Knowledge and Attitudes of Undergraduate University Students about Sexual Transmitted Diseases at University of Kufa

Saif Musadaq Hasan[*], Professor Dr. Fatima Wanas Khudair[**]

[*]. B.Sc., M.Sc. Nursing, Community Health Nursing Department, Faculty of Nursing, University of Kufa
[**]. B.Sc., M.Sc., PhD. Nursing, Community Health Nursing Department, Faculty of Nursing, University of Kufa

Abstract- **Background:** Sexually Transmitted Diseases are considered the most serious problems on health of community. It occurs not only in poor countries but also in rich countries, STDs are among the top five diseases causing loss of healthy life foundations for young and make them looking for health care services continuously. **Aim of the study:** To evaluate the level of Knowledge and Attitudes of undergraduate university students towards STDs. **Methodology:** A descriptive cross-sectional study was applied on (450) students at University of Kufa from 27th December 2018 until 11th July 2019. The validity of the questionnaire was determined by the experts, the reliability of questionnaire was determined by Cronbach's Alpha test while the questionnaire was used in a self-filling method by the participants. **Results:** The overall Knowledge of students was poor while the great majority of students have a positive attitude toward STDs. **Conclusions:** The study concluded that due to the absence of this subject in curricula and weakness in the media and government health programs, as well as negative impact of customs and traditions lead to decrease in level of knowledge about sexually transmitted diseases among students. **Recommendations:** The study recommended that conducting seminars and instructive programs for university students on sexually transmitted diseases, especially for humanities and scientific colleges.

Index Terms- Knowledge, Attitude, Undergraduate University Students, Sexually Transmitted Diseases.

I. INTRODUCTION

Young person starts to replace sexual imaginations with sexual experience and expand sexual life ,therefore they are the most vulnerable to exposure to difficulties of undefended sex such as sexually transmitted diseases, unintended pregnancies and HIV. Every year, more than half of all sexually transmitted diseases threaten the life of young people according to universal statistics (Folasayo *et al.*, 2017) .

STDs are a group of infections that are transmitted mainly through unprotected sex, In addition, it can be transmitted by another way from mother to fetus, the tattoo , blood and needles, it is classified as curable and non-treatable diseases (OG *et al.* ,2018) .

STDs pose a serious threat to the general health of males and females in all countries, whether rich or poor, so there is a rapid spread of the disease due to several factors, including social, economic and demographic of many countries of the world (De Waure *et al*., 2015).

According to WHO estimate that more than 1 million people infected every day with sexually transmitted diseases. It causes negative problems on human health from somatic problems until infertility , malignant tumors , complications of the mother and child and loss of life, in addition to a large financial burden , the United States alone spend more than tens of billions dollars annually on the STDs (Von Rosen *et al*., 2018).

More than thirty type of bacterial, viruses and parasites cause STDs can be classified into curable diseases that transmitted by bacteria in general such as gonorrhea, syphilis, chlamydia, and trichomoniasis on the other side are incurable diseases that cannot be completely cured , It is considered expensive but can preventable include HIV, genital herpes, HPV and hepatitis B (Subbarao and Akhilesh, 2017) .

Weak knowledge , attitude and dangerous applications about sexually transmitted diseases in the youth phase are an international phenomenon widespread and this gets us to wonder and worry about this occurrence. Previous studies reflect the difference in sexual behaviors and misunderstanding as a result of adherence to beliefs and cultures from one area to another (Ruikar, 2013).

In developing countries, most previous studies focused on assessing the knowledge on HIV while are very low regard to of knowledge about sexually transmitted diseases that are necessary in the treatment and prevention of these diseases, especially to meet the need of society to help when the symptoms occur (Amu and Adegun, 2015).

Most of the information available in Islamic countries is focused on AIDS, so there is a lack of studies on sexually transmitted diseases. Most accurate information about prevalence and incidence comes from developed countries (El-Tholoth *et.al*, 2018).

Objectives of the Study:

1-To evaluate level of Knowledge and Attitudes of undergraduate university students towards sexual transmitted diseases.

2- To find out the relationship between the level of knowledge and attitudes towards sexual transmitted diseases and their socio-demographic characteristic of (age, gender, residency, marital status, monthly income, educational level of father and mother ,occupation of father and mother , living place, family type and sources of previous information about STDs).

II. METHODOLOGY

Study Design: Descriptive design a cross-sectional study are implemented to achieve the objective of study for the period from 27th December 2018 until, 11th July 2019.

Ethical Consideration: The students were informed about the nature of the research and its future benefits for the community and they agreed to participate as a sample for research. Promised to maintain the confidentiality of the student's identity and disclose its information and not to be named by filling the questionnaire through the self-administrated .

Setting of the Study: The study was conducted in (15) faculties at University of Kufa.

The Sampling : The sample selected was 450 students from different faculties in University of Kufa for the study. a probability sampling technique (cluster sample) used through dividing KUFA University to three classifications (Health faculties, Scientific faculties & Humanistic faculties) then 5 faculties from each classification was selected randomly and 30 student in 4th grade from each faculty without representation to its proportional (disproportional allocation).

Instrument of the Study : The questionnaire was divided into three main parts (socio-demographic information, questions on knowledge about Sexually Transmitted Diseases and questions to determine student's attitudes regarding Sexually Transmitted Diseases).

Study Validity: To validate the questionnaire use method of face validity (Panel of Experts) which have more than 10 years of experience at their jobs field. It was designed and presented to (22) experts in community health .

Reliability: The reliability of questionnaire was determined during the completion of the pilot study by Cronbach's Alpha coefficient test, the test was conducted on all questions of knowledge and attitude. The result of test showed acceptable reliability depending on the value of the Cronbach's Alpha which was (0.901) for knowledge scale and (0.731) for attitude scale.

The Statistical Analysis:
The data of (450) students were examined by use the Statistical Package of Social Sciences program (SPSS) version 23 , 2015. for statistical analysis.

Scoring:
1. **Knowledge Scores:**
Each item of the knowledge questions has three responses, yes, no, don't know, the responses of participants were categorized either, correct, incorrect or uncertain. The scores were 3 points for accurate answer, 2 points for uncertain answer and 1 point for incorrect answer, The evaluation of the knowledge then categorized according to mean of score into three categories **:**
1 – 1.66 **Poor Knowledge**
1.67 – 2.33 **Fair Knowledge**
2.34 – 3 **Good Knowledge**

2. **Attitude Scores:**
Each item of the Attitude questions had three responses, Agree, undecided, Disagree , therefore, according to the ideal answers for each questions, the responses of participants categorized either, correct, incorrect. The evaluation of the Attitude then categorized according to mean of score into two categories **:**
MS. ≥ 2 **Positive Attitude**
MS. < 2 **Negative Attitude**

Limitation of the study:
This study faces some difficult during its process:
1- Administrative routine in government institutions in order to obtain approval of sample collection.
2- Withdrawal number of female participation in the study due to their embarrassment.
3- It was not so easy to reach subjects because they believed that STDs are considered stigma and socially unacceptable.
4- Limited studies related STDs in Iraq .

III.   RESULTS :

Table 1 : Study Sample Demographic Data

Demographic Data	Rating And Intervals	Frequency	Percent
Age (Years)	21 - 23	371	82.4
	24 - 26	68	15.1
	27 and more	11	2.4
	Mean ± SD	22.47 ± 1.50	
Gender	Male	309	68.7
	Female	141	31.3
Residence	Urban	352	78.2
	Rural	98	21.8
Marital status	Single	360	80.0
	Married	85	18.9
	Divorced	4	0.9
	Separated	1	0.2
Economic status	Not Enough	65	14.4
	Some Enough	174	38.7
	Enough	211	46.9
With whom do you live	Friend	20	4.4
	Family	362	80.4
	Internal Department	68	15.1
Family type	Nuclear Family	212	47.1
	Extended Family	208	46.2
	Single Parent Family	30	6.7
father Education	Illiterate	30	6.7
	Able to Read and Write	63	14.0
	Primary School Graduate	68	15.1
	Intermediate School Graduate	63	14.0
	Preparatory School Graduate	35	7.8
	Institute Graduate	74	16.4
	College Graduate	98	21.8
	Post Graduate	19	4.2
Mother Education	Illiterate	67	14.9
	Able to Read and Write	87	19.3
	Primary School Graduate	91	20.2
	Intermediate School Graduate	63	14.0
	Preparatory School Graduate	43	9.6
	Institute Graduate	46	10.2
	College Graduate	52	11.6
	Post Graduate	1	0.2
Father Occupation	Employee	172	38.2
	Free works	151	33.6
	Retired	66	14.7
	Unemployed	61	13.6

Continue Table 1

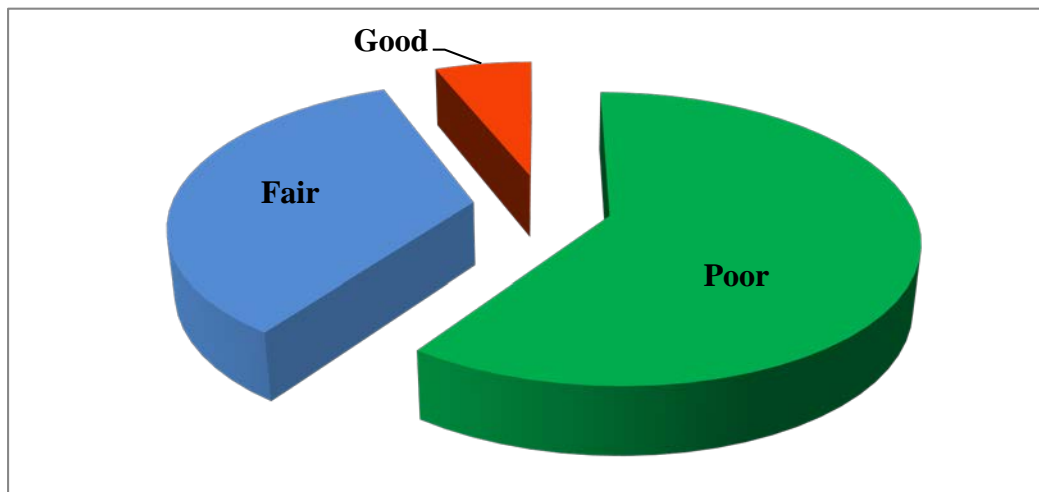| Mother Occupation	Employee	77	17.1
	Free works	11	2.4
	Retired	16	3.6
	Housewife	346	76.9
Classification of Colleges	Health Colleges	150	33.3
	Scientific Colleges	150	33.3
	Humanistic Colleges	150	33.3
	Total	**450**	**100.0**

Table (4.1) shows that a total of 450 participants are from undergraduate university students . It was (82.4) % for ages (21 – 23) , males were the dominant represented (68.7%) compared to females (31.3%). A majority of the participants (78.2%) were urban residents and (80%) of participants are single . Concerning economic status the study results show that the highest percentage of the study sample (46.9%) are within Enough . Regarding to the living situation, the study results show that the majority of the study sample (80.4%) are living with their families. Regarding to family type (47.1%) of them from nuclear families. Concerning the Father's education the study indicates (21.8%) of them graduated from College, While mother's education (20.2%)of them graduated from primary school. Concerning the Father's occupation, the study indicates (38.2%) of them Employee, in regarding to mother's occupation (76.9%) of them housewife. In the case of colleges the percentage was equal (150) students for each classification .

Table 2 : Overall Student's Knowledge about STDs

score of Poor 1.66), This is	Levels of knowledge	Frequency	Percent	Mean Score	Overall Assessment	Good (mean of 2.34 - 3), Fair (mean score 1.67-2.33), (mean of score 1- cut off point (0.66) table shows that the overall level of the Knowledge of students about STDs Poor see figure 1
	Poor	274	60.9	1.66	**Poor**	
	Fair	149	33.1			
	Good	27	6.0			
	Total	450	100.0			

Figure 1: Distribution of participant according to overall knowledge about STDs

Table 3 : Overall Student's Attitude about STDs .
 (Mean of score < 2 Negative , Mean of score ≥ 2 Positive) .

This table reveals that overall assessment of students attitude about STDs is positive.

Table 4 : Association between student's Knowledge about STDs and their demographic data

Levels of Attitude	Frequency	Percent	Mean Score	Overall Attitude
Negative	94	16.9		
Positive	356	83.1	2.28	Positive
Total	450	100.0		

Socio-demographic Data	Rating and interval	Overall knowledge			Value X^2	DF.	P.value
		poor	fair	good			
Age (years)	21 - 23	228	118	25	4.09	4	0. 39 NS.
	24 - 26	40	27	1			
	27 +	6	4	1			
Gender	Male	198	103	8	20.78	2	0.001 HS.
	Female	76	46	19			
Residence	Urban	209	117	26	5.79	2	0.05 S.
	Rural	65	32	1			
Marital Status	Single	213	116	23	9.24	6	0.16 NS.
	Married	57	30	4			
	Divorced	4	0	0			
	Separated	0	3	0			
Economic Status	Not Enough	44	19	2	5.51	4	0.23 NS.
	Some Enough	108	59	7			
	Enough	112	71	18			
With whom do you live	Friend	7	12	1	9.28	4	0.054 NS.
	Family	229	110	23			
	Internal department	38	27	3			
Family type	Nuclear Family	132	62	18	8.44	4	0.07 NS.
	Extended Family	125	77	6			
	Single Parent	17	10	3			
Father Education	Illiterate	16	13	1	37.04	14	0.001 HS.
	Able to Read and Write	44	19	0			
	Primary School Graduate	44	24	0			
	Intermediate School Graduate	43	17	3			
	Preparatory School Graduate	22	12	1			
	Institute Graduate	43	26	5			
	College Graduate	55	27	16			
	Post Graduate	7	11	1			
Mother Education	Illiterate	37	27	3	41.85	14	0.001 HS.
	Able to Read and Write	58	28	1			
	Primary School Graduate	65	25	1			
	Intermediate School Graduate	37	21	5			
	Preparatory School Graduate	28	13	2			

	Institute Graduate	24	16	6		
	College Graduate	25	19	8		
	Post Graduate	0	0	1		
Father Occupation	Employee	113	46	13		
	Free works	92	48	11	13.33	6	0.058 NS.
	Retired	33	32	1		
	Unemployed	36	23	2		
Mother Occupation	Employee	31	32	14		
	Free works	11	0	0	41.72	6	0.001 **HS**.
	Retired	7	9	0		
	Housewife	225	108	13		
Classification of colleges	Health Colleges	26	97	27		
	Scientific Colleges	130	20	0	194	4	0.001 **HS**.
	Humanistic Colleges	118	32	0		

P-value (probability value) , DF. (degree of freedom) , NS: Non-Significant at P> 0.05 ; S: Significant at P<0.05 ; HS: Highly Significant at P<0.01 ; X² :Chi- Square ; *p*-value : probability value .

Table (4) showed that the association between overall knowledge of participants with their socio-demographic characteristics . it had been found that a highly significant associated with (Gender , Father and mother education , Mother occupation and Classification of colleges) , also there is a significant association with Residence while the remaining factor has no significant association .

Table 5: Association between student's Attitude about STDs and demographic data

Socio-demographic Data	Rating and interval	Overall Attitude		X² Value	DF	P. value
		Negative (n= 94)	Positive (n=356)			
Age (years)	21 - 23	61	310			
	24 - 26	12	56	0.92	2	0.63 NS.
	27+	3	8			
Gender	Male	53	256	0.04	1	0.82 NS.
	Female	23	118			
Residence	Urban	56	296	1.10	1	0.29 NS.
	Rural	20	78			
Marital Status	Single	64	296			
	Married	11	74	1.53	3	0.67 NS.
	Divorced	1	3			
	Separated	0	1			
Economic Status	Not Enough	13	52	2.01	2	0.36 **NS**.
	Some Enough	24	150			
	Enough	39	172			
With whom do you live	Friend	0	20			
	Family	69	293	7.38	2	0.06 **NS**
	Internal department	7	61			
Family type	Nuclear Family	30	182	4.26	2	0.11 NS.
	Extended Family	43	165			
	Single Parent	3	27			
	Illiterate	3	27		7	

Father Education	Able to Read and Write	19	44	13.39		0.06 **NS**.
	Primary School Graduate	15	53			
	Intermediate School Graduate	7	56			
	Preparatory School Graduate	6	29			
	Institute Graduate	11	63			
	College Graduate	13	85			
	Post Graduate	2	17			
Mother Education	Illiterate	12	55	4.42	7	0.73 NS.
	Able to Read and Write	13	74			
	Primary School Graduate	14	77			
	Intermediate School Graduate	16	47			
	Preparatory School Graduate	7	36			
	Institute Graduate	7	39			
	College Graduate	7	45			
	Post Graduate	0	1			
Father Occupation	Employee	31	141	1.71	3	0.63 NS.
	Free works	28	123			
	Retired	8	58			
	Unemployed	9	52			
Mother Occupation	Employee	5	72	18.96	3	0.001 **HS**.
	Free works	6	5			
	Retired	1	15			
	Housewife	64	282			
Classification of colleges	Health Colleges	8	142	27.48	2	0.001 **HS.**
	Scientific Colleges	26	124			
	Humanistic Colleges	42	108			

P-value (probability value) , DF. (degree of freedom) , NS: Non-Significant at P> 0.05; S: Significant at P<0.05; HS: Highly Significant at P<0.01 ; X^2: Chi- Square ; p-value : probability value .

Table (5) showed that the association between overall Attitude of participants with their socio-demographic characteristics . it had been found that non-significant association with most variables, except with (Mother Occupation and Classification of colleges) where a significant association had been found .

IV. DISCUSSION :

Socio-demographic Characteristics Related to the Study sample (table 1) : The present results indicate that the most of study samples are within ages (21 – 23) year old(82.4). This result is supported by (Al Naggar and Al Jashamy, 2011) who reported that (21 – 23) is dominated age group in their study. Regarding gender, more than two third of study samples are males (68.7%) . This result agree with (Al Naggar and Al Jashamy, 2011) who mention that nearly two third of study sample was male. Concerning residency area, more than three quarters of the participants are from urban area (78.2%). This result is in the same line with (Demis *et al.*, 2017) they revealed that three quarters of the participants are urban residents (75.6 %). With regard to marital status, the study results show that the majority of study sample are single (80%). This result is supported by (Al- Malki, 2014 ; Fonte *et al.* , 2018) who found that the majority of study sample was single (94%). According to economic status, the study results indicate that less than half of the study subjects are within enough level (46.9%). Regarding living situation and family type

, most of students are living with their families(80.4%) and less than half of them from nuclear families. This result in the same line with (Demis *et al.*, 2017). They indicated that less than three quarters of the participants are living with family, the study indicates that less than quarter of them with college graduation. This result is supported by (Mohamed and Ahmed, 2018) who reported that university level is dominate Father's education in this study. Regarding mother's education, the study result shows that less than quarter of study sample, their mothers graduated from primary school. This result agrees with (Megersa *et al.*, 2017) who revealed that one third of study findings are primary school level dominate mother's education (33%). Relative to the father's occupation, almost more than one-third of their fathers are employees. this result comes along with (Demis *et al*., 2017) They found that more than half of the students had their fathers employed while the mother's occupation indicates that majority of their mothers are housewives. This result is agreement with (Mohamed and Ahmed, 2018). The study found that the majority of students were their mother's housewives. Concerning faculties classification, the results of our study showed that equal distribution for each classification of faculties including health, scientific and humanistic classifications. These findings are supported by (Fonte *et al.* , 2018) whose findings contain three colleges including Nursing , Law and Engineering colleges.

Student's overall knowledge about STDs (table 2) :
The current results indicate that slightly two third of students have poor knowledge about STDs. The current results can be

interpreted by the lack of coverage of the curricula on the issues related to awareness of these diseases, in addition to the failure of prevention programs in the health institutions and lack of focus by the media and cultural customs. These results are supported by (Fonte *et al*. 2018) who indicated that the majority of participants had low level of knowledge.

Student's Overall Attitude about STDs (table 3):

The current results indicate that most of students (83.1%) have positive attitude while less than quarter of them (16.9%) have negative attitude about STDs . The current results can be explained by the level of cultural and educational development of most students who produce acceptable behaviors and perceptions towards this phenomenon. This result comes along with (Demis et al., 2017) who found that most of study sample with positive attitude about STDs.

Associations between Student's overall Knowledge about STDs and their Socio-demographic Characteristics (tables 4)
The study results show that a significant association between student's overall knowledge and (gender, residence, father and mother education , mother occupation and classification of faculties) while the remaining factors had a non-significant association. These results agree with (Folasayo *et al*., 2017) their results showed that there is an association between knowledge about sexually transmitted diseases and (gender, residence and type of college) while (Demis *et al*., 2017) all of them stated that there are associations between knowledge about sexually transmitted diseases and (fathers education , mothers education and mothers job).

Associations between Student's overall Attitude about STDs and their Socio-demographic Characteristics : (tables 5)
The study results show that there is a non-significant association between overall attitude and most of socio-demographic variables, except with (mother occupation and classification of colleges) there is a significant association. This result disagrees with (Mahmoud and Ahmed, 2018 ; Folasayo *et al*., 2017) they indicated that there is no association between student's attitude about STDs with their mother occupation and classification of faculties.

V. Conclusions

As a result of the weakness of the curriculum, lack of media concentration, weak governmental health programs, and the negative impact of cultural backgrounds leading to deficit of knowledge among students.

VI. Recommendations

Conducting seminars and instructive programs for university students on sexually transmitted diseases especially for humanities and scientific colleges, Increasing the cooperation between the Ministry of Higher Education &scientific research and the Ministry of Education with the Ministry of Health in order to develop a curriculum to cover this important phenomenon in

society, Encouraging the creation of advertisements through the mass media to raise awareness about sexually transmitted diseases and their risks to young people, especially when traveling abroad and Conducting a further national studies with a wide range of sample.

References

[1] Al-Malki, B. M. (2014). Knowledge and awareness of sexually transmitted diseases among male university students in Taif, Saudi Arabia. International Journal of Medical Science and Public Health, 3(3), 342-349.

[2] Al-Naggar, R. A., & Al-Jashamy, K. (2011). Perception of undergraduate university students towards sexually transmitted diseases: A qualitative study. Journal of Men's Health, 8(1), S87-S90.

[3] Amu, E. O., & Adegun, P. T. (2015). Awareness and knowledge of sexually transmitted infections among secondary school adolescents in Ado Ekiti, South Western Nigeria. Journal of sexually transmitted diseases, 1(1), 1-5 .

[4] Demis, A., Adera, A., & Workeneh, D. (2017). Determination of knowledge, attitudes and practices on prevention of sexually transmitted infections among seto semero high school students. MOJ Public Health, 5(5), 142-153.

[5] De Waure, C., Mannocci, A., Cadeddu, C., Gualano, M. R., Chiaradia, G., Vincitorio, D., ... & Icciardi, W. (2015). Knowledge, attitudes and behaviour about Sexually Transmitted Infections: a survey among Italian university female students. Epidemiology Biostatistics and Public Health, 12(2), 1-11.

[6] El-Tholoth, H. S., Alqahtani, F. D., Aljabri, A. A., Alfaryan, K. H., Alharbi, F., Alhowaimil, A. A., ... & Al-Afraa, T. (2018). Knowledge and attitude about sexually transmitted diseases among youth in Saudi Arabia. Urology annals, 10(2), 198.

[7] Folasayo, A., Oluwasegun, A., Samsudin, S., Saudi, S., Osman, M., & Hamat, R. (2017). Assessing the knowledge level, attitudes, risky behaviors and preventive practices on sexually transmitted diseases among university students as future healthcare providers in the central zone of Malaysia: a cross-sectional study. International journal of environmental research and public health, 14(2), 159.

[8] Fonte, V. R. F. D., Spindola, T., Francisco, M. T. R., Sodré, C. P., André, N. L. N. D. O., & Pinheiro, C. D. (2018). Young university students and the knowledge about sexually transmitted infections. Escola Anna Nery, 22(2), 1-7.

[9] Mahmoud, S. F., Ahmed, N. M. E. (2018). The effect of providing educational sessions about sexually transmitted diseases on knowledge and attitudes of secondary school students at Zagazig City. Journal of Nursing Education and Practice, 8 (4), 16-27.

[10] Megersa, N. D., Ahmed, S. M., Gutema, B. T., Teshome, G. S., Melketsedik, Z. A., & Tariku, E. Z. (2017). Knowledge, attitude and preventive practices towards sexually transmitted infection among preparatory school students of Arsi Negelle town. Journal of AIDS and Clinical Research, 8(12), 1-6 .

[11] OG, O., LA, L., TO, A. (2018). Sexually Transmitted Diseases: Knowledge and Misconception of Adolescents in Okpokwu Local Government Area, Benue State, North Central Nigreia . International Journal of Medical Science and Health Research, 2(1), 10-20 .

[12] Ruikar, H. A. (2013). Knowledge, attitude and practices about sexually transmitted infections-A study on undergraduate college students of Mumbai. Web med Central journal, 4(3), 1-4

[13] Subbarao, N. T., & Akhilesh, A. (2017). Knowledge and attitude about sexually transmitted infections other than HIV among college students. Indian Journal of Sexually Transmitted Diseases, 38(1), 10 .

[14] Von Rosen, F., von Rosen, A., Müller-Riemenschneider, F., Damberg, I., & Tinnemann, P. (2018). STI knowledge in Berlin adolescents . International Journal of Environmental Research and Public Health, 15(1), 110 .

Authors

First Author – Saif Musadaq Hasan, B.Sc., M.Sc. Nursing, Community Health Nursing Department, Faculty of Nursing, University of Kufa

Second Author – Professor Dr. Fatima Wanas Khudair, B.Sc.,   Email: safsafee03@gmail.com
M.Sc., PhD. Nursing, Community Health Nursing Department,
Faculty of Nursing, University of Kufa