1. Pain or burning during urination (dysuria)[20].
2. An increased urge to urinate (urinary urgency)
3. The need to get up at night to urinate (nocturia) [21].
4. Inability to hold your urine (urinary incontinence)
5. Passing frequent, small amounts of urine
6. Foul-smelling urine
7. Cloudy urine (pyuria) [22].
8. Bloody urine (hematuria)
9. Lower abdominal or pelvic pain
10. Fever
11. Fatigue [23].

2.7.2 Upper Urinary Tract (Pyelonephritis)

A bladder infection that has moved to the kidneys is usually considered serious and in need of urgent medical care. Pyelonephritis can cause systemic symptoms that are not only more apparent but frequently debilitating. Signs of pyelonephritis may include:

- Flank pain (pain that's usually deep and high in the back or sides, though it can be present in the upper abdomen)
- High fever
- Body chills
- Rigors (shivering and sweating accompanied by a rise in temperature)
- Nausea or vomiting [24].

2.8 Diagnosis

The diagnosis of urinary tract infections typically involves analysis of a urine sample, and in some cases, imaging tests may be used.

- **Urinalysis:** This test will examine the urine for red blood cells, white blood cells and bacteria. The number of white and red blood cells found in your Urine can actually indicate an infection [25].
- **Urine culture:** A urine culture is used to determine the type of bacteria in your urine. This is an important test because it helps determine the appropriate treatment [26].
- **Ultrasound:** In this test, sound waves create an image of the internal organs. This test is done on top of your skin, is painless and doesn't typically need any preparation.

- **Cystoscopy:** This test uses a special instrument fitted with a lens and a light source (cystoscope) to see inside the bladder from the urethra[27].
- **Computerized tomography(CT) scan:** Another imaging test, a CT scan is a type of X-ray that takes cross sections of the body (like slices). This test is much more precise than typical X-ray [28].
- **Intravenous Pyelogram (IVP):** is an x-ray exam that uses a special dye to outline the kidneys, ureters and bladder. It can show how your renal and urinary system handles fluid waste. This helps your health care team find problems in the urinary tract [29].

2.9 Treatment

Urinary tract infections are often mild and can sometimes resolve if you drink enough fluids. Sometimes taking a mild over-the-counter pain reliever can help relieve discomfort while the infection is resolving [30].

Sometimes UTI lasting for more than two days need to be treated with a course of antibiotics. You can develop serious complications if the infection has moved from your bladder to your kidneys [31].

2.9.1 Cystitis Treatment

The first-line antibiotic drugs used for the treatment of uncomplicated cystitis include:

- Trimethoprim-sulfamethoxazole (TMP-SMX).
- Nitrofurantoin monohydrate.
- Fosfomycin [32].

Symptoms of cystitis such as lower belly pain and cloudy or bloody urine will typically resolve within six days of starting treatment. Treatment may take longer if you have recurrent UTIs or have severe urinary tract symptoms [33].

2.9.2 Pyelonephritis Treatment

Around 90% of acute kidney infections can be treated with oral antibiotics. The most commonly prescribed ones include:

- Fluoroquinolones (such as ciprofloxacin and levofloxacin).
- Cephalosporin's.
- Penicillin.
- Amoxicillin.
- Augmenting (amoxicillin-clavulanate potassium) [34].

People with milder infections may only require treatment for five to seven days. By contrast, pregnant women may require a seven- to 14-day course, while immune-compromised people may require up to 21 days of treatment. Severe cases may require a combination of intravenous and oral antibiotics [35].

2.9.3 Treatment for Recurrent UTI

Recommended treatments for recurrent UTIs include maximizing personal hygiene factors, avoiding spermicides, wiping correctly, using vaginal estrogens if appropriate, etc. The effectiveness of lifestyle changes in personal hygiene in reducing recurrent UTIs has not been conclusively demonstrated [36].

The use of probiotics is also unclear as clinical trials to date have been disappointing [37]. The use of cranberry products is somewhat controversial, but so far, a benefit has not yet been definitively established [38].

2.10 Complications

UTI complications often occur as a result of an untreated or undertreated infection. The risk is also high in people with underlying kidney disorders, diabetes, or diseases affecting the immune system (such as HIV). Complications of a urinarytract infection include [39].

- Recurrent UTIs occurring most commonly in women.
- Bladder dysfunction and/or overactive bladder from damage or scarring to the bladder from recurrent infections.
- Urethral narrowing (stricture) in men with recurrent infections [40].
- Increased risk of preterm birth and low birth weight in pregnancy.
- Permanent kidney damage.
- Sepsis (a potentially life-threatening, whole-body inflammatory response caused by severe infection) [41].

2.11 Prevention

Prevention is key to avoiding the persistent and sometimes severe complications of infection. While safer sex and good genital hygiene are central to preventing a UTI, there are other practices that may help if you are prone to recurrent infection [42].

Drinks lots of water: By regularly flushing the urinary tract, bacteria will have a harder time establishing an infection. Aim to drink several glasses of water per day.

Drink cranberry juice: Although studies are not conclusive that cranberry juice prevents UTIs, it is likely not harmful [43].

Change your birth control method: Diaphragms, or unlubricated or spermicide-treated condoms, can all contribute to bacterial growth

Urinate immediately after sex: Doing so helps flush bacteria and other microbes out of the urinary tract [44].

Don't hold your urine: This allows any bacteria circulating in the bladder to establish an infection. Go to the bathroom as soon as you feel the need and be sure to empty your bladder completely.

Avoid using products such as: douches ,scented pads or tampons scented powders deodorant sprays [45].

Increase vitamin C intake: Some evidence shows that increasing your intake of vitamin C could protect against urinary tract infections .Increasing vitamin C intake may decrease the risk of UTIs by making the urine more acidic, thus killing off infection-causing bacteria [46].

2.12 Studies

A study on Assessment of Nursing Students' Knowledge toward Preventive Measures of Urinary Tract Infections was done at University of Mosul, Iraq, Which was conducted among (120) students enrolled in the nursing college at Mosul university at May, 2019. The results of the study showed that (40.8%) of respondents were belonged to the age group(20-22) years old, more than half of them (55%) were females, and the majority of them (86.7%) were single .The study concluded that the general level of the knowledge among the participants was overall (52.5%) of the (120) participants had moderate level of knowledge, while (36.7%) of them had poor knowledge regarding preventive measures of urinary tract infection [47].

Another study was conducted at college of nursing/ University of Telafer to aassessment of the nursing students` knowledge about urinary tract infection.The study sample consists of (50) students (15) male and (35) female, the results showed that the majority of students (74%) were between the ages of (19-23 years), and the majority of them (70 %) were female. The study also found that most of students' knowledge varied between good and middle about the UTI [48].

A study about knowledge and self-reported practices regarding prevention of urinary tract infection among adolescents girls in College of Mangaluru , Yenepoya University, India at 11, 2020. Data collected from (100) subjects were analyzed by descriptive and inferential statistics using SPSS version 22, and among the selected subjects (44%) of subjects have good knowledge regarding prevention of UTI and (58%) of the subjects had a favorable practice regarding prevention of urinary tract infection.

This study indicates that majority subjects have a good knowledge and less number of subjects have a poor knowledge regarding prevention of urinary tract infection and also majority of the subjects have a favorable practice and no one has unfavorable practice regarding prevention of UTI [49].

Study in Bangladesh, was conducted to determine the knowledge and awareness about UTI among the university students, the result was showed that the respondents there were (61.04%) female, the average limit for age was found to be 21 years. The result showed that (76.92%) of respondents correctly identified bacteria as the principle pathogens forming UTIs and (80.15%) suggested antibacterial drugs for the treatment of UTIs. (60.04%) showed poor knowledge on the further consequences of untreated UTI in the long run and (51.86%) don't know the adverse effect of urinary retention. This study showed that cumulatively (77.79%) respondents had positive attitude towards the measures against UTI. Among the subjects (71.46%) are against holding urine, (93.80%) thinks drinking plenty of water is good for health, (94.79%) wanted to contact the doctor when get ill [50].

Chapter three
Methodology

3.1 Design of the study

A descriptive cross-sectional study design was carried out in College of Nursing at Basrah university involving (150) students (male and female). Started from December 1st 2021 up to 30 March 2022, in order to study the knowledge of the students about urinary tract infections.

3.2 Setting of the study

The present study was conducted at College of Nursing – Basrah university, involving second, third and fourth stages for morning and evening study.

3.3 The sample of the study

A convenient sample which consisted of (150) students.

3.4 Study's instrument

A Closed-end questions questionnaire was used for the purpose of data collection. The questionnaire contains six parts, the first part consists of 4 items related to Socio-demographic characteristics of the students and include: age, gender, stages and residency. The second part of the questionnaire consists of 9 questions that are concerned with signs and symptoms of UTI. Third part consist of 14 questions related to causes of UTI and fourth part consist of 6 questions related to prevention of UTI. Fifth part consist of 5 questions related to diagnosis of UTI. Sixth part consist of 6 questions related to treatment of UTI. Standardized 3- points Likert scale including : YES, NO or I don't know was used for the purpose of the study. The already performed questionnaire forma was distributed to (150) students were they read the forma and answer them, the forma then collected by the researchers, each forma was scored according to the right typical answer.

3.5 Statistical analysis

Analysis was made by using SPSS (Statistical package for Social Sciences)26.

3.6 Descriptive

1- Percentage (%)

2- frequency

3- Mean of scores

Chapter four

Results

4.1 Results

Table (1) : The demographic features of the students

Age	Frequency	Percentage
18—20	48	32%
21—23	56	37.4%
24 and above	46	30.6%
Gender		
Male	67	44.6%
Females	83	55.4%
Stage		
Stage2	40	26.6%
Stage3	45	30%
Stage4	65	43.4%
Residency		
Urban	85	56.6%
Rural	65	43.4%

The table showed the demographic features of the sample. The table showed that (32%) of the sample were in the age interval from 18- 20 years, (37.4 %) were from 21-23 years and (30.6 %) were 24 years and above.(44.6%) were males and (55.4%) were females. Regarding the stages, (26.6%) were in the second stage, (30%) were in the third stage , and (43.4%) were in the fourth stage. (56.6%) were living in urban areas and (43.4%) in rural areas.

Table (2) : The student's knowledge about clinical features of UTI

Items	Does UTI cause the following symptoms and signs	YES		No		I don't know		*Ms
		*F	*%	F	%	F	%	
1	High temperature	100	67	29	19	21	14	2.53
2	Difficulty and burning during urination	145	97	4	3	1	1	2.96
3	Nausea and vomiting	45	30	75	50	30	20	2.1
4	The presence of blood and pus in the urine	129	86	13	9	8	5	2.8
5	Pain in the flank	138	92	7	5	5	3	2.9
6	Symptoms of urinary tract infection are often absent, for example in the elderly	35	23	69	46	46	13	1.9

*F :Frequency

*% :percentage

*Ms : Mean of score

The table showed the knowledge of the student about the clinical features of UTI, (67%) considered the high fever as one of the clinical features of UTI. While (97%) considered difficulty and burning during urination as a clinical feature. (86%) considered the presence of blood and pus in the urine as a clinical feature. Also (92%) considered pain in the flank as a clinical feature. The table also showed that the answers of respondents regarding the knowledge about clinical features were significant, we found that the value of Mean of Score were more than 2 .

Table (3): Student's knowledge about the causes of UTI

Items	Which of the following causes a urinary tract infection?	Yes		No		I don't know		Ms
		F	%	F	%	F	%	
1	Eat plenty of table salt	120	80	9	6	21	14	2.6
2	Bad diet	125	83	11	7	14	9	2.7
3	The presence of stones in the kidneys and urinary tract	143	95	4	3	3	2	2.9
4	Diabetes	85	57	37	25	28	19	2.3
5	Fatigue and stress	65	43	60	40	25	17	2.2
6	sexual intercourse	65	43	29	19	56	37	2.06
7	Some forms of contraception	103	69	21	14	26	17	2.5
8	Pregnancy	88	59	29	19	33	22	2.3
9	hormonal changes	93	62	25	17	32	21	2.4
10	Urinary catheterization procedure	101	67	17	11	32	21	2.4
11	Women are more susceptible to infection than men	111	74	16	11	23	15	2.6

The table showed the knowledge of the student about the causes of UTI. The highest level of knowledge regarding the cause include the following questions ,Eat plenty of table salt (80%) , the presence of stones in the kidneys and urinary tract (95%) , Diabetes (57%) ,contraception (69%), pregnancy (59%), hormonal changes (62%), urinary catheterization (67%) , Women are more susceptible to infection than men (74%). Rest had low percent of consideration by the respondent. The table also showed that the

answers of respondents regarding the knowledge about causes were significant , we found that the value of Mean of Score were more than 2 .

Table (4) students' Knowledge about ways to prevent UTI

Items	One of the ways to prevent urinary tract infection is	Yes		No		I don't know		Ms
		F	%	F	%	F	%	
1	Drink plenty of fluids, especially water	141	94	6	4	3	2	2.9
2	Drink cranberry juice	37	25	26	17	87	58	1.6
3	Empty the bladder when needed without delay	135	90	6	4	9	6	2.8
4	Avoid feminine products such as vaginal douches and powders in the genital area	94	63	19	13	37	25	2.3

The table showed the items regarding the knowledge about preventions of UTI . (94%) were agree with the benefit of drinking plenty of water as way contributed the prevention .(90%) agree with role of emptying the bladder without delay as preventive measure . (63%) agree with that avoidance feminine products as important in prevention of UTI in females. The rest had low percent of consideration by the respondent. the table also showed that the answers of respondents regarding the knowledge about prevention were significant , we found that the value of Mean of Score were more than 2 .

Table (5) Knowledge of the student about the methods of diagnosing

Items	One of the ways to diagnosing urinary tract infection is	Yes		No		I don't know		Ms
		F	%	F	%	F	%	
1	urine analysis	149	99	1	1	0	0	2.9
2	Urine culture and sensitivity	71	47	35	23	44	29	2.1
3	Ultrasound	95	63	34	32	21	14	2.5
4	Clinical signs and symptoms	119	79	13	9	18	12	2.6

The table showed the responses of the students regarding the knowledge about method of diagnosis. (99%) of the respondents were consider urine analysis in the diagnosis. (79%) were consider the clinical signs and symptoms as way in the diagnosis. (63%) consider the sonography as way in the diagnosis . (47%) consider the urine culture and sensitivity as way for diagnosis. The table also showed that the answers of respondents regarding the knowledge about method of diagnosis were significant , we found that the value of Mean of Score were more than 2 .

Table (6) Knowledge of the student about the methods of treatment of UTI

Items	One of the ways to treat urinary tract infection is	Yes		No		I don't know		Ms
		F	%	F	%	F	%	
1	Drink enough fluid	139	93	5	3	6	4	2.8
2	Avoid foods that contain salt and avoid spices	130	87	13	9	7	5	2.8
3	Use of antibiotics and pain relievers	107	71	17	11	26	17	2.5
4	Sometimes the disease needs to be hospitalized to receive treatment in complicated cases	116	77	13	9	21	14	2.6

The table showed the respondent knowledge regarding the line of treatment of UTI. (93%) of the respondent believe that drinking plenty of water is an important role in the treatment. (87%) of the respondents consider the avoidance of salty and spicy diet as important part of the treatment. (71%) were agree with use of antibiotics and pain relievers .(77%) think that the patients need to be hospitalized. The rest had low percent of consideration by the respondent. the table also showed that the answers of respondents regarding the knowledge about treatment were significant , we found that the value of Mean of Score were more than 2 .

Chapter five

Discussion

5.1 Discussion

Urinary tract infection is an infection that affects any part of the urinary tract starting from the urethra up to the kidneys, it is a simple disease that is usually taken lightly, although it is the commonest kind of bacterial infection among all age groups. Urinary tract infections are also characterized by being recurrent, which causes lifelong discomfort and affects the quality of life.

Our study showed that the overall assessment of the knowledge is good which was similar to a study done in College of Nursing, University of Mosul, (*Assessment of Nursing Students' Knowledge toward Preventive Measures of Urinary Tract Infections in Mosul Teaching Hospitals*) were the study found that most of student's knowledge varied between good and middle about the UTI. (47)

Another study about knowledge and self-reported practices regarding prevention of urinary tract infection among adolescents girls in College of Mangaluru , Yenepoya University, India at 11, 2020 found that (44%) of subjects have good knowledge regarding prevention of UTI [49] which is differ from our study were the level of knowledge is higher.

Study is to determine the knowledge and awareness about UTI among the university students of Bangladesh, found that (77.79%) respondents had positive attitude towards the measures in prevention of UTI [50], which is also similar to our study.

Chapter six

Conclusion

6.1 Conclusion:

1. The majority of students were from the age group (21_23) year.
2. The proportion of students was more female than male.
3. Most of the students lived in urban areas.
4. Most of the student's information were good about the knowledge on urinary tract infection.

6.2 Recommendations :

1. Holding lectures and educational conferences at Basrah University on Urinary tract infection to increase the knowledge of nursing students.
2. For the importance of urinary tract infection, we recommend increasing health awareness among all people.

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Study on Nursing Students knowledge about Urinary Tract Infections at Basrah University

Age :

home adress:

Gender :

Stage :

Social status :

Source of information on UTI: Studying at the College of Nursing -

Other

The student's knowledge of the signs and symptoms of UTI			
Does UTI cause the following symptoms and signs	YES	No	I don't know
High temperature			
Difficulty and burning during urination			
Nausea and vomiting			
The presence of blood and pus in the urine			
Pain in the flank			
Symptoms of urinary tract infection are often absent, for example in the elderly			
The student's knowledge of the causes of urinary tract infection			
Which of the following causes a urinary tract infection?	YES	No	I don't know
Eat plenty of table salt			
Bad diet			
The presence of stones in the kidneys and urinary tract			
Diabetes			
Fatigue and stress			
sexual intercourse			
Some forms of contraception			
Pregnancy			
hormonal changes			
Urinary catheterization procedure			

Women are more susceptible to infection than men			
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Knowledge of the student about ways to prevent UTI			
One of the ways to prevent urinary tract infection is	YES	No	I don't know
Drink plenty of fluids, especially water			
Drink cranberry juice			
Empty the bladder when needed without delay			
Avoid feminine products such as vaginal douches and powders in the genital area			
Knowledge of the student about the methods of diagnosing UTI			
One of the ways to diagnosing urinary tract infection is	YES	No	I don't know
urine analysis			
Urine culture and sensitivity			
Ultrasound			
Clinical signs and symptoms			
Knowledge of the student about the methods of treatment of UTI			
One of the ways to treat urinary tract infection is	YES	No	I don't know
Drink enough fluid			
Avoid foods that contain salt and avoid spices			
Use of antibiotics and pain relievers			
Sometimes the disease needs to be hospitalized to receive treatment in complicated cases			

Abstract

Background: Urinary tract infection is a common bacterial infection known to affect different parts of the urinary tract. annually affecting 250 million people worldwide.

Objective: To assess the nursing student's knowledge about the causes, sign and symptoms, prevention, diagnosis and treatment of urinary tract infection.

Methodology: A cross-sectional study involving (150) participants from University of Basrah, College of Nursing, the study started from November 2021 till April 2022. A Closed-end questions questionnaire was used for the purpose of data collection. Analysis was made by using SPSS version 26, data was expressed in (frequency, percentage and mean of score).

Results: The range of age of the participants was 21- 23 years old. (97 %) considered difficulty and burning during urination as clinical feature.(67 %) considered the high fever and (86 %) considered the presence of blood and pus in the urine as clinical feature. The highest level of knowledge (95%) regarding the cause considered presence of stones in the kidneys and urinary tract as a cause. (99 %) of the respondents consider urine analysis in the diagnosis of urinary tract infection.

Conclusions: The proportion of students was more female than male. Most of the students lived in urban areas. Most of the student's information were good about the knowledge on urinary tract infection

University of Basrah

Collage of Nursing



***A Study on Nursing Students knowledge about Urinary
Tract Infections at Basrah University***

To

***The Council of the College of Nursing University of Basrah in
Partial Fulfillment of the Requirements for The Bachelors
Degree of Sciences in Nursing***

Submitted by

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الاسم	اللقب العلمي	الشهادة	التخصص	مكان العمل
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د. هشام حسين عبدالرؤف	استاذ	دكتوراة	الاشعة التشخيصية	كلية التمريض

دراسة عن معرفة طلاب كلية التمريض في البصرة حول التهاب المجاري البولية .

العمر: عنوان السكن :

الجنس:

المرحلة:الحاله الاجتماعية :

مصدر المعلومات عن مرض التهاب المجاري البولية : الدراسة في الكلية التمريض - اخرى

معرفة الطالب بعلامات واعراض مرض التهاب المجاري البولية

لا اعلم	لا	نعم	هل مرض التهاب المجاري البولية يسبب الأعراض و العلامات التالية
			ارتفاع درجة الحرارة
			صعوبة و حرقاة أثناء التبول
			الغثيان والقيء
			وجود الدم والقيح في الإدرار
			ألم في الخصرة
			تندعم أعراض مرض التهاب المجاري البولية في كثير من الأحيان مثلا عنده كبار السن

معرفة الطالب بأسباب التهاب المجاري البولية

لا اعلم	لا	نعم	أي من الأسباب الآتية تسبب التهاب المجاري البولية
			تناول ملح الطعام بكمية كبيرة
			النظام الغذائي السيئ
			وجود الحصى في الكلى والمجاري البولية
			مرض السكري
			التعب و الإجهاد
			الاتصال الجنسي

			بعض أشكال المنع الحمل
			الحمل
			التغيرات الهرمونية
			إجراء القسطرة بولية
			المرأة تكون أكثر عرضه للإصابة من الرجل

معرفة الطالب حول طرق الوقاية من التهاب المجاري البولية			
لا اعلم	لا	نعم	من طرق الوقاية من التهاب المجاري البولية هي
			شرب الكثير من السوائل وخاصة الماء
			شرب عصير التوت البري
			تفريغ المثانة عنده الحاجة دون تأخير
			تجنب المنتجات النسائية مثل الدش المهبلي ومساحيق في المنطقة الأعضاء التناسلية

معرفة الطالب حول طرق تشخيص مرض التهاب المجاري البولية			
لا اعلم	لا	نعم	من طرق تشخيص مرض التهاب المجاري البولية هي
			تحليل الإدرار
			زرع الإدرار
			السونار
			العلامات والإعراض السريرية
معرفة الطالب حول طرق علاج مرض التهاب المجاري البولية			
لا اعلم	لا	نعم	طرق علاج مرض التهاب المجاري البولية هي
			تناول كمية كافية من السوائل
			تجنب الأطعمة التي تحتوي على الأملاح و تجنب التوابل والبهارات
			استخدام المضادات الحيوية و الأدوية المسكنة للألام
			في بعض الأحيان يحتاج المريض الى دخول مستشفى لتلقي العلاج في الحالات المعقدة.

الخلاصة

الخلفية: عدوى المسالك البولية هي عدوى بكتيرية شائعة من المعروف أنها تصيب أجزاء مختلفة من المسالك البولية. يؤثر سنويًا على 250 مليون شخص في جميع أنحاء العالم.

الهدف: تقييم معرفة طالب التمريض حول الأسباب والعلامات والأعراض والوقاية والتشخيص والعلاج من عدوى المسالك البولية.

المنهجية: دراسة مقطعية شملت (150) مشاركًا من جامعة البصرة ، كلية التمريض ، بدأت الدراسة من تشرين الثاني 2021 حتى نيسان 2022. تم استخدام استبيان أسئلة مغلق لغرض جمع البيانات. تم إجراء التحليل باستخدام الإصدار 26 من SPSS ، وتم التعبير عن البيانات في (التكرار والنسبة المئوية ومتوسط الدرجة).

النتائج: تراوحت أعمار المشاركين بين 21 و 23 سنة. (97%) اعتبروا صعوبة وحرقان أثناء التبول سمة سريرية. (67%) اعتبروا ارتفاع درجة الحرارة و (86%) يعتبرون وجود الدم والقيح في البول سمة سريرية. أعلى مستوى من المعرفة (95%) فيما يتعلق بالسبب الذي يعتبر وجود حصوات في الكلى والمسالك البولية كسبب. (99%) من المبحوثين يأخذون في الاعتبار تحليل البول في تشخيص عدوى المسالك البولية.

الاستنتاجات: كانت نسبة الطالبات أكثر من الذكور. عاش معظم الطلاب في المناطق الحضرية. كانت معظم معلومات الطالب جيدة حول المعرفة المتعلقة بعدوى المسالك البولية



جامعة البصرة كلية التمريض

(دراسة عن معرفة طلاب كلية التمريض في البصرة حول التهابات المسالك البولية)

مقدم من

لمجلس كلية التمريض جامعة البصرة في استيفاء جزئي لمتطلبات درجة بكالوريوس العلوم في
التمريض

من قبل الطلاب

أنور كاظم غالب

حسين علي محمد

عمار داخل حاشوش

مشرف

دكتور فراس عبدالقادر جاسم