

## Awareness of Technical School Adolescent Students Regarding Aids / HIV in Tanta City, Egypt; (A Comparative Male and Female Study)

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### Abstract:

**The Aim Of This Study:** was to assess the level of awareness about HIV/AIDS among in-technical school adolescents in Tanta city.

**Background:** In Egypt, HIV is prevalent among the most productive population. About 84.3 % of the HIV infected Egyptians were between 15-49 years. There is an increase in the number of detected HIV infections in the youth and the share of those between 15-24 years is 14.1% of all detected HIV infections.

**Design:** A descriptive cross-sectional design was used.

**Methods:** school-based study was conducted using a self-administered structured questionnaire. The respondents were secondary technical school students' grade 3, 4, and 5 in Tanta city-Egypt.

**Results:** The majority of the studied students had poor awareness score about AIDS. However, the female students were more likely to have poor HIV/AIDS awareness compared to male students. About two thirds of the students have a lot of misconceptions related to transmission and prevention of HIV/AIDS.

**Conclusion & Recommendation:** lack of awareness and misconceptions about HIV/ AIDS are commonly among technical school adolescent students in Tanta city. HIV/AIDS information, education and communication activities need to be intensified in secondary technical schools, including further attention being put on gender and teaching methods of HIV/AIDS and its related issues.

**Keywords:** school, adolescents, HIV/AIDS, knowledge, awareness.

### I. Introduction

Over three decades after HIV/AIDS was first reported by the Communicable Diseases Control (CDC) in 1981. It is estimated that more than 39.5 million people worldwide infected with HIV. Sub-Saharan Africa, the global epicenter of the AIDS pandemic, still is home to over two-thirds of HIV infected people, with high prevalence among ages 15-49. More than 83% of all new infections in many African countries are among young and productive people in which females outnumber males<sup>(1-4)</sup>.

Egypt's first AIDS case was, declared in 1986, since then, there is a steady increase in the number of HIV/AIDS detected cases. Until the end of 2009, 3,919 HIV infected cases are detected, from them 2,920 (74.5 %) were Egyptians and 1,078 (27.5 %) developed AIDS. However, a higher estimates is provided by UNAIDS/WHO reaching 10,200 HIV infected cases in Egypt till the year 2008<sup>(1,5)</sup>.

HIV epidemic has not so far emerged as a serious health threat in Egypt. The epidemic may be growing arises from several factors that need to be taken into consideration. First, Egypt experiences a wide range of HIV transmission routes, and unprotected sexual transmission is overwhelmingly responsible for new infections in the country<sup>(5-7)</sup>.

Half of HIV infected cases are detected in urban settings and the share of youth and women are on rise. Until 2007, HIV infected cases were detected in almost all Egyptian governorates except South and North Sinai (Ministry of Health, 2009). However, there is marked variation in the cumulative number of HIV detected cases between the governorates. Highest numbers of HIV cases are, reported in Cairo, Giza, Alexandria, Gharbia and Dakahlia. Gharbia prevalence lies between 3 to 7 cases among 100.000 populations<sup>(6,7)</sup>.

HIV is prevalent among the most productive Egyptian population. 84.3 % of the HIV infected Egyptians were between 15-49 years. The share of those between 15-24 years is 14.1% of all detected HIV infections. At the same time, 77.5% of HIV detected cases were in males, especially since cultural norms may trap them in damaging patterns of risk behaviors, as practicing unprotected sex or injecting drugs which are increasingly recognized as fundamental forces that boost men's health vulnerabilities, while the number of infected females aged 15-24 years accounted for 24.2 % of all HIV detected cases in Egyptian youth<sup>(5-7)</sup>.

Acquired immuno deficiency syndrome (AIDS) caused by Human Immuno deficiency Virus (HIV) is posing a serious challenge to the conceptual foundations and the practice of development planning worldwide. More than half of the new HIV infections are occurring in young people between 15 to 24 years old, with approximately 7,000 young people becoming infected each day. HIV/AIDS is retarding economic

growth by destroying human capital by mainly affecting the young adults in this age group who are in their most productive ages of life. HIV/AIDS among adolescents is frequently the result of sexual and gender base violence, of rape, sexual relations with HIV positive partners, prostitution and sexual slavery<sup>(8-10)</sup>.

Adolescents are shrouded in myths and misconceptions about sexual health and sexuality. With the influence of infotainment media and the breakdown of traditional family structures, sexual behaviour among adolescents is in flux. In the absence of any organized institution for imparting sex education, young people tend to learn about sexual and reproductive health from unauthorized and unreliable sources resulting in perpetuation of myths and misconceptions about puberty, masturbation, sexual intercourse, safe sex, reproductive health and sexually transmitted diseases (STDs). Moreover, immature reproductive tracts of young people make them more susceptible to HIV/AIDS<sup>(11-13)</sup>.

According to EDHS 2008, comprehensive HIV knowledge remains insufficient in the population aged 15-24 years, especially females. Abstinence and condom use are the least to be, recognized as prevention measures. Several misconceptions exist and comprehensive HIV knowledge is unacceptably low in 15-24 years old group accounting for 11.2%. Between 2005 and 2008 females aged 15-24 years did not show any remarkable improvement in comprehensive HIV knowledge, 4.3 % in 2005 versus 4.8 % in 2009 (Ministry of Health, 2009)<sup>(14)</sup>.

The nurse must recognize the potential defects and embarrassments and assist teens by anticipating concerns. It is also important to allow teens to express themselves in their own language. Nurses must learn about common slang expressions and common misconceptions, so they do not miss important concerns that teenagers might have. Teens may have difficulty discussing topics that provoke a judgmental reaction, such as discussing sexually transmitted diseases<sup>(13, 15)</sup>.

In Tanta city, at El- Gharbia governorate, a large number of teenager adolescents are enrolled in technical schools, a significant proportion of rural students attend this schools away from their home village. The level of AIDS / HIV awareness and access to AIDS / HIV information has been matters of concern. Looking at the above, an ardent need was felt to assess the awareness level of adolescents regarding AIDS \ HIV.

**The Aim of this study was to:** Assess awareness of technical school adolescent students regarding AIDS / HIV in Tanta city.

**Research questions:**

1. What is the level of awareness about HIV/ AIDS among male and female adolescent students in Tanta technical schools?
2. What are the misconceptions that those adolescents have regarding transmission and prevention of AIDS/ HIV?
3. Is there a difference between level of awareness among male and female adolescent students?

## **II. Materials And Methods**

**Materials:**

**Design;** A descriptive cross-sectional design was used in this study.

**Setting;** this study was conducted in the governmental technical secondary schools in Tanta city. Tanta city include two educational districts (West & East) which include 8 secondary technical schools.

**Subjects:** A representative number of 2320 adolescent students (boys& girls) from grade 3, grade 4, and grade 5 were included in the study. They were selected randomly from the previous setting by proportion allocation method representing 14% according to each district and sex.

**Data collection tool:** A structured questionnaire was prepared by the researchers and consisted primarily of closed-ended questions except one question about the definition of AIDS. It comprising of 15 questions on the knowledge and awareness about various aspects of HIV/AIDS – definition, severity, infectivity, modes of transmission, signs & symptoms, treatment, and prevention. These questions were subsequently coded to as (0) for ‘wrong answer’ or ‘do not know’ and (1) for each correct answer’. A sum score was constructed to produce a knowledge score ranging from 0 to 27. A higher score indicates a higher proportion of correct responses.

### **Methods**

**1-Obtaining approvals:**

Before conducting the study, a written permission letter was obtained from faculty of nursing, Tanta University, directed to the Ministry of Education and subsequently official letters were directed to each director of the selected schools to obtain their approval and cooperation for carrying out the study.

**2-Developing the tools:**

The structured questionnaire sheet was developed based on literature review <sup>(4,13,16)</sup>. The developed tool was distributed to a jury of 5 academic professors in public health to test its content validity. Accordingly corrections and modifications were done.

A pilot study was carried out on 20 students to test the tool for relevance, clarity and reliability. Data collected from pilot study of the study were excluded from the final data analysis.

**3- The actual study.**

- The collection of the data continued during a period of 8 weeks starting from April 2014 till the end of May 2014.
- Ethical considerations: Informed consent was obtained from the selected students to participate in the study and informed them about the purpose of the study and the confidentiality of any information given to the researcher.
- The students were given this structured HIV awareness questionnaire and requested to fill it up and return within minutes. Any kind of discussion with the teachers or fellow students while giving their responses was discouraged. For ethical consideration the students were told about all correct information about the disease and its transmission and prevention after completing the filling of the questionnaire sheet and collecting it.
- The total awareness scores of the studied students regarding AIDS was classified into two three categories as follows:
  - \* Good:  $\geq 65\%$  of the total score.
  - \* Average  $\geq 50\%$  -< 65% of the total score
  - \* Poor: < 50 % of the total score

**4- Statistical analysis:** The data were coded, entered and analyzed using SPSS (version 20). Descriptive statistics (frequency numbers and percentages) identified demographic characteristics and students responses to the questionnaire. Chi-square test analyzes the difference between male and female awareness. Statistical significant difference was set at P value <0.05%.

**III. Results**

Table (1) shows distribution of the studied students by sex according to their age and residence. The table illustrated that, about three quarters (74.6%) of the studied students their ages were 17 or 18 years, while the rest (25.4%) their age were ranged from 19 to 21 years. In relation to the residence, the majority (92.8%) of male students were from rural areas compared to slightly more than one half (53.4%) of female students.

**Table (1): Distribution of the studied students by sex according to their age and residence**

Variables	Sex				Total (n=2320)	
	Male (n=1137)		Female (n=1183)			
	No	%	No	%	No	%
<b>Age in years</b>						
17 -	486	42.7	405	34.2	891	38.4
18 -	373	32.8	467	39.5	840	36.2
19 – 21	278	24.5	311	26.3	589	25.4
<b>Residence</b>						
Rural	1055	92.8	632	53.4	1687	72.7
Urban	82	7.2	551	46.6	633	27.3

Table (2) shows percent distribution of the studied sample by sex according to their awareness about HIV/AIDS. The table revealed that, slightly less than half (48.6%) of the studied students did not hear about AIDS, and despite it the majority of them answered the subsequent questions. Slightly less than one half (48.8%) of those who hear about AIDS gave complete correct answer about it. In addition, the majority know that AIDS is a dangerous disease, and about three quarters (77.8%) of them know that it is infectious. Moreover, about tow fifth (40.9 &40.1%) of the studied sample did not know the correct risk group and the causative agent of AIDS respectively.

Regarding to mode of transmission, the table showed that, only 0.5% of the studied sample knew the different correct modes of transmission of AIDS, and slightly more than two thirds (68.1%)of them either did not knew or gave wrong answer to the main mode of transmission. The majority (99.8% & 94.1%) of the studied students did not knew or knew incorrect incubation period and infectivity period of AIDS respectively.

In relation to symptoms of AIDS, only few percents (5.8%) of the studied students knew most of the correct symptoms. The table revealed also that, about two fifth (40.5%) and less than half (45.4%) of the

studied students reported the presence of effective treatment and vaccine for AIDS respectively. Only 0.3% of the studied students knew the different correct method of prevention of AIDS.

The table showed that, male students had higher awareness than female students regarding each item of comprehensive awareness of AIDS. There was statistical significance difference between male and female students in relation to each item of comprehensive awareness of AIDS ( $P < 0.001^*$ ).

**Table (2): Percent distribution of the studied sample by sex according to their comprehensive awareness about AIDS**

Variables	Sex				Total(n=2320)		X <sup>2</sup>	P
	Male (n=1137)		Female(n=1183)		No	%		
	No	%	No	%				
<b>Hearing about AIDS</b>								
Yes	701	61.7	491	41.5	1192	51.4	94.221	< 0.001*
No	436	38.3	692	58.5	1128	48.6		
<b>If yes Definition of AIDS</b>								
complete correct definition	(n=701)		(n= 491)		(n= 1192)		233.067	< 0.001*
Incomplete correct definition	393	56.1	184	37.5	577	48.4		
Wrong definition	137	19.5	45	9.1	182	15.3		
<b>Aids is a dangerous disease</b>								
Correct	1095	96.3	1045	88.3	2140	92.2	55.197	< 0.001*
Incorrect	27	2.4	61	5.2	88	3.8		
Do not know	15	1.3	77	6.5	92	4.0		
<b>Aids is an infectious disease</b>								
Correct	890	78.3	914	77.3	1804	77.8	16.074	< 0.001*
In correct	185	16.3	157	13.3	342	14.7		
Do not know	62	5.5	112	9.4	174	7.5		
<b>Risk Group</b>								
Correct	478	42.0	322	27.2	800	34.5	260.999	< 0.001*
In correct	341	30.0	220	19.4	561	24.6		
do not know	318	28.0	631	53.3	949	40.9		
<b>Causative Agent</b>								
Correct	710	62.4	514	43.4	1224	52.8	111.752	< 0.001*
Incorrect	95	8.4	71	6.0	166	7.1		
do not know	332	29.2	598	50.5	930	40.1		
<b>Different modes of Transmission</b>								
complete correct	5	0.4	6	0.5	11	0.5	133.777	< 0.001*
incomplete correct	1074	94.5	923	78.0	1997	86.1		
Do not know	58	5.1	254	21.5	312	13.4		
<b>The main mode of Transmission</b>								
Correct	528	46.4	212	17.9	740	31.9	398.555	< 0.001*
In correct	290	25.5	257	21.7	547	23.6		
Do not know	319	28.1	714	60.4	1033	44.5		
<b>Incubation period of AIDS</b>								
correct	4	0.4	-	-	4	0.2	71.986	< 0.001*
Incorrect	478	42	309	26.1	787	33.9		
do not know	655	57.6	874	73.9	1529	65.9		
<b>Infectivity period of AIDS</b>								
correct	65	5.7	71	6.0	136	5.9	64.702	< 0.001*
Incorrect	530	46.5	396	33.5	926	39.9		
Do not know	542	47.7	716	60.5	1258	54.2		
<b>Symptoms of AIDs</b>								
Complete correct	86	7.6	49	4.1	135	5.8	78.913	< 0.001*
Incomplete correct	664	58.4	519	43.9	1183	51.0		
Do not know or wrong answer	387	34.0	49	4.1	1002	43.2		
<b>Presence of effective treatment to AIDs</b>								
correct	542	47.7	398	33.6	940	40.5	108.167	< 0.001*
Incorrect	543	47.8	587	49.6	1130	48.7		
do not know	52	4.6	198	16.7	250	10.8		
<b>Presence of vaccine for AIDS</b>								
correct	565	49.7	488	41.3	1053	45.4	62.466	< 0.001*
incorrect	485	42.7	475	40.2	960	41.4		
do not know	87	7.7	220	18.6	307	13.2		
<b>Method of prevention</b>								
complete correct	6	0.5	2	0.2	8	0.3	150.925	< 0.001*
incomplete correct	857	75.4	606	51.2	1463	63.1		
do not know or wrong answer	274	24.1	575	48.6	849	36.6		

**Table 3**, representing percent distribution of the studied sample by sex according to their believes about transmission of AIDS. More than three quarters (83.5%) of male students compared to less than half (48.5%) of female students believe that AIDS can be transmitted through sexual relations. while, more than half of both male and female students (55.7% and 57.1%) respectively believe that blood transfusion can transmit AIDS. Only about one tenth (13.5 and 12.4%) of both groups respectively believe that drug injection can transmit AIDS and small percentage (6.2 and 7.9%) of them respectively believe in breastfeeding as a method of transmitting AIDS.

On the other hand, there were valuable Percentages of both male and female adolescents respectively have wrong believes that AIDS can transmit through eating with infected person (13.3 and 16.4%), using public toilets ( 19.7 and 12.1%), tooth brush (15.9 and 13.2 %), coughing droplet ( 11.3 and 8.5%), hugging (8,4 and 6.9%), insect bites (4.2 and 10.4 %), kissing ( 15.5 and 9.7%), and swimming in public swimming pools ( 9.3 and 8.8 %).

**Table (3):** Percent distribution of the studied sample by sex according to their believes about transmission of AIDS

Variables	Sex				Total (n=2320)		X <sup>2</sup>	P
	Male (n=1137)		Female(n=1183)		No	%		
	No	%	No	%				
<b>Aids transmits through shaking</b>								
Yes	33	2.9	64	5.4	97	4.2	9.100	0.003*
<b>Aids transmits through hugging</b>								
Yes	95	8.4	82	6.9	177	7.6	1.668	0.197
<b>Aids transmits through sexual relation</b>								
Yes	949	83.5	574	48.5	1523	65.6	313.931	< 0.001*
<b>Aids transmits through dentist instruments</b>								
Yes	103	9.1	141	11.9	244	10.5	5.039	0.25*
<b>Aids transmits through blood transfusion</b>								
Yes	633	55.7	675	57.1	1308	56.4	0.453	0.501
<b>Aids transmits through breast feeding</b>								
Yes	70	6.2	93	7.9	163	7.0	2.580	0.108
<b>Aids transmits through kissing</b>								
Yes	176	15.5	115	9.7	291	12.5	17.524	< 0.001*
<b>Aids transmits through drug injection</b>								
Yes	153	13.5	147	12.4	300	12.9	0.547	0.460
<b>Aids transmits through organ transplantation</b>								
Yes	197	17.3	188	15.9	385	13.6	0.862	0.353
<b>Aids transmits through tooth Brush</b>								
Yes	181	15.9	156	13.2	337	14.5	3.486	0.062
<b>Aids transmits through ear piercing procedure</b>								
Yes	140	12.3	95	8.0	235	10.1	11.681	0.001*
<b>Aids transmits through use public toilet</b>								
Yes	224	19.7	143	12.1	367	15.8	25.234	0.001*
<b>Aids transmits through eating with infected person</b>								
Yes	151	13.3	194	16.4	345	14.9	4.454	0.035*
<b>Aids transmits through insect bites</b>								
Yes	48	4.2	123	10.4	171	7.4	32.387	< 0.001*
<b>Aids transmits through bathing in public swimming pools</b>								
Yes	106	9.3	104	8.8	210	9.1	0.199	0.656
<b>Aids transmits through coughing droplet</b>								
Yes	129	11,3	100	8.5	229	9.9	5.453	0.020*

Table 4, Percent distribution of the studied sample by sex according to their believes about methods of prevention of AIDS. There are two thirds (67%) of male students compared to only one third (31.2%) of female students believe that avoiding adultery is an essential method for AIDS prevention with a significant difference between the two groups (p < 0.001). More than one half (55.7% and 57.1%) of both male and female students believe that avoiding blood transfusion from infected person can prevent AIDS. Slightly more than one quarter (25.2%&29.9%) of males and less than one quarter (23.0%&21.4%) of females respectively believe that sterilization of instruments and single use of syringe are effective methods of prevention of HIV/AIDS infection. While, 13.9 and 16.6% of male and female groups respectively believe in avoiding drug addiction as a method of AIDS prevention and very small percentage (2.7 and 5.7%) only of the two groups respectively believe that using condom is an effective method of AIDS prevention with a significance difference between the two groups (p= 0.001).

On the other hand, there is more than one third (40.5 and 34.5%) of male and female students respectively have wrong believes that isolate AIDS patients is an effective method of prevention with a significance between the two groups (P=0.003). About 28.1% of males and 16.5% of females think that avoid

hugging infected person can prevent transmission of AIDS and 17.9% and 14.6% of both groups respectively think also that avoid eating with infected person can prevent occurrence of AIDS. In addition, 16.1% and 11.5% of male and female students respectively have also wrong believe that avoid shacking infected person is a method of prevention and 11.8% and 9.7% of both groups respectively believe also that avoid using public toilets is a method of prevention.

**Table (4): Percent distribution of the studied sample by sex according to their believes about methods of prevention of AIDS**

Variables	Sex				Total (2320)		X <sup>2</sup>	P
	Male (n=1137)		Female (n=1183)		No	%		
	No	%	No	%				
<b>Isolate patientsa</b>								
Yes	460	40.5	408	34.5	868	37.4	8.821	0.003*
<b>Avoid adultery (abnormal sexual relations)</b>								
Yes	762	67.0	369	31.2	1131	48.8	297.851	< 0.001*
<b>Avoid blood transfusion from infected person</b>								
Yes	633	55.7	675	57.1	1308	56.4	0.453	0.501
<b>Avoid bath in public swimming pools</b>								
Yes	105	9.2	86	7.3	191	8.2	2.964	0.085
<b>Avoid using public toilet</b>								
Yes	134	11.8	115	9.7	249	10.7	2.579	0.108
<b>Avoid eating with infected person</b>								
Yes	203	17.9	173	14.6	376	16.2	4.454	0.035*
<b>Avoid hugging infected person</b>								
Yes	320	28.1	195	16.5	515	22.2	45.646	< 0.001*
<b>Avoid visiting a dentist</b>								
Yes	37	3.3	56	4.7	93	4.0	3.298	0.069
<b>Sterilization of doctor instruments</b>								
Yes	286	25.2	272	23.0	558	24.1	1.483	0.223
<b>Single use of syringe</b>								
Yes	340	29.9	253	21.4	593	25.6	22.103	< 0.001*
<b>Avoid participate shaving materials</b>								
Yes	193	17.0	154	13.0	347	15.0	7.136	0.008*
<b>Avoid drug addiction</b>								
Yes	158	13.9	196	16.6	354	15.3	3.201	0.074
<b>Avoid shacking infected person</b>								
Yes	183	16.1	136	11.5	319	13.8	10.339	0.001*
<b>using condom</b>								
Yes	31	2.7	68	5.7	99	4.3	12.958	< 0.001*

Table (5) represents Percent distribution of the studied sample by sex according to their total score of awareness about AIDS. It shows that the mean total score of awareness for the total surveyed students is 7.6690±3.60488. Awareness mean score for male students is 8.9164±3.14820 compared to 6.4700±3.61032 for female students.

The majority (93.7 and 95.5%) of male and female students respectively had poor comprehensive awareness score compared with only 5.0% and 4% of both groups respectively had average score and 1.3% and 0.5% of them respectively had good awareness score. There was a significant difference found between male and female adolescent in relation to their total score of comprehensive awareness about AIDS (X<sup>2</sup> = 369.927 and P<0.001).

**Table (5): Percent distribution of the studied sample by sex according to their total score of awareness about AIDS**

Variables	Sex				Total (2320)		X <sup>2</sup>	P
	Male (n=1137)		Female (n=1183)		No	%		
	No	%	No	%				
<b>Good (≥ 65%)</b>	15	1.3	6	0.5	21	0.9	369.927	< 0.001*
<b>Average (50 &lt; 65%)</b>	57	5.0	47	4.0	104	4.5		
<b>Poor (&lt; 50%)</b>	1065	93.7	1130	95.5	2195	94.6		
<b>Mean ± SD</b>	8.9164±3.14820		6.4700±3.61032		7.6690±3.60488			

#### IV. Discussion

Though HIV/AIDS is one of the worst health crises in recorded history of the world, it has moved from being a primarily health issue, to be a developmental crisis. More than 82% of all new infections in many African countries are among youth<sup>(17)</sup>. The current study revealed that, the majority of the studied students had

poor score of comprehensive awareness about AIDS. However, the female students were more likely to have poor comprehensive HIV/AIDS knowledge compared to male students. It may be attributed to lack of formal and informal health education classes about HIV/AIDS infection in Egypt and the reluctance of mass media education about AIDS in recent years. In the Egyptian society, males are slightly aware than females because males has less constrictions to access and watch sex films than females – especially among those students affiliated to technical schools- from which males can get some awareness about HIV/AIDS. The result of the current study is in consistent with results of Oljira L et al<sup>(18)</sup>, as it showed that, only about a quarter of the in-school adolescents had comprehensive HIV/AIDS knowledge and females were less likely to have comprehensive HIV/AIDS knowledge. On the other hand, Petros P<sup>(17)</sup> is contradicting and declared that the majority of Ethiopian students heard about and have awareness of HIV/AIDS through its commendable mainstreaming interventions, including HIV prevention, education and training programs, community dialogs, care and psychosocial support.

HIV/AIDS infection is rapidly spreading all over the world including Egypt. Unfortunately, even in the 21st century, awareness of people particularly school students about the disease is still low. In the current study, although a big percentage of students reported that, they never hear about AIDS, they responded to the subsequent questions about the disease. The largest percentage of the students reported that, AIDS is a dangerous disease, but non-little percentage of them did not know that it is infectious and very little percentage of them knew all correct modes of transmission. Only less than quarter of them knew that sex is the main mode of transmission. This can be due to that, the majority of students were from rural areas with low access to health information. Moreover, the Egyptian culture of the rural prevents students to discuss diseases and issues related to sex particularly among females.

In addition, about half of the studied students did not know the etiological agent of HIV. A big percentage did not know the correct answer or gave wrong answers for incubation period, infectivity period, symptoms and prevention of HIV/AIDS. These results are in agreement with the findings of Oyo-Ita AE., et al<sup>(11)</sup> as it showed that, about a third (31.2%) of the participants did not know the etiological agent of HIV/AIDS and the majority (89.5%) did not know any sign or symptoms of AIDS.

Scientific knowledge about HIV/AIDS is essential for the adolescents to take rational decisions regarding sexual life and how they can protect themselves against HIV infection<sup>(8)</sup>. The present study revealed that although a large percentage of the studied students reported sex and blood as modes of transmission of HIV/AIDS, a non-small percentage had false believes that HIV/AIDS can transmitted through shaking, hugging, kissing, public toilet, eating with infected person, bathing in public swimming pools, and coughing droplet, particularly among females. This result is supported by the result of Singh A., and Jain S<sup>(8)</sup>, who reported that, nearly one-fourth of the adolescents thought that HIV/AIDS could be transmitted by mosquito bite and 9.8% thought that HIV/AIDS could be transmitted by eating with infected person. Moreover, a study carried out by Gonçalves H et al<sup>(19)</sup> revealed that 25.6% and 16.2% of adolescents believe that HIV/AIDS could be transmitted by kissing on the mouth and hugging someone with AIDS respectively. Results of a study done by Bastien S<sup>(20)</sup> in Tanzania, revealed that, high percentage of respondents reporting that HIV/AIDS could be transmitted via shaking, hugging, and by a mosquito bite. Removal of such misconceptions among youth and the general population is very important. Or else, it might lead to create a phobia among the community population.

The current study revealed that about two thirds of male participant students and less one third of females reported that HIV/AIDS infection could be prevented via avoiding adultery. In relation to condom, only few percents of males and females students knew that its use could protect against HIV/AIDS infection. Such finding may be related to weak role of schools and mass media toward youth and community health education about HIV/AIDS especially regarding condom and its use. Petros P<sup>(17)</sup> reported contradicted results about condoms; almost all respondents have heard about condoms, the mass media was found to be a major information source about it.

On the other hand, one third of the studied students had wrong believes that HIV/AIDS can be prevented by isolation of infected one. Less than one fifth of them consider avoiding the eating, hugging, shacking, sharing hygienic tools with infected person, as methods of HIV/AIDS prevention. This false believes may be attributed to Egyptian community stigma toward HIV/AIDS infected persons. Therefore, it was so important to explore adolescent students' awareness' about HIV/AIDS.

## **V. Conclusion and Recommendations**

In conclusion, the majority of technical-school adolescents found to have poor HIV/AIDS awareness. Although the female adolescents are highly vulnerable to HIV infection and its effects, they were by far the less likely to have HIV/AIDS awareness. About two thirds of the students have a lot of misconceptions related to transmission and prevention of HIV/AIDS. This advocates the need of properly formulated awareness campaigns on HIV/AIDS for schools. HIV/AIDS information, education and communication activities need to be intensified in secondary technical schools, including further attention being put on gender and teaching

methods of HIV/AIDS and its related issues. Mass media as a source of information have to allow in-depth knowledge of the disease. Parents, teachers, as well as health workers should be more involved in educating the youth on this dreaded disease.

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### **References**

- [1]. UNAIDS (2010), Report on Global AIDS Epidemic, Geneva.
- [2]. World Bank (1999), *Confronting AIDS: Public Priorities in a Global Epidemic*, revised ed., Oxford University Press, Oxford.
- [3]. Petros P (2010). *HIV/AIDS and Development*, Academic Publishing, Germany, ISBN 978-3-8383-9881-5.
- [4]. Judith A A, Cherie R and Kristine D W (2014). *Community public health nursing: promoting the public health*. 8<sup>th</sup> edition. Lippincott Williams & Wilkins, : 511, 257.
- [5]. UNGASS Country Progress Report January 2008- December 2009. Arab Republic of Egypt.. [www.unaids.org/.../egypt\\_2010\\_country.....](http://www.unaids.org/.../egypt_2010_country.....)
- [6]. Egypt Program Profile: HIV and AIDS – UNICEF. [www.unicef.org/egypt/HIV.pdf](http://www.unicef.org/egypt/HIV.pdf)
- [7]. Egypt's progress towards achievement of the Millennium Development Goals 2010.
- [8]. Anjali Singh and Shikha Jain (2009). AWARENESS OF HIV/AIDS AMONG SCHOOL ADOLESCENTS IN BANASKANTHA DISTRICT OF GUJARAT. *Health and Population: Perspectives and Issues*, Vol. 32 (2): 59-65.
- [9]. Payal Mahajan and Neeru Sharma (2005). Awareness Level of Adolescent Girls Regarding HIV/AIDS (A Comparative Study of Rural and Urban Areas of Jammu). *J. Hum. Ecol.*, 17(4): 313-314.
- [10]. Karen S and Sharyn J (2009). *Community health nursing: caring for the public's health*. 2<sup>nd</sup> edition. Jones and Bartlett Publishers, 459-467.
- [11]. E. Oyo-Ita, B. M. Ikpeme, A. J. Etokidem, J. B. Offor, 1E. O. Okokon and S. J. Etuk (2005). Knowledge of HIV/AIDS among secondary school adolescents in Calabar- Nigeria. *Annals of African Medicine*, Vol. 4, No. 1: 2 – 6.
- [12]. DHONDIYAL M and VENKATESH R (2006).. Knowledge Regarding Human Sexuality among Adolescent Girls. *Indian Journal of Pediatrics*, Vol. 73, p 743.
- [13]. Marcia S and Jeanette L(2008). *Public health nursing: population- centered health care in the community*. 7<sup>th</sup> edition. Mosby, 768-769, 650-651.
- [14]. El-Zanaty F and Ann W. *Egypt Demographic and Health Survey 2008*. Cairo, Egypt: Ministry of Health and Population, National Population Council, and ORC Macro2009;180. [http://www.measuredhs.com/pubs/pub\\_details.cfm?filename=FR176.pdf&id=586](http://www.measuredhs.com/pubs/pub_details.cfm?filename=FR176.pdf&id=586)
- [15]. Gail H, Rosanna F. *Community and public health nursing: Evidence for practice*. Lippincott Williams & Wilkins, 2012: 753-754.
- [16]. Aaro LE., Breivik K., KleepK., Kaaya S., Onya HE., Wubs A., Helleve A., and Flisher AJ (2011). An HIV/AIDS knowledge scale for adolescents: item response theory analysis based on data from South Africa and Tanzania. *Health Education Research*. 26(2): 212-224.
- [17]. Petros P (2014). Risk perception, HIV/AIDS related knowledge, attitude and practice of the university community: The case of Ethiopian Civil Service College. *HIV & AIDS Review*: 13: 26-32.
- [18]. Oljira L, Berhane Y and Worku A (2013). Assessment of comprehensive HIV/AIDS knowledge level among in-school adolescents in eastern Ethiopia. *Journal of International AIDS Society*, , 16:17349 <http://www.jiasociety.org/index.php/jias/article/view/17349> <http://dx.doi.org/10.7448/IAS.16.1.17349>
- [19]. Gonçalves H., González-Chica DA., Menezes A Hallal PC., Araújo CL., and Dumith SC (2013). HIV/AIDS transmission knowledge among adolescents aged 11 years from Southern Brazil. *Rev Bras Epidemiol*16(2): 420-31.
- [20]. Bastien S (2008). Out-of-school and 'at risk Socio-demographic characteristics, AIDS knowledge and risk perception among young people in Northern Tanzania. *International Journal of Educational Development*. 28 : 393–404.