ORIGINAL ARTICLE

CONTENTS

Educational program to asses and promote knowledge of Al-Zahraa hospital nurses about trichomoniasis disease, Al-Najaf city

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ABSTRACT

Aim: This study included implementing an educational program to evaluate and promote nurses' knowledge of trichomoniasis disease which caused by *Trichomonas vaginalis* parasite**.**

Materials and Methods: 100 randomly samples of nurses working in different units in Al-Zahraa Hospital – Najaf City, Iraq. This semi-experimental study was performed. The study was conducted from December 2023 until April 2024. It included a sample of different ages, gender and experience, working in different units in the hospital, married and unmarried, as well as those living in urban and rural areas.

Results: The results show the total rating of sample knowledge concerning Trichomoniasis in primary test was a moderate with a mean (0.57) and the mean of next test was a good (0.84), also the results observed a highly significant difference ($P < 0.01$) between pre-test and post-test assessments. In addition, according to their Socio-Demographic Characteristics, the study showed no significant difference in the knowledge scores in the next test.

Conclusion: This study concluded that there was an improvement in knowledge after the program for all nurses.

KEY WORDS: educational program, experimental study, trichomoniasis, nurses, knowledge, promote , assess, sexual transmitted disease

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INTRODUCTION

Bacteria, viruses, fungi, protozoan parasites cause "Sexually transmitted diseases". The portals of entry for these pathogens involved the reproductive organs, skin, mouth, urinary tract, anus, and rectal region [1]. Normally, trichomoniasis is correlated to Sexually transmitted disease, in addition, it is a common indicator of high-risk of behavior for sex [2, 3]. *Trichomonas vaginalis* has been increasingly recognized over the past decade, underlining the importance of this pathogen as a public health problem [4, 5]. Men and women of different ages are prone to infection with trichomoniasis, the disease connected with the hygienic practice, the use of rubber sheath worn (condom), and a sex hormone concentration in women. It is a clearly related to sterility, abortion and the low-weight of birth. As the disease is sexually transmitted, thus several partners are a main risk factor of infectious and its disseminate [6]. Metronidazole and tinidazole are the only drugs approved for treating trichomoniasis among infected subjects [7]. The overall public should be more knowledgeable about diseases that affect sexual and reproductive health in women so, they can take preventing and protective measures such as the use of acting contraceptives, avoiding the misuse of antibiotics, using condoms and improved healthier habits. In the cases of sexually transmitted infections, checking and treating both partners is also necessary [3]. Sexually transmitted infections have numerous consequences and understanding disease processes by nurses make them responsible for providing "health education" to all people, irrespective their gender, age or sexual tendency on how to avoid sexually transmitted infections. Nurses have a crucial role in the protection from sexually transmitted disease through providing exact information regarding these diseases, their barring, treatment and prospective complications, sobering researches revealed to compel nurses to be part of the resolution [1].

AIM

The aim of our study was to assess nurses' knowledge of the parasite, which is a sexually transmitted disease of public health relevance, and its long-term impact.

Table 1. Frequency of demographic and occupational characteristics for study contributors (n=100)

Socio-Demographic Characteristics	Rating and Intervals	frequency	%
Age	21-29	56	56
	30-28	26	26
	39-47	14	14
	48-56	3	3
	57-66	1	1
Gender	Males	32	32
	Females	68	68
Residence	Urban	75	75
	Rural	25	25
Occupational Title	Technical nurse	37	37
	Nurse	63	63
Years of Experience	1-12	71	71
	13-24	22	22
	25-36	7	7
Marital status	Single	36	36
	Married	64	64
Working Unit	Emergency Department	30	30
	Critical Care Unit	11	11
	Operating Room	20	20
	Others	39	39
Qualification	Technical Nursing	24	24
	Institute	18	18
	Diploma Nursing School	16	16
	Bachelor Nursing	38	38
	Master Degree	4	4
Total		100	100%

MATERIALS AND METHODS

The semi-experimental study was conducted on 100 random samples of nurses working in different units in Al-Zahraa Hospital – Najaf City, after obtaining their agreement to answer the Socio-demographic item and training. The researchers get an acceptance from maternity and newborn department in the Nursing College, Kufa University, Health Directorate of Al-Najaf province, Al-Zahraa teaching hospital. The study began from December 2023 until April 2024. The study included implementing an educational program to evaluate and promote nurses' knowledge ofthe trichomoniasis disease which causes by *Trichomonas vaginalis* parasite. The nurses were divided into small groups. They were met in a private hall. A pre-test was conducted, followed by a workshopwas to provide them with information. Then a brochure was distributed that included everything related to the Trichomonas Vaginalis parasite, and after a specified and agreed-upon period, the post-test was conducted. The test included questions about the pathogenic cause of trichomoniasis, its method of transmission, its symptoms and effect on men and women, complications, risk factors, treatment and prevention.

THE STUDY INCLUDED FOUR PARTS

Part 1: Socio- demographic information about the nurses (age, gender, residence, occupational title, years of experience, marital status, working unit, and qualification). This information was collected at the beginning of the study by interviewing them.

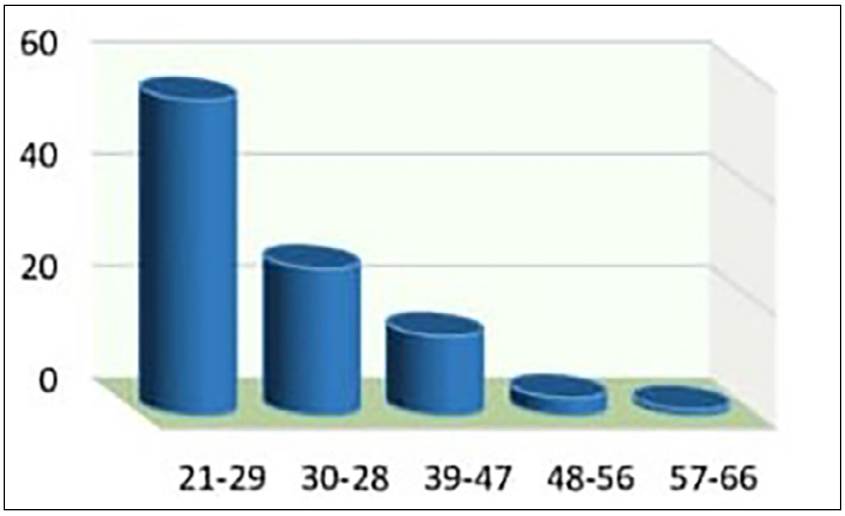

Fig. 1. Distribution of respondents by age groups (years) (n=100).

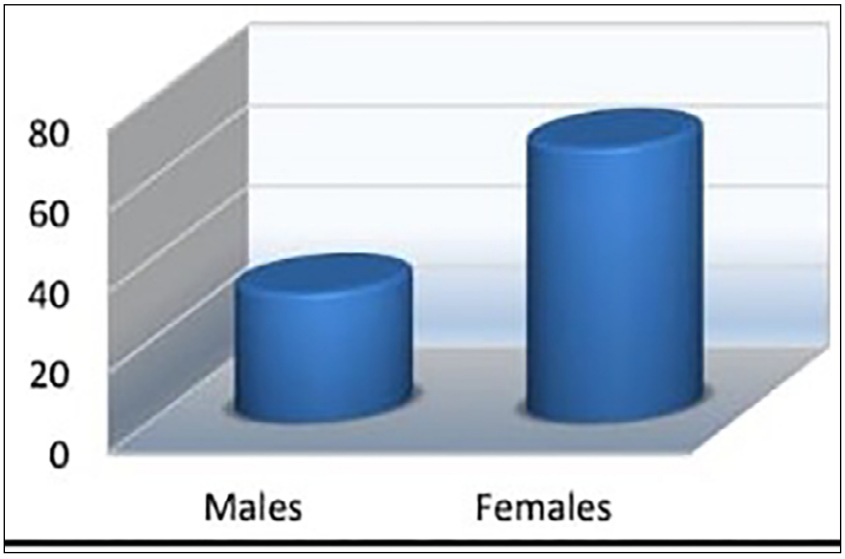

Fig. 2. Distribution of respondents by their gender (n=100).

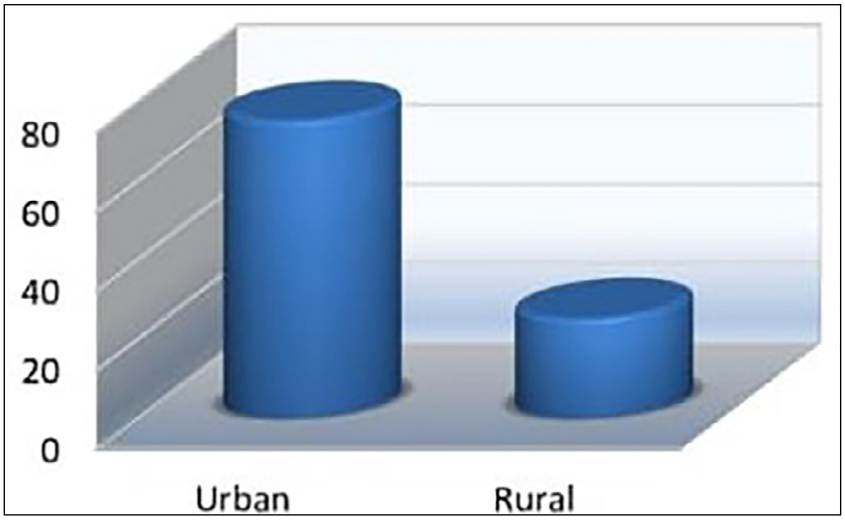

Fig. 3. Distribution of respondents according to their residence (n=100).

Part 2: Included questions to test them and evaluate their knowledge of the disease before implementing the program

Part 3: Training: It included conducting a workshop and distributing the brochure, which aims to enhance their knowledge

Part 4: It included re-taking the test to evaluate the extent of the acquired knowledge, the role of theeducational program in that, and achieving the specific goal of the study. The test includes 30 questions that contain general questions about Trichomonas Vaginalis; the first

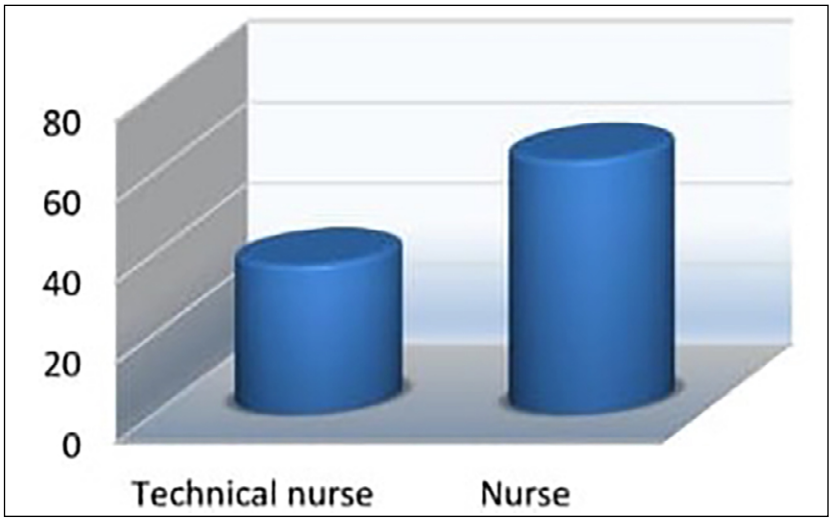

Fig. 4. Distribution of respondents according to their occupation (n=100).

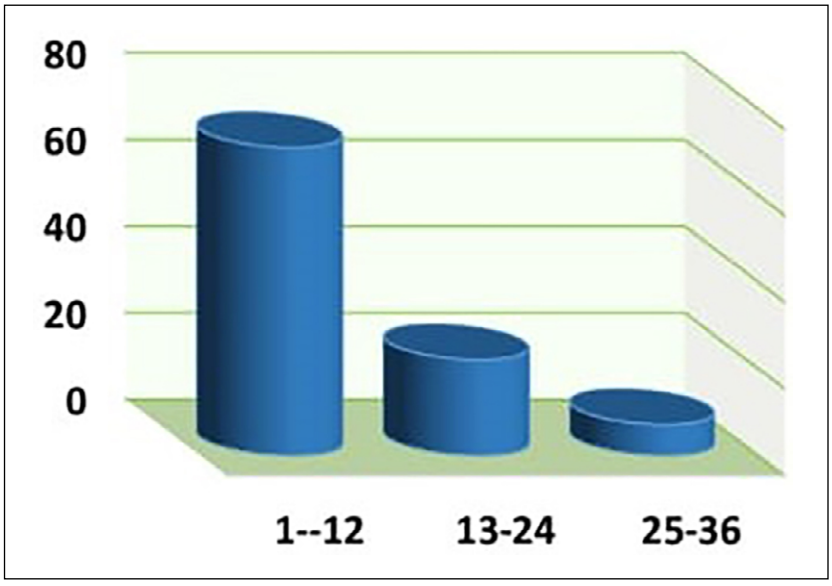

Fig. 5. Distribution of respondents according to their experience (n=100).

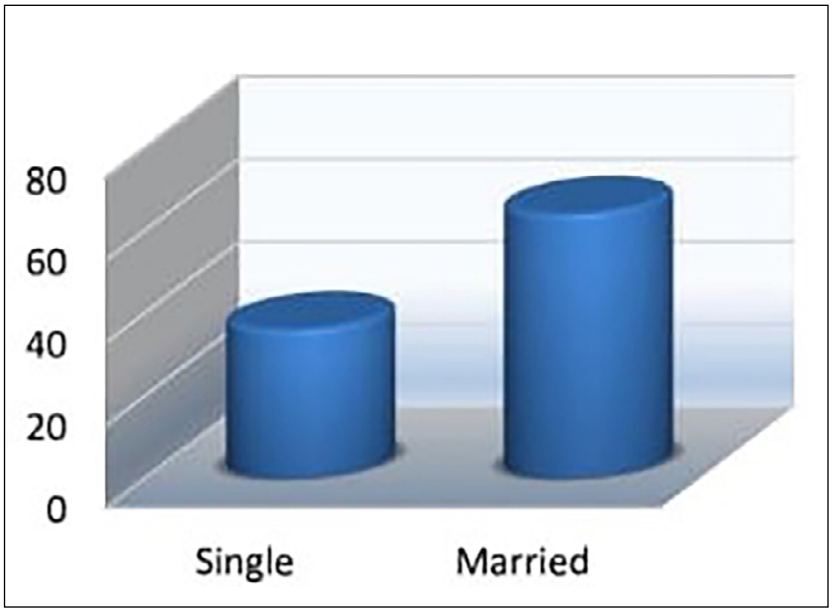

Fig. 6. Distribution of respondents according to their marriage (n=100).

15 questions are short questions, for each there are four answers, including one correct answer. But the other 15 questions,the answer is true or false depending on the type of question. Validity of the study instrument is conducted through a panel of experts who have years of experience in nursing field.

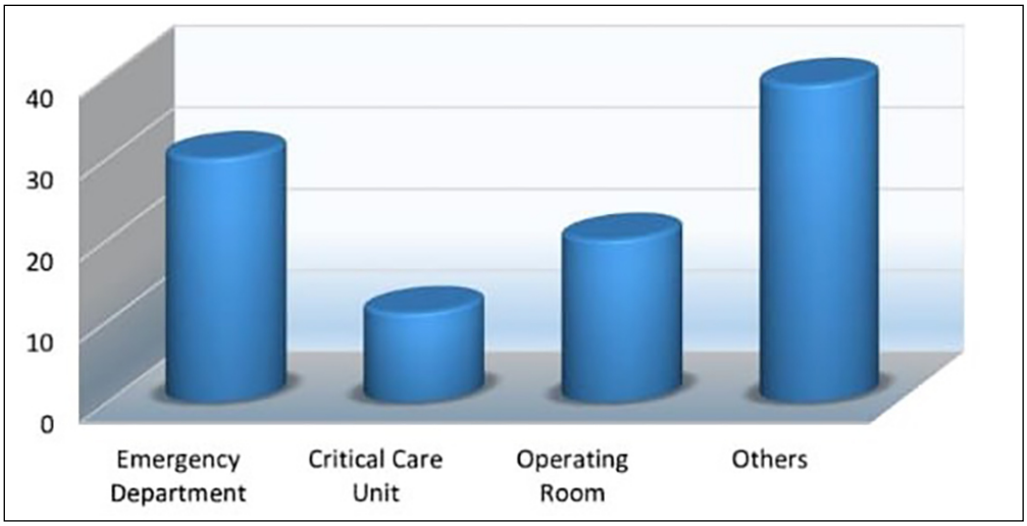

Fig. 7. Distribution of respondents according to their working unit (n=100).

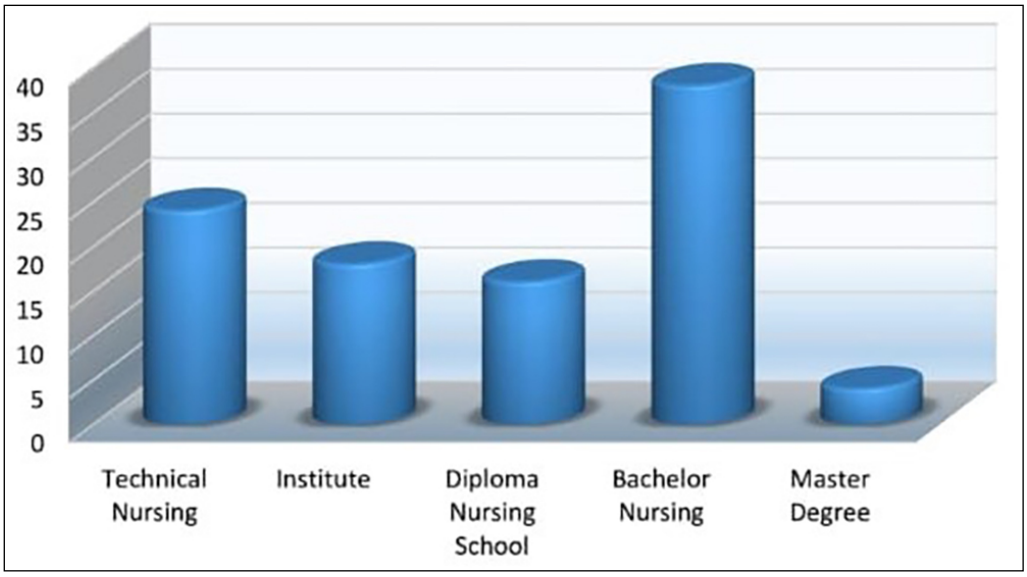

Fig. 8. Distribution of respondents according to their qualification (n=100).

STATISTICAL ANALYSIS

All the data in the current study were entered into the SPSS program (version 20). The minimum values, the maximum values, the means, and the standard deviation were calculated. Chi-square (non-parametric test) was used for qualitative data. One-way ANOVA, independent t test, and Paired t test, were used for quantitative data according to the fulfillment of the conditions required for each test. P-value ≤0.05 was considered statistically significant.

RESULTS

Overall of 100 samples of nurses were included. Systematically the study was an offered the results of the data analysis in tables and these were correlated with the aim of the study which was to evaluate the effectiveness of education program to enhancing nurses' knowledge about trichomoniasis as follows: Table 1: Summarize the frequency distribution of the nurse contributors by their demographic data and Occupational Characteristics.

This table explained that most of the contributors (56 %) were in the ages group 21-29 years old, while the fewest contributors in the ages 57-66 years old where 1%, (Fig.1). As well as, the table shows that the majority of contributors (68%) were female, and major part (75%) resided in urban areas, while the smallest percentages (32% and 25%) were males and residents of rural areas, respectively (Fig.2 and Fig.3). On the other hand, regarding occupational titles, 63% of the participants were nurses, and 37% were technical nurses (Fig.4).

The results regarding length of service in nursing show that the largest proportion (71%) of the sample had between 1 and 12 years of service (Fig.5). For marital status – 64% of the groups were married (Fig.6). Also, the majority worked in the emergency department and working in others units, 30% and 39% respectively, in addition, concerning qualification, those with bachelor's nursing was (38%) where represented more than others groups (Fig.7 and Fig.8).

Table 2. Assessment of the sample's knowledge regarding Trichomoniasis in the primary and next test

Items		Knowledge Regarding Trichomoniasis for the Study sample (n=100)							
		Pre-Test				Post-Test			
		F.	%	MS	SD	F.	%	MS	SD
Q1: Sexually transmitted diseases mean	Incorrect	32	32	.68	.47	11	11	.89	.31
	Correct	68	68			89	89		
Q2: Types of STDs are:	Incorrect	38	38	.62	.49	20	20	.80	.40
	Correct	62	62			80	80		
Q3: What is the causative agent of trichomoniasis?	Incorrect	51	51	.49	.50	23	23	.77	.42
	Correct	49	49			77	77		
Q4: What is the name of the parasite that causes trichomoniasis	Incorrect	40	40	.60	.49	7	7	.93	.26
	Correct	60	60			93	93		
Q5: What is the mode of transmission for trichomoniasis	Incorrect	37	37	.63	.49	4	4	.96	.20
	Correct	63	63			96	96		
Q6: Which statement about Trichomoniasis is TRUE?	Incorrect	51	51	.49	.50	15	15	.85	.36
	Correct	49	49			85	85		
Q7: What are the common symptoms of trichomoniasis in women?	Incorrect	47	47	.53	.50	16	16	.84	.37
	Correct	53	53			84	84		
Q8: Most men with this infection have which of the followingsymptoms	Incorrect	57	57	.43	.50	14	14	.86	.35
	Correct	43	43			86	86		
Q9: How long can someone be infected with trichomoniasis without showing symptoms?	Incorrect	67	67	.33	.47	39	39	.61	.49
	Correct	33	33			61	61		
Q10: Urine and vaginal test used to diagnose	Incorrect	40	40	.60	.49	17	17	.83	.38
	Correct	60	60			83	83		
Q11: Complication of trichomoniasis	Incorrect	47	47	.53	.50	9	9	.91	.29
	Correct	53	53			91	91		
Q12: Risk factor of trichomoniasis	Incorrect	49	49	.51	.50	16	16	.84	.37
	Correct	51	51			84	84		
Q13: How is trichomoniasis treated?	Incorrect	56	56	.44	.50	21	21	.79	.41
	Correct	44	44			79	79		
Q14: Treatment for *Trichomonas Vaginalis* includes:	Incorrect	73	73	.27	.45	42	42	.58	.50
	Correct	27	27			58	58		
Q15: You should abstain completely from while you take metronidazole and at least for 3 days after finishing thetreatment course	Incorrect	46	46	.54	.50	8	8	.92	.27
	Correct	54	54			92	92		
Q16: Most STDs affect both men and women, but in many casesthe health problems they cause can be more severe for women	Incorrect	41	41	.59	.49	12	12	.88	.33
	Correct	59	59			88	88		
Q17: Syphilis is one type of sexually transmitted disease	Incorrect	45	45	.55	.50	11	11	.89	.31
	Correct	55	55			89	89		
Q18: Can trichomoniasis be prevented?	Incorrect	65	65	.35	.48	24	24	.76	.43
	Correct	35	35			76	76		
Q19: Does trichomoniasis increase the risk of other STIs?	Incorrect	26	26	.74	.44	9	9	.91	.29
	Correct	74	74			91	91		

Table 2. Cont.

Q20: Can trichomoniasis cause complications during pregnancy?	Incorrect	24	24	.76	.43	3	3	.97	.17
	Correct	76	76			97	97		
Q21: Can trichomoniasis be cured?	Incorrect	31	31	.69	.46	10	10	.90	.30
	Correct	69	69			90	90		
Q22: Metronidazole cannot cause certain side effects	Incorrect	61	61	.39	.49	26	26	.74	.44
	Correct	39	39			74	74		
Q23: Trichomoniasis may also cause a woman to deliver a premature	Incorrect	25	25	.75	.44	10	10	.90	.30
	Correct	75	75			90	90		
Q24: There is a vaccine for trichomoniasis	Incorrect	53	53	.47	.50	26	26	.74	.44
	Correct	47	47			74	74		
Q25: Trichomoniasis can cause infertility for men and women	Incorrect	35	35	.65	.48	12	12	.88	.33
	Correct	65	65			88	88		
Q26: Trichomoniasis can infect the bladder	Incorrect	52	52	.48	.50	25	25	.75	.44
	Correct	48	48			75	75		
Q27: Trichomoniasis can diagnose by culture analysis	Incorrect	26	26	.74	.44	9	9	.91	.29
	Correct	74	74			91	91		
Q28: Men suffer from pain during urination	Incorrect	22	22	.78	.42	9	9	.91	.29
	Correct	78	78			91	91		
Q29: The life cycle of trichomoniasis has trophozoite and thecyst	Incorrect	36	36	.64	.48	20	20	.80	.40
	Correct	64	64			80	80		
Q30: Heart palpitations, Nausea and vomiting, Chest pain,Sweating, Agitation, Anxiety, Difficulty breathing this side effect occurs if the patient drinks alcohol during treatment.	Incorrect	47	47	.53	.50	11	11	.89	.31
	Correct	53	53			89	89		

%: percentage, F: frequency, MS: Mean of score: poor (mean of scores 0-0.33), moderate (mean of scores 0.34-0.67), good (mean of scores 0.68 and more), SD: standard deviation, Assess: assessment.

Table 2 demonstrated the average percentages and assessment of contributors' answers to the items related to knowledge about trichomoniasis. In the pre-test, this table showed that the correct answers to questions number 9, 14, 18 and 22 had lower percent were 33%, 27%, 35% and 39% respectively compared with remaining questions. In the post-test, the table revealed that the correct answers to questions number 9, 14, 18 and 22 increased with mean score 61%, 58%, 76% and 74% respectively. Also the table observed that before the Program, the correct answers to questions number 19, 20, 23, 27, and 28 had higher percentage of 74%, 76%, 75%, 74% and 78% respectively, and in the next test, these percentages increased to 91%, 97%, 90%, 91% and 91% mean score respectively, additionally, there was variation in nurses' responses to the remaining questions between primary and next test. Also, the finding revealed lower percentage of correct answers for questions 9 and 14 in the posttest with mean score of 61% and 58% respectively, and the majority of mean score of correct answers in the posttest of question 5 was 96%. However, the table showed there was an elevation in the percentage of correct answers for all questions in the posttest compared to the pre-test.

Concerning nurses' knowledge of trichomoniasis in the primary test, the study recorded that the frequency of poor knowledge was 3%, moderate knowledge was 76% and good knowledge was 21%, furthermore, the table in the next test demonstrated the frequency of poor knowledge was 0%, moderate knowledge was 6 % and good knowledge was 94%**,** as shown in table 3.

In the table 4 the result showed the total assessment in the primary test was a moderate (0.57), while the next test was a good (0.84). As well as, the results revealed variances in nurses' knowledge assessment, showing highly significant difference between primary and next test assessments ($P < 0.01$).

In addition, the statistical test for the relationship between age and the samples' knowledge was 1.668. Regarding gender, residence, occupational title, and years of experience, were 1.355, 0.715, 1.472 and 0,649 respectively. Also, the results showed the statistical test for marital status, working unit and qualification were 0.660, 1.713 and 1.094 respectively. The results

Table 3. Overall assessment of the samples' Knowledge Regarding Trichomoniasis in the primary and next test

Overall Items	Knowledge Regarding Trichomoniasis for the Study sample (n=100)									
	Pre-Test					Post-Test				
	F.	%	MS	SD	Assess.	F.	%	MS	SD	Assess
Knowledge Regarding Trichomoniasis	Poor	3	3	.57	.14	Moderate	0	0	.84	.09	Good
	Moderate	76	76				6	6			
	Good	21	21				94	94			

%: percentage, F: frequency, MS: Mean of score: poor (mean of scores 0-0.33), moderate (mean of scores 0.34-0.67), good (mean of scores 0.68 and more), SD: standard deviation, Assess: assessment.

Table 4. Mean variance (Paired T-Test) of nurses' knowledge at periods of measurements (pretest and posttest)

Overall Items	Periods of Measurements	M.S.	SD	t-value	d.f.	p-value
Knowledge Regarding Trichomoniasis	Pre-test	.57	.14	20.334	99	0.0001^{HS}
	Post-test	.84	.09			

M.S. Mean of Score, SD. Standard deviation, d.f degree of freedom, P = probability value. NS. Non-Significant at (P > 0.05), HS. High Significant at (P< 0.01).

demonstrated no significant difference in the nurse's Knowledge according to their Demographic Characteristics, as the p-values were more than 0.05, (Table 5).

DISCUSSION

Globally, sexually transmitted infections continue a significant public health subject, mainly between the younger populations. Despite being avoidable and treatable, sexually transmitted infections remain prevalent. In many developing and undeveloped countries, absence of admission to treatment is a main factor. Another main factor is the absence of knowledge and awareness [8]. Developing periodic educational programs and evaluations regarding *Trichomonas vaginalis* on a regular basis would enhance competency to provide high quality nursing care [9]. The random sample in this study included male and female participants of different ages and qualifications, with experience ranging from 1 to 36 years and working in different units in Al-Zahraa Hospital – Al Najaf city (Figures 1-8). In present study, the effect of educational program on the nurses' knowledge about trichomoniasis was researched, the results show the total of study sample knowledge level regarding Trichomoniasis in the Pretest was a moderate (0.57), and in the post it was good (0.84), (Table 3), with highly important difference (P <0.01) between primary and next test level. At pretest findings in our study revealed that samples' knowledge is moderate knowledge in symptoms and complication, in contrast, at posttest reported good knowledge (Table 2). This significant rise in educational level of symptom and complication after training was in line with other studies and gave the same results as Börekçi et al.[10] that was conducted the pretest and post to determine the influence of the education level of students basing peer on knowledge about Sexually transmitted disease in of Mersin University in Turkey, and study of Sallam et al. [9] who conducted in a Military Hospital, Egypt, to asses and enhance the nurses' knowledge about trichomoniasis with pre-posttest. Also, current study showed moderate knowledge in the risk factor, treatment and prevented approach at pretest while with the implementation of the educational program, nurses' knowledge increased to better knowledge, (Table 2). This result in agreement with results/ avaible in literature [9, 10]. The moderate level of nurses' knowledge in this study before training may be due to the lack of interest or the tendency of this group to develop their knowledge of these diseases because of their connection to the issue of sex and what results from malpractices. The results in our semi experimental study differ from other descriptive studies conducted on different groups of societies to measure their knowledge about the sexual transmitted disease. This variance might be due to differences in education, then awareness about a sexually transmitted disease [11], concluded in a study conducted to evaluate nurse's Knowledge and Practice concerning sexually transmitted diseases in Sirajganj, Bangladesh, that the assessment of nurses' knowledge was high, and 84.6% of respondents have awareness, but only 15% did not have knowledge about signs and symptoms. Performing of health professionals is well, according to their responsibilities, but their knowledge about sexually transmitted disease was limited duo to not have sufficient information. Therefore, improvement of superiority of their services needs more training [12]. Also, Fred M. [13] mentioned in study conducted among graved women admitted to antenatal centers of General Hospital Luweero / Uganda, that the high level of knowledge established of midwives and nursing assistants, with the majority effective was 16-25 age group. The outcomes regarding sexually trans-

Table 5. Relationship among demographic characteristics of the sample and knowledge at the post-test

Socio-Demographic Characteristics	Rating and Intervals	Mean	SD	Statistical Test	P-Value
Age	21-29	.83	.09	1.668#	0.164NS
	30-28	.86	.08		
	39-47	.86	.08		
	48-56	.79	.05		
	57-66	.93	.		
Gender	Males	.82	.10	1.355^	0.179 NS
	Females	.85	.08		
Residence	Urban	.84	.09	0.715^	0.476NS
	Rural	.83	.07		
Occupational Title	Technical nurse	.82	.10	1.472^	0.144NS
	Nurse	.85	.08		
Years of Experience	1-12	.84	.09	0.649#	0.525NS
	13-24	.86	.08		
	25-36	.83	.07		
Marital status	Single	.85	.09	0.660^	0.511NS
	Married	.84	.09		
Working Unit	Emergency Department	.82	.09	1.713#	0.169NS
	Critical Care Unit	.88	.06		
	Operating Room	.85	.09		
	Others	.84	.09		
Qualification	Technical Nursing	.86	.08	1.094#	0.364NS
	Institute	.84	.08		
	Diploma Nursing School	.86	.09		
	Bachelor Nursing	.82	.10		
	Master Degree	.85	.04		

NS: nonsignificant.

mitted infections presented by Lagadinou et al. [14] highlighted emphasize the crucial need for best designed, ongoing programs of sexual education to raise students' awareness around sexually transmitted infections and their avoiding, the researchers revealed that most of the contributors have an aware of the major sexually transmitted infections and their mode of transmission in study designed to evaluate the knowledge and attitudes of nursing and medical students in study performed at the University of Patras, western Greece. Osanyin et al. [15] mentioned that most of the participants had awareness and had a positive attitude about protection of sexually transmitted infections, but the knowledge and practices remained not enough , so, the study recommended enhanced education to increase the knowledge and practices related to sexually transmitted infections between young single individual, the study was performed in Surulere, Lagos State, Nigeria between young single persons. Vakilian K [16] observed that "the university students' knowledge" is far from the wanted level. Also Mansor et al. [17] determined in their study that the knowledge of sexually transmitted infections in higher education institutions among students was unacceptable, to strengthen existing sexual education programs might be transporting more information about other sexually transmitted infections rather than concentrating on HIV only, upcoming program should concentrate on students who have a skill certificate or diploma and others, then those remaining off-campus. Keizur et al. [18] mentioned knowledge concerning sexually transmitted infections between undergraduate women students was limited, educational programs and through the health center of university might

raise testing rates. The findings of Amakali et al. [19] study revealed poor knowledge of sexually transmitted disease and negative attitudes towards the management of patients with sexually transmitted disease among the study respondents in the study performed to determine the knowledge among undergraduate diploma nursing students regarding sexually transmitted diseases sexually transmitted disease at the University of Namibia. The conclusion of Sunil et al. [20] study indicate that most students of the high school have low knowledge of sexually transmitted infections, so it is important to introduce educational programs about sex to increase awareness of student around sexually transmitted infections and protective methods. There was a non- significant difference in the knowledge of male and female sample, no association in the knowledge according to ages and qualifications, and no difference in the knowledge with the experience years and married and single participant, also the nurses who work in different units have the same knowledge at posttest in our study (Table 5), this means that the program has an obvious impact on the all study sample. In this result, our study agreed and disagreed with other studies conducted in different countries as study conducted in the Medical Sciences/ Markazi University, Iran, to asses of healthcare staff' knowledge, attitude, and practice linked to sexually transmitted infections revealed that there was the same knowledge in study sample (physicians midwives, and health professionals) according to gender, ages, the experience years and marital status but the knowledge score different between occupational sample [12], and Alshemeili et al. [21] study conducted in the United Arab Emirates who found that male and female were not related to the level of knowledge and showed age and marital status were significantly related to the level of sample knowledge, exactly, contributors who were slightly older, also literature date mentioned that men and women no difference associated with knowledge [16]. Specific gaps of knowledge exist for HIV and non-HIV sexually transmitted infections, which should be addressed through educating sex, concentrating on high-risk groups exactly, passive attitudes and deafen behavior should be addressed through raising focused sexually transmitted infections knowledge [22]. In study conducted in Nigeria by Adekunle et al. [23] revealed that the 172 female contributors more than 80% not know of trichomoniasis before the study, and did not hear the route of transmission or how to avoid it. The importance of the current study lies in the fact that the spread of sexually transmitted diseases is continuously and increasing, especially *Trichomonas vaginalis* parasite such recorded by many studies as Al-Abbas [24] when they researched the prevalence rats of *Chlamydia trachomatis* and *Trichomonas vaginalis* in female who visited Al-Zahraa Hospital, Al- Najaf city, Kadhum N [25] study reported high rate of disease with *Trichomonas vaginalis* in non-pregnant female group attending Basrah Teaching Hospital, Basrah Maternity and Children teaching Hospital and Al-Faihaa Hospital, showed a high rate of infection with *Trichomonas vaginalis* among partners in Al-Hamza province, Iraq, and recorded the highest rate with *Trichomonas vaginalis* among women who attended the hospitals and medical clinics from different regions of Karbala province [6, 26]. In addition *Trichomonas vaginalis*, can remain asymptomatic for long periods, which may result in severe complications. In women with pelvic inflammatory illness, trichomoniasis was strongly correlated with and predicted [27]. The occurrence of *Trichomonas vaginalis* and, its associated risk factors among the asymptomatic population is very high [28]. Based on the findings of the Merdaw et al. [29] study, the genetic diversity in the *Trichomonas vaginalis* in Iraqi isolates can associate with clinical manifestations (infertility and cervical abnormalities). Therefore, increasing knowledge for nurses' groups that come into contact with society is important for transferring and communicating information to the largest possible number of people, hospital visitors, studies have revealed that communicating information through peers is more effective. The education based on the peer education is effective, particularly among youths, who are normally under the effect by their peers in many habits counting in relations of "positive and negative health behaviors" [10].

CONCLUSIONS

Our study included an educational program that may be the first in Al-Najaf City to evaluate and promote the knowledge of a group of nurses about the risk factors, symptoms and complications of the disease, how to prevent and treat it, and methods of transmission of trichomoniasis. This study concluded that the knowledge level improved from moderate to good after the program for all nurses in different age, gender, married, single, different working unit and years of experience, in the total assessment, the knowledge of nurses about trichomoniasis in the Pretest, was a moderate mean score (0.57) and the posttest was a good (0.84) mean score, with no significant difference in the nurse's Knowledge according to their Demographic Characteristics.

LIMITATIONS

One of the limitations of this study is that the sample size did not include the entire province and did not include all sexually transmitted diseases. Therefore, we recommend conducting similar studies of all disease transmitted by sexual method that include other groups and the nursing group that are much relevant and influential in society.

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CONFLICT OF INTEREST

The Authors declare no conflict of interest

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