Assessment of Nursing Students' Knowledge toward Preventive Measures of Urinary Tract Infections in Mosul Teaching Hospitals

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Abstract

Background and Objectives: 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.

Materials and Method: A cross-sectional study was conducted among (120) students enrolled in the nursing college at Mosul university during the period of 25st January, 2019 to 25th of May, 2019. A self-administered structured questionnaire which consists of (16) items was obtain to assess the knowledge regarding preventive measures of UTI and other demographic details. The SPSS (version 18) was used for the data analysis. The demographic characteristics of the study samples were reported by using descriptive statistics (frequencies, percentages, and mean). The mean of scores were compared by one-way ANOVA were done to find the association between variables.

Results: The results of the present study showed that (40.8%) of respondents were belonged tothe age group (20-22) years old, more than half of them (55%) were females, and the majority of them (86.7%) were single.

Conclusions: 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.

Recommendations: Based on the results of the study, the researchers recommended the necessary to preparation of educational programs for students of the university of Mosul to develop their knowledge and knowledge about the seriousness of UTI diseases, as well as the establishment of units for counseling and health guidance.

Keywords: *Knowledge, preventive measures,urinary tract infection, nursingcollege students.*

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Introduction

Urinary tract infections (UTIs) are characterized by colonization, invasion and multiplication of microorganisms in the urinary system[1][2]. UTI is an infection of the urinary system that may involve the lower urinary tract or both the lower and upper urinary tract[3]. UTIs are considered as the most frequent

bacterial infections worldwide[4][5].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[6-8]. 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[9-10].Manifestations of (UTI) account for more than 7 million heath 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[11-13]. In this study, we aimed to 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.

Methodology

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 Mosul University at the College of Nursing. Aaccedental sample of (120) students (males and females) from the nursing college students, were included in the study. To assess students' knowledge the researchers construct questionnaire format which consisted of (16) questions: The researchers interviewed all students, and each student was given a time period between (10- 15) minutes to answer the questions. In order to a chive 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 to the students' demographical characteristics sheet which include (age, gender, marital status). While Part Two is a questionnaire concerned with data to assess the their knowledge which was consists of list of (16) items. Each item has three option yes, no, and uncertain. The researchers were used three points to measure each items of the knowledge sheet. (3) for the right answer (yes), (2) for uncertain answer, and (1) for the wrong answer (no). The general level of students' knowledge were divided into three levels according to the mean of score; poor level of knowledge were (less than 2), moderate level of knowledge ranges from (2 - 2.5), and good level of knowledge ranges from (more than 2.5 - 3). The SPSS (version 18) was used for the data analysis. The demographic characteristics of the study samples were reported by using descriptive statistics (frequencies, percentages, and mean). The mean of scores were compared by one sample independent t-test, and one-way ANOVA. The content validity of the knowledge test tool was established in consultation with a panel of (10) experts in different specializations. All of them agreed that the questionnaires were clear, relevant, and adequate. Minor changes were employed based on their recommendations and suggestions. Data were collected through direct interviews of the samples, by using a constructed questionnaire to the period from 25st January, 2019 to 25th of May, 2019.

Results

According to table (1), out of (120) participants (40.8%) of respondents their age were range from (20-22) years old. In relation to gender, more than half of them (55%) were females. Regarding to the marital status that (86.7%) of the samples were single. Table (2) presented that the overall (52.5%) of the (120) participants had moderate knowledge, while (10.8%) of them had poor knowledge regarding preventive measures of UTIs. Table (4) indicated that there are no significant differences between students' knowledge in regard to their age and marital status respectively.

Table (1): Distribution of the studied students' level of Knowledge regarding preventive measures of UTIs.

Level of knowledge	Mean of score	Frequency	Percentage
Poor	>2	44	36.70%
Moderate	2 - 2.5	63	52.50%
Good	More than 2.5 – 3	13	10.80%

Table (2): Distribution of the samples according to their knowledge regarding preventive measures of UTIs.

No.	Preventive measures items	Mean of Score	(SD)
1	Bathing in the swimming pool increase UTI.	1.97	0.90249
2	Bathing by shower reduce the incidence of UTI.	1.98	0.90733
3	Cleaning the perineum from front to back after defecation reduce UTI.	2.58	0.78412
4	Use deodorant as a preventive measure to prevent UTI.	1.95	0.8638
5	Urination 4-5 times reduces UTI.	2.38	0.87143
6	Drinking liquids other than water decreases UTI.	1.9	0.83006
7	Use berry juice as a preventive measure to lessen the injury of UTI.	1.65	0.87591
8	Vitamin C reduce the risk of UTI.	1.98	0.90733
9	Avoid tight underwear lessens injury of UTI.	2.35	0.87731
10	Cotton underwear diminishes UTI.	2.36	0.85929
11	Emptying the bladder completely by repeating urination.	2.52	0.72137
12	Urinate immediately when felling bladder full.	2.45	0.75426
13	Pee before going to bed.	2.35	0.82656
14	Reduce the intake of hot, spicy foods.	1.88	0.63753
15	Emptying the bladder completely by repeating standing upright in the bathroom.	1.7	0.72876
16	Drinking enough water regularly daily reduce the incidence of infection.	2.51	0.67343

Table (3): Association between student' knowledge with selected demographic variable.

Variable	Sum of Square	DF	Mean Square	F cal.	F tab.	Sig.
Age						
Between Group	0.256	2	0.128			
Within Group	8.679	117	0.074	1.723	3.07	0.183
Total	**8.935**	**119**				
Marital Status						
Between Group	0.051	2	0.025			
Within Group	8.884	117	0.076	0.333	3.07	0.718
Total	**8.935**	**119**				

Table (4): Differences in students' Knowledge regarding gender.

Gender	No.	Mean	SD	T cal.	T tab.	Sig.
Male	54	2.1551	0.27891	-0.211	1.98	0.907
Female	66	2.1657	0.27199	-0.21		

DF = (118), α = (0.05)

Discussion

There is no doubt the urinary tract infection it is consider the common problem which are affected in male and female[14,15]. We as a health care provider we must be educated the community to how deal with that disorder to preventing complication. In general, about 50% of clinical training should take place in the nursing school curriculum.[16] 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.[17] According to study findings the participants distributed depending on demographic characteristics of respondents their age, In relation to samples gender and regarding to the marital status. All these variables putting to election to know what are the factors which are influencing into their knowledge. In table (1) we divided the level of knowledge in three categories good,moderate and poor, the,majority of participants had moderate knowledge toward preventive urinary tract infection because a good relationship for sample with their friends. Peer support and good relationships with peers are considered as factors contributing to a positive learning attitude [18,19].

The students in the present study were also willing to learn, which will support academic self-efficacy in their learning environment. Since healthcare professions are based on both theoretical knowledge and practice, candidates of healthcare professionals have to receive education in the clinical environment integrated with theoretical courses. It is important for students to actively participate in healthcare services.When we discuss the table (2) the analyses revile in details the method of preventive urinary infection, however the researcher show the variations between it, some of them was poor and another was moderate The studies demonstrated that time management training programs generally increased students time management skills and the copying time pressure [20]. The curriculum for the undergraduate nursing students education is appropriate to the age, social, culture and environment of students [21]. In table (3 and 4) the researchers thought the marital status and gender of sample play the important role to enhancing the background of the precaution and preventive of infection,There are several important areas of UTImanagement that are beyond the scope of our study . The management of UTI in pregnancy is not covered here in great detail, asthis is an area that is typically managed during prenatal care. Other areas beyond the scope of this document include long-term prophylaxisof UTI as well as acute or chronic prostatitis and UTI in pediatric patientsmany article demonstrate the a highly percentage of urinary infection was in female while there is no significant between male and female knowledge [22]. This study was concluded that (40.8%) of respondents their age was between (20 - 22) years old, most of them (66%) were females, and (86.7%) of the samples were single. More than half (52.5%) of the (120) participants had moderate knowledge, while (36.7%) of them had poor knowledge regarding preventive measures of UTI.There are no significant differences between students' knowledge regarding their age and marital statusrespectively. Thereis no significant differences in students' knowledge scores in regard to gender. Based on the results of the study, the researchers recommended the necessary to preparation of educational programs for students of the university of Mosul to develop their knowledge about the seriousness of UTI diseases, as well as the establishment of units for counseling and health guidance.

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