

Perception of Late Adolescent Girls about Sexually Transmitted Diseases and Infections in El-Minia University

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Abstract:

Sexually transmitted diseases (STDs) are responsible for a variety of health problems, and can have especially serious consequences for adolescents and young adults. Adolescence is marked by profound biological and psychological changes. However, adolescent health, especially reproductive health, is a neglected area. **Aim of the study** was to recognize the perception of adolescent girls regarding the sexually transmitted diseases and infection, and to determine whether adolescent girls differentiate between the terms sexually transmitted disease (STDs) and sexually transmitted infection (STIs). **Subjects and methods** a descriptive cross-sectional research design was used to conduct the study at eight faculties that are selected randomly in El- Minia University. It included 408 female students by random sampling technique. The data were collected by using a self-administered questionnaire including knowledge and attitude rating scale. **The study results** revealed that there were unsatisfactory knowledge related to mode of transmission (63%), types (69.1%), and symptoms of STDs/STIs (85.8%). while they had satisfactory knowledge about curability, complication and protection ways of sexually transmitted diseases and Infection. The sources of information were mainly the school/university (20.1%), and then mass media (15.4%). Shyness was the most pronounced barrier (38.2%) for seeking health care, Tradition come the next barrier (21.1%), followed by there is No special girl's center (10.3%). Knowledge was significantly higher among students in urban areas ($p<0.001$) than rural areas, and whose mothers able to read and write. **Conclusion** the study concluded that lack awareness of adolescent girls about sexually transmitted disease and infections and they unable to differentiate between the terms sexually transmitted disease (STDs) and sexually transmitted infection (STIs). **Therefore, it is recommended** to conduct sessions discussing sexual health and STDs/STIs for mothers at schools and students at universities, with the cooperation of non-governmental organizations (NGOs), worship places, National Women Council, and-cultural and behavioral determinants of sexual risk behaviors, which may lead to STDs/STIs.

Key Words: *Adolescence, sexually transmitted disease and sexually transmitted infections*

Introduction

The term adolescence is commonly used to describe the transition stage between childhood and adulthood. Adolescents make up approximately 20% of the world's population; about 85% live in developing countries, (Dehne & Riedner 2005). Adolescents are the age group at greatest risk for nearly all Sexually Transmitted Infections (STIs) and Sexually Transmitted Diseases (STDs). (The Open Infectious Diseases Journal, 2009). Some professionals use the term STIs to describe an illness that is curable and STDs to describe an illness that is incurable. For example, genital herpes, human papillomavirus (HPV), Hepatitis B virus (HBV) and human immunodeficiency virus would be considered STDs (incurable illnesses), whereas Candidiasis, gonorrhea, syphilis, and chlamydia would be described as STIs (curable illnesses) (Brown University Health Services, 2009). STIs is Infections acquired through sexual intercourse (may be symptomatic or asymptomatic) (WHO2009).

Physical symptoms may or may not accompany an STIs, and some professionals differentiate between

STIs and STDs (American Social Health Association 2009). Planned Parenthood Federation of America (2008) explains that "STDs are caused by STIs". The STIs is an STDs only when it results in symptoms. For example, may state that chlamydia is a sexually transmitted infection, but Pelvic Inflammatory Disease (PID) would be the disease that results from not treating the infection"(Planned Parenthood Federation of America, 2008, And Kaplan, et al. 2004).

The relationship between STIs and STDs is the predominant mode of transmission for them is sexual contact and, Many of the measures for preventing STIs and STDs are the same, as are the target audiences for these interventions. Other STIs, when present, facilitate the transmission of STDs such as HIV. Making early diagnosis and effective treatment of STIs an important strategy for the prevention of STDs transmission. (UNICA, 2008).

Management Of STIs/STDs In Adolescents

Management of STIs/STDs remains one of the greatest challenges in health care delivery especially in developing countries. Several factors have contributed to the problem of STI /STD management:

stigma, societal attitudes towards sex, inadequate resources, high levels of drug resistance, lack of diagnostic facilities, and lack of trained person-power. (Chinsebu KC, et al, 2004). The key steps in the management of STI/STD patients are: making the correct diagnosis, prescribing the correct and effective treatment, and counseling, (Matondo P, et al 2005).

Prevention

STIs/STDs can be prevented by behavioral interventions and increased awareness. Education on STIs can be done at home, school, and at the hospitals (Hill YL, Biro FM, 2009). Health providers will need to focus on *Primary prevention* encouraging consistent condom use, and appropriate vaccination approaches for STIs/STDs; *Secondary prevention* through decreasing the number of existing cases via early detection and screening, and *Tertiary prevention* minimization of STI/STD sequelae. (WHO 2009).

Nurses role in management of STIs/STDs:

Nurses are in an ideal position to give sexual health advice to this age group, because they often have contact with teenagers, and to minimizing the adolescents delay in seeking treatment by understanding the underlying reasons for delaying through planning routine screening. These measures include having regular checkup, maintaining personal hygiene, and avoiding early marriage, Also the nurse can help adolescent girls to understand the treatment plan of STDs/STIs through providing accurate information about prevention, transmission, and treatment of STDs/STIs. (NICE 2007, Ritchie 2006 and CME Feature 2009)

Appropriate preventive strategies that conform to Islamic rules and values This raises the necessity to conduct further studies to evaluate the awareness and educate the general population. (WHO 2009).

Significance of the Study

The WHO estimates that youth age 15 to 24 years comprise 50% of all new STIs/STDs and consequently must be targeted for education in decreasing transmission and reducing the stigmatization of them. There are overwhelming epidemiological data that demonstrate the heavy burden of STIs/STDs on adolescents. In 2007, WHO estimated that a third of the 333 million cases of curable STIs occurred among young people under the age of 25 yrs. Adolescents and young people make up only 25% of the sexually active population but represent almost 50% of all new STIs. More than 40% of adolescents are subsequently infected by at least one STI other than the initial infecting organism

Aim of the Study

This study has two aims:

(1) To identify the perception of adolescent girls about sexually transmitted disease (STDs) and

sexually transmitted infection (STIs) in El-Minia University.

(2) To determine whether adolescent girls differentiate between the terms sexually transmitted disease (STDs) and sexually transmitted infection (STIs).

Research Question

(1) Do adolescent girls think that the terms STDs and STIs mean the same thing?

(2) Do adolescent girls can differentiate between the terms sexually transmitted disease (STDs) and sexually transmitted infection (STIs).

Subject and Methods:

Research design

A cross sectional descriptive research design was utilized in this study.

Setting:

This study was conducted at eight faculties (N=8) (Nursing, Dental medicine, Fine arts, Specific education, Science, tourism & hotels, Agriculture and physical education) in El- Minia University.

Sample:

After the random selection has been made we calculate the total number of study population (female students) for all the randomly selected faculties which are (4088) then we take a convenient sample about 10% from total population which are (408) student.

The sample of the present study included 408 adolescent girls. The data collection started from 12/2012 to 4/2013 which is collected through two days per week from Faculty.

Inclusion criteria:

- Adolescent girls aged from 18-21 years old.
- From all faculties (medical & non-medical).

Tools

A specially designed self-administered questionnaire was developed by the researcher to collect the necessary data from the adolescent student based on relevant literature and reviewed by experts from nursing obstetrics and Gynecological nursing specialties to describe sexually transmitted disease and sexually transmitted infection, mode of transmission, its types, signs & symptoms, treatment and ways of protection.

The questionnaire included the following items:

Part I: Sociodemographic data

This includes (faculty, academic level, age, residence, mother's educational level and her occupation).

Part II: Assessment the Knowledge about STDs and STIs

This includes (Sexually transmitted disease versus STIs, Mode of transmission, Types, signs & symptoms, Curability, Complication, effect of

STDs/STIs on reproduction, Protection ways, Source of information about STDs/ STIs , Barriers to seek obstetrician when exposed to STDs & STIs and How improve their knowledge about STDs & STIs).

Part III:

Distribution of the studied sample according to the relationship between Sociodemographic characteristics and their Knowledge about STDs and STIs.

Ethical consideration:

- An official letter of approval of the study was obtained from the dean of the faculty of Nursing at El-Minia University to the dean of each of the randomly selected faculties; this letter was include a brief explanation of the objectives of the study and permission was requested from each dean to carry out the study.
- Formal consent was obtained from female student orally before being involved in the study after explanation of the nature and purpose of the study and there are no risks or cost in participation, and there are voluntary participation and confidentiality of each subject who agrees to participate to fill the questionnaire.

Procedure:

- The researcher collected the sample through two days every week (one faculty per week), I went to each faculty at 9:00 a.m, introduced my self to the lecturer who assisted me to collect the data and seen him the permission of collection, then introduced my self to all student who participate in the study, distributed on them self-administered questionnaire to fill data after explaining the aim of the study and answered any question about the questionnaire, filling of questionnaire took 10-15 minutes by participants.
- After filling the questionnaire, the researcher was provide health education about STDS & STIS (mode of transmission, signs & symptoms, types, complication, treatment and prevention) and answer to all questions of participants related to this subject.

Operation design and Pilot Study

Pilot study was done on 10% of the female students to evaluate the clarity and understanding of the tools. It also helped in the estimation of the time needed to fill the form. According to the results of the pilot, tools modifications were done. The girls who were tested in the pilot study were included in the main study sample.

Statistical analysis

Data were analyzed using the statistical package for social science (SPSS) version 16.0 (Windows Microsoft). Continuous data were expressed as frequency, percentage, mean and SD. discrete data were expressed as frequency and percentage. Comparison between variables was done using chi-square test. Probability (p-value) less than 0.05 was considered significant and less than 0.001 was considered highly significant.

Limitation of the study:

- 1- Lack of time of presenting sample in some faculties that let me to visit it more than one times.
- 2- Embarrassment of some girls act as a barrier to fill the questionnaire.

Results:

The results of this study will be described according to the following parts:

Table (1): Distribution of the studied sample according to their sociodemographic characteristics:

Socio- demographic characteristics	(N=408)	%
Faculty		
Nursing	45	11.0
Dental medicine	42	10.3
Fine Arts	29	7.1
Physical Education	38	9.3
Agriculture	55	13.5
science	93	22.8
Tourism	59	14.5
Specific education	47	11.5
Age		
18-19 years	179	43.9
20-21 years	229	56.1
Mean age \pm SD	19.8\pm1.2	
Residence		
Rural	157	38.5
Urban	251	61.5
Mother's educational level		
Illiterate	82	20.1
Read and write	235	57.6
University	91	22.3
Mother's occupation		
House wife	266	65.2
Working	142	34.8

Table (2): Distribution of the studied sample according to their knowledge about STDs and STIs.

Items	(N=408)							
	Yes		No		Don't Know		X2	P value
	No	%	No	%	No	%		
(1) Do the terms Sexually Transmitted Disease (STD) and Sexually Transmitted Infection (STI) mean the same thing?	104	25.5	116	28.4	188	46.1	30.35	<0.01**
(2) Do you know the mode of transmission of STDs and STIs?	139	34.1	12	2.9	257	63	220.7	<0.01**
(4) Do you know the types of the STDs and STIs?	107	26.2	19	4.7	282	69.1	263.6	<0.01**
(6) Do you know the symptoms of the STDs and STIs?	26	6.4	32	7.8	350	85.8	505.2	<0.01**
(8) Do the Sexually Transmitted Infection (STIs) are curable?	184	45.1	54	13.2	170	41.7	74.88	<0.01**
(9) Do the Sexually Transmitted Disease (STDs) are curable?	117	28.7	110	27.0	181	44.4	22.52	<0.01**
(10) Do the STDs and STIs have a complication?	259	63.5	10	2.5	139	34.1	228.0	<0.01**
(12) Are the STDs & STIs effect on reproduction?	277	67.9	31	7.6	100	24.5	236.8	<0.01**
(13) Are the STIs may lead to STDs?	201	49.3	40	9.8	167	40.9	67.93	<0.01**

* = sig at 5 % level ($p < 0.05$)** = sig at 1 % level ($p < 0.01$)**Table (3): Distribution of the studied sample according to their knowledge about the protection ways from STDs & STIs. (N=408)**

Protection ways from STDs & STIs	No	%
1- Avoid contact with an infected person	73	17.9
2- Avoid contaminated toilet seat	13	3.2
3- Avoid contaminated syringe	29	7.1
4- Avoid wearing tight clothes for long time	3	0.7
5- Avoid infected blood transfusion	37	9.1
6- Developing vaccination approaches	36	8.8
7- Personal utensils (toothbrush, eating utensils)	8	2.0
8- All of them	323	79.2
9- None of them	0	0.0
10- Others (mention?)	0	0.0

N.B: More than one answer #

Table (4): Distribution of the studied sample according sources of information that help them to gain information about STDs & STIs and methods that improve their knowledge about STDs & STIs.

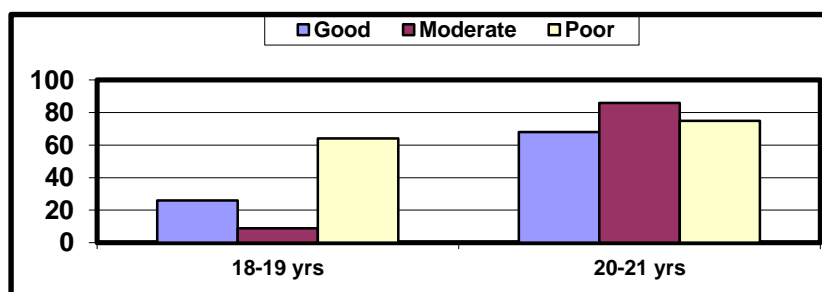
Sources Of Information	No	%
1- Mass media	63	15.4
2- Mother	29	7.1
3- School, university & books	82	20.1
4- Friends & relatives	40	9.8
5- All of them	233	57.1
6- Others (Internet)	19	4.7
Methods improve their knowledge	No	%
1- From trusted Internet web sites for adolescent health.	57	14.0
2- Teaching of such information in the curriculum of faculty.	49	12.0
3- Attend Scientific Symposium and seminars related to these diseases.	69	16.9
4- Distributing booklets include information about STDs & STIs.	84	20.6
5- All of them	223	54.7

N.B: More than one answer #

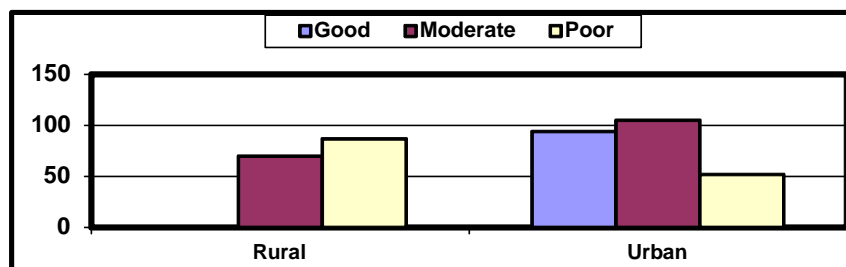
Table (5): Distribution of the studied sample according to suffering from STDs & STIs and the barriers to seek obstetrician when exposed to STDs & STIs.

(A) Suffered from STDs & STIs	(N=408)	%
- Yes	18	4.4
- No	369	90.4
- Don't Know	21	5.1
Barriers to seek obstetrician when exposed to STDs & STIs	No	%
1- Shyness	156	38.2
2- Tradition	86	21.1
3- No special girl's center	42	10.3
4- No need	20	4.9
5- All of them	187	45.8
6- Others (what?)	7	1.7

Figure (1): Distribution of the studied sample according to the relationship between age and their Knowledge about STDs and STIs.



Figure(2): Distribution of the studied sample according to the relationship between Residence and their Knowledge about STDs and STIs.



Figure(3): Distribution of the studied sample according to the relationship between Mother's educational level and their Knowledge about STDs/STIs.



Figure(4) Distribution of the studied sample according to the relationship between Mother's occupation and their Knowledge about STDs/STIs.

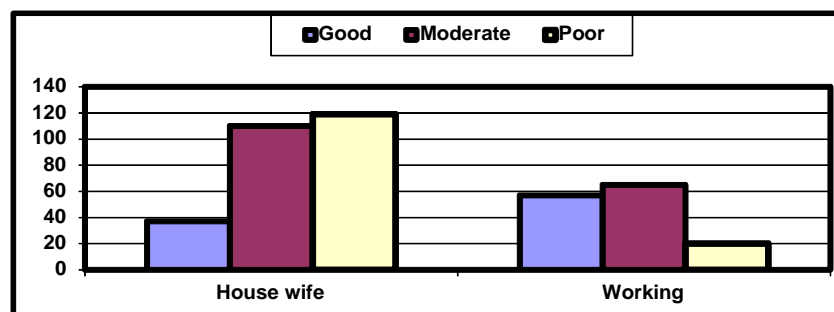


Table (1): Illustrated distribution of the studied sample according to their socio- demographic characteristics. Regarding age it was observed that the mean age \pm SD of the studied sample was 19.8 ± 1.2 years. Regarding place of residence, it was noticed that more than two thirds (61.5%) of the studied sample were living in urban areas . As regard mother's education it is obvious that more than half of the study sample mother's (57.6%) able to read and write, In relation of mother's occupation more than two thirds (65.2%) of their mother's were housewife

Table (2): Shows distribution of the studied sample according to their knowledge about STDs and STIs. It was observed that near half of the sample (46.1%) they don't know, More than half of the sample (63%)&(69.1%) don't know the mode of transmission of STDs and STIs& type respectively. Regarding the symptoms, the majority of the sample (85.8%) don't know the symptoms. As regard to their knowledge about STDs and STIs curability. (45.1%) said that STIs are curable. In relation to their knowledge about the complication of STDs and STIs more than two third (63.5%) responded yes STDs & STIs had a complication.,

Table (3): This table shows their knowledge about the Protection ways from STDs & STIs. It was observed that the majority of the sample (79.2%) responded all of them; the high percent (17.9%) said avoiding contact with an infected person.

Table (4): This table illustrates the Sources of information which help them to gain information about STDs & STIs, the majority select all of them (57.1%), while (20.1%) from School, university & books, (15.4%) from Mass media, Regarding the method to improve their knowledge, it was noticed that (20.6%) select distributing booklets include information about STDs & STIs is the best method to improve their knowledge,

Table (5): This table shows that only (4.4%) of the studied sample suffer from STDs & STIs symptoms,

On the other hand they prefer to consult medical advice when suffer from it (38.9%), while (33.3%) prefer to ask their friends about complain. Considering the reasons that prevent adolescent girls from seeking obstetrician when exposed to STDs & STIs symptoms, it was observed that the Shyness was the most pronounced barrier (38.2%),

Figure (1): This table illustrates the relation between age of the studied sample as regards to their knowledge, it was observed that there were moderate statistical significant difference (p value = < 0.01) between age of the studied sample and their knowledge about STDs and STIs.

Figure (2): This table illustrates the relation between place of residence of the studied sample as regards to their knowledge, it shows moderate statistical significant difference (p value = < 0.01) between knowledge and place of residence.

Figure (3): This illustrates the relation between mother's educational level and the study sample knowledge; it shows mild statistical significant difference between mother's education and the study sample knowledge. (p value = < 0.05)

Figure (4): Shows moderate statistical significant difference between mother's occupation and level of the study sample knowledge. (p value = < 0.01)

Discussion:

Sexually transmitted diseases and sexually transmitted Infection (STIs) are recognized as a major public health problem in most of the industrialized world. STDs/STIs deserve attention not only because of their high prevalence but also because they frequently go undetected and untreated, and can result in serious reproductive morbidity and mortality. (Cates, et al 2007). (Madani, et al 2006). Multiple barriers prevent adolescent from seeking STIs/STDs care even when they are aware with this disease. The barriers include lack of special health centers for adolescent girl's, fear of confidentiality,

Shyness and Tradition that inhibit seeking medical advice concerning such topics (**Feroli, 2004**).

As regard to sociodemographic characteristics of the adolescent girls, the findings of the present study showed that, the mean age (19.8 ± 1.2) years this age is considered as risk factor to infection, There is moderate statistical significant difference (P value = 0.01^{**}) between age of the studied sample and their knowledge about STDs/STIs. This finding is supported by (**Mizanur, 2009**) in his study about adolescent knowledge and awareness of STDs and factors affecting them, who found that the older adolescents had better knowledge than their younger counterparts. This might be due to the fact that the older adolescents are more conversant with peer groups and other members of the family.

Regarding to their knowledge about the differentiation between the term STDs and STI, it was observed that one quarter of sample (25.5%) said that the terms mean the same thing, and near half (46.1%) don't know. This might be due to lack of information about this issue in university curricula, and also avoidance of discussing such issue in the family or the media in our conservative communities. This finding is supported by (**Heather, 2009**) in her study about young women's beliefs about the terms sexually transmitted disease and sexually transmitted infection who found that (57%) responded that STD and STIs not mean the same, (28%) responded yes it mean the same thing, and (15%) said don't know.

Regarding to the mode of transmission, the finding of this study was found that, more than half of the studied sample (63%) don't know the mode of, this result is supported by (**Mizanur, 2009**) in his study about adolescent knowledge and awareness of STDs and factors affecting them, who found that only (2.4%) had sufficient knowledge about transmission and prevention of STDs.

Exploring adolescents answer in relation to their knowledge about types of STDs and STIs, more than two third of the sample (69.1%) don't know the types. The same finding was observed by (**Lamada, 2004**) in her study about knowledge, attitude and practice of adolescent females regarding reproductive health. Who found that large proportion of girls identified AIDS only as one types of STDs. This is explained by high publicity in the media regarding AIDS, which is attributed to its seriousness, severity, devastating sequels, and lack of treatment.

Regarding STDs/STIs symptoms, the result indicate that, the majority of the sample (85.8%) don't knew the symptoms of STD/STI. This finding is serious because lack of knowledge about symptoms can promote more misconceptions about STDs/STIs and many illnesses that may have similar symptoms. Also, it may limit the role of preventive practices, as

well as early detection and management. The consequences of this lack of knowledge are more increases in the incidence, prevalence, and complication of STD/STI. This finding was in congruence with (**Abdul rahman 2003**) in his study Women's perception and their health seeking behavior towards symptoms of STIs/STDs, who has observed that similar lack of awareness about STDs/STIs symptoms and their predisposing factors among adolescent girls.

Considering complication of STDs/STIs, it found that more than two third of the sample (63.5%) responded yes STDs/STIs had a complication. It was observed that More than half (56%) was mentioned that infertility was the most common complication of STD/STI. This finding is supported by (**Sarhan A. 2008**) & (**Obiechina A. 2001**) in her study about perception of adolescent girls regarding the sexually transmitted diseases in Banha city, who found that a low level of knowledge about complication of STD/STI, and revealed that more than three quarters of them (76.3%) said infertility is the most common one, only small percentages knew about other complication.

As regard to the student's knowledge about the relation between STD/STI and reproduction. It was observed that the majority of sample (67.9%) responded that STDs & STIs effect on reproduction. This findings are in the same line with the well known consequences of STD/STI on fertility. In this regard, (**Cates, 2007**) has highlighted that the long term consequences of untreated STDs include tubal infertility and the disease can be transmitted to fetus in pregnant women

Regarding to protection ways against STDs&STIs, the present study showed that majority of the sample (79.2%) knew the ways of protections of STDs/STIs. This is agreed with (**Ghareeb 2005**) in her study about Adolescent Girls' knowledge, attitudes and practices toward Sexual transmitted disease at Ain Shams University, who found that (78.6%) of the sample correctly identified the protection ways against STDs/STIs.

In relation to the sources of information about STDs & STIs, the present study observed that (Table 8), the School, university books (20.1%) was the main source, while (15.4%) from Mass media, (9.8%) from Friends & relatives, and only (7.1%) from Mother, Adolescent in school are also exposed to STD/STI message as a part of their science curriculum. Yet strong taboos remain about discussing topics related to sexuality openly. This finding agreed with (**Sarhan A. 2008**) in her study about perception of adolescent girls regarding the sexually transmitted diseases in Banha city, who found that the sources of

information were mainly the school (74.0%), and mass media (48.1%).

This finding disagree with (**Fageeh W. 2008**) in her study Awareness of Sexually Transmitted Diseases among Adolescents in Saudi Arabia, who observed that the sources of information were mainly the Internet (87%), books (73%), TV/radio (62%), friends (55%), newspapers/ magazines (50%) and family (37%).

The present study reinforce that schools and university play an important role and beneficial way to disseminate knowledge among population at this group, also clarifies the importance of mass media because it consider a very effective way to teach adolescents about such issues. The result finding revealed that the mother have a limited role as a source of information this may be attributed to culture and traditions among Egyptian mothers that prevent them to speak openly with their daughters about such issues. In addition the mother's knowledge regarding these issues may be limited and they embarrassed about such issues.

Concerning the suffering from symptoms of STD/STI, the present study show that (4.4%) of the studied sample suffer from STDs & STIs symptoms,. This finding is supported by (**Qayed 2003**) who studied reproductive health among adolescent in Assuit, and found that (48%) of less educated respondents had RTI/STDs symptoms.

Moreover, in the present study, more than one third of the student (38.9%) prefer to consult private clinic when suffer from STD/STI symptoms,. This finding in the same line with (**National Survey of Egyptian Adolescent 1999**), which found that (76.2%) of the adolescent prefer to consult private doctors. This report emphasized the importance of developing a special health center for adolescent females.

Regarding barriers against health seeking behavior among the study sample, considering the reason that prevent adolescent girls from seeking health care when suffering from STDs & STIs symptoms, it was found that Shyness was the most pronounced barrier (38.2%), Tradition come the next barrier (21.1%),. These findings were in accordance with a study conducted by (**Abdulrahman 2003**) on women's perception and their health seeking behavior towards symptoms of STDs/STIs. Which reported that the vast majority of the study sample was less likely to seek care at an earlier stage of infection. They tended to use traditional remedies in treating symptoms..

As regarding to the correlation between socio-demographic characteristics of the studied sample and their knowledge about STD/STI. The findings of the present study showed that, regarding to educational background, which focused on university female. The different types of educations (faculties)

have been considered. The study showed that there were moderate statistical significant difference (p-value =0.01**) between educational type (faculties) and their knowledge about STDs and STIs. In general, the knowledge was considerably good among medical female's students. This finding is expected but this finding is not supported by (**Fageeh W. 2008**) in her study about Awareness of STDs among Adolescents, who found that there was no difference between medical vs. non-medical professionals in the level of awareness about STDs/STIs.

Regarding the place of residence, it was observed that there was moderate statistical significant difference (P value=0.01**) between the place of residence of the studied sample and their knowledge. The knowledge was considerably good among girls at Urban area than in rural area (23% and 0.00%) respectively. This finding agreed with (**Sarhan A. 2008**) in her study about perception of adolescent girls regarding the sexually transmitted diseases in Banha city, who found that poor knowledge about STD/STI in rural community, attributed it to the illiteracy and lack of services in this communities, which reflects the stronger effect of the society norms and cultures. This is not supported by (**Mizanur, et al 2009**) in his study about adolescent knowledge and awareness of STDs/STIs and factors affecting them, who found that there was no difference between urban and rural areas in their knowledge.

As regard to mother's education, the findings of the presenting study revealed that there was mild statistical significant difference (p value = 0.05*) between mother's education and their girl's knowledge. This finding of the study was in the same line with (**Burazeri 2003**) who carried out a study on knowledge and attitude of undergraduate students toward STDs in Tirana. They reported a strong linear association between mother education and level of the knowledge on STDs among their study sample. The finding of the present study is expected because the educated mothers have a suitable background and were highly aware of STDs/STIs.

This finding disagreed with the result of (**Ghareeb 2005**) who carried out a study on adolescent girl's knowledge and practice regarding STDs. She found that the majority of parents had high school education, in the meantime there were no statistical significant difference between mother's education and their girl's knowledge regarding STDs.

Regarding to mother's occupation and level of the study sample knowledge It was observed that there were moderate statistical significant difference between mother's occupation and level of the study sample knowledge,. This finding agreed with (**Sarhan A. 2008**) in her study about perception of

adolescent girls regarding the sexually transmitted diseases in Banha city, who found that students with working mother have more knowledge, this may be due to working mothers more open in discussing sexually health issues with her daughters, as the probability that she has higher education is more than housewife.

From the results of the present study, it can be concluded that adolescent female don't have enough information about STDs/STIs to help them go through adolescence successfully and prepare them to prevent its complication, this may be due to the Egyptian culture. Traditionally in Egypt adolescent were shielded from information about reproduction and sexuality until the time of their marriage. Today, Egyptian has become more exposed to mass media explaining the dangers of STDs/STIs. So, the parents must be more aware to the needs and experience of their kids.

Health educators in the region should play a leading role in educating the population about prevention from STDs/STIs and put it into the public consciousness.

Educational activities at schools/Universities should be increased in order to better inform the students of these problems as it is very important to offer young people better and more correct information about STDs and HIV/AIDS (UNAIDS. 2007).

Conclusion:

Based on the present study findings, it can be concluded that:

The study concluded that lack awareness of adolescent girls about sexually transmitted disease and infections and they unable to differentiate between the terms sexually transmitted disease (STDs) and sexually transmitted infection (STIs). The Most of the studied students have unsatisfactory knowledge related to mode of transmission (63%), types (69.1%), and symptoms of STDs/STIs (85.8%). while they had satisfactory knowledge about curability, complication and protection ways. The sources of information were mainly the school/university (20.1%), and then mass media (15.4%). Shyness was the most pronounced barrier (38.2%) for seeking health care, Tradition come the next barrier (21.1%), followed by there is No special girl's center (10.3%).

The preferable methods that they select to improve their knowledge about STDs & STIs were distributing booklets include information about STDs & STIs (20.6%), and attended scientific symposium and seminars related to these diseases (16.9%). Knowledge was significantly higher among students

in urban areas ($p < 0.001$) than rural areas, and whose mothers able to read and write.

Recommendations:

In the light of the findings of the present study, the following recommendations are suggested:

- There is a strong need for creating awareness among adolescent female through health educational programs about (mode of transmission, types, signs & symptoms, treatment, complication, and protection ways) of STIs/STDs through mass media.
- Develop a special health center for adolescent females that motivate them to seek prevention, early diagnosis and treatment of STDs/STIs that may have positive effects on the adolescent health.
- More Studies and research to investigate other risk factors for acquiring STDs/STIs.

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