

## The Effect of Educational Guidelines Nursing Program regarding Sexually Transmitted Diseases among Male Nursing Students

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### Abstract

**Background:** Sexually transmitted diseases are major global public health problems that are the main cause of acute illness, infertility, long-term disability and death. Aim of this study was to evaluate the effect of educational guidelines nursing program regarding sexually transmitted diseases among male nursing university students. Quasi-experimental pre-post -test design was utilized to fulfill the aim of this study. A Purposive sample of a total 108 male nursing students which included 75 in 1st academic year & 33 in 2nd year at Faculty of Nursing Benha University. Data were collected through a structured interviewing questionnaire. **Results:** there was a highly statistically significant difference related to all items of knowledge regarding STDs pre -test and immediately after program implementation ( $P < 0.001^{**}$ ). **Conclusion:** the current study found that a two session educational intervention was beneficial in increasing STDs knowledge of university students. **Recommendation:** Application of continuous comprehensive health education programs is recommended for students in different grades to focus on STDs with implementation of a practical training course to improve the nursing students' knowledge.

**Key words:** Sexually transmitted diseases, infertility, illness.

### Introduction

The World Health Organization defines adolescents as people between 10 and 19 years of age. Individuals within this age range have passed through childhood but are not yet considered adults. Adolescence is an important transitional phase, during which humans experience rapid physical, mental, and social development (WHO, 2012).

Lacks of information encourage sexual risk behavior, thus increasing individuals' chances of acquiring STDs. In recent years, STDs have occurred mostly among young people, with the highest reported rates found among those aged 15-24

years so the term sexually transmitted diseases refer to a variety of clinical syndromes caused by pathogens that can be acquired and transmitted through sexual activity and non-sexual means such as via blood or blood products. STDs can also be transmitted from mother to child during childbirth. STDs are caused by more than 30 different pathogens including bacteria, viruses, protozoa, fungus, and ecto-parasites and also considered a significant cause of morbidity among adolescents with multiple consequences (Henrique and Ana, 2014).

According to Healthy People 2020 (2010), Biological, social, economic and behavioral factors that affect the spread of STDs are identified and include: asymptomatic nature of STDs, age and gender disparities, lag time between exposure and symptoms, racial and ethnic disparities, poverty, substance abuse, sexuality secrecy and sexual networks.

The college years are recognized as a time when young adults tend to explore their sexuality, often leading to high-risk sexual behaviors such as unprotected intercourse, infidelity, and anal intercourse. These behaviors place college students at an increased risk for STDs. Misconceptions among college students regarding STDs have been identified to influence sexual behavior (Goldsberry and Jennifer, 2016).

To protect adolescents from acquiring STDs diseases, there is a need to educate them on STD prevention by providing them with relevant information and equipping with the life skills that will enable them to put knowledge into practice. STD-prevention their complications education programs implemented by governments and international organizations in two developing and developed countries to promote healthy sexual behaviors, strengthen community capacity, and increase access to quality services (CDC, 2011).

The nurse plays an important role in comprehensive sexually education programs of practicing abstinence, counseling, discussing partners' sexual history, have regular medical checkups, learn the symptoms of STDs, vaccines against HPV and hepatitis B are available, using condoms consistently, reduction of number of partners and retesting after treatment do a better job of preventing STD (Goldsberry and Jennifer, 2016).

### **Significance of the study:**

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Worldwide, about one million people acquire a new curable STD every day; and more than 357 million new cases occur each year. Globally, 2.0 million people became infected by HIV virus in 2014 and 1.2 million people died from HIV-related causes. An estimated 36.9 million people were living with HIV at the end of 2014(WHO, 2014).

The prevalence and incidence of STDs in Egypt have remained mostly unknown, and its impact on public health was largely undetermined despite the clear social changes, the emergent risk groups, the demographic and migratory trends. Patients with STDs are receiving suboptimal treatment. Egypt faces several challenges in maintaining a low prevalence of STDs including HIV/AIDS including poor surveillance system, health inequality with weak access to reproductive health care, unexpected influx of refugees, inferior status of females , presence of pervasive fear and stigmatization and even criminalization (Amin, 2014).

### **Aim of the study**

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This study aimed to evaluate the effect of educational guidelines nursing program regarding sexually transmitted diseases among male nursing university students.

### **Research hypothesis**

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Students who will receive an educational program will show an improvement in their knowledge after application of program.

### **Subjects and method**

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Design Quasi-experimental pre-post test design was used to achieve the aim of the study.

### Settings

This study was carried out at the Faculty of Nursing in Benha University.

### Study Sample

A purposive sample consisted of (108) male nursing students which included 75 in 1st academic year & 33 in 2nd year of Faculty of Nursing Benha University.

### Inclusion Criteria are as follow:

- Age from 18 to 25 years.
- Single.
- 1<sup>st</sup>&2<sup>nd</sup> academic year's male students.

### Tools of data collection

A structured interviewing questionnaire:

It was designed by the researcher under guidance of supervisors; it was written in English language in the form of close and open ended questions and consisted of three parts:

Part I- Personnel and socio demographic data (7questions), such as (age, academic year, level of education of their parents, residence, with whom they live...etc.).

Part II- History of STDs (4 questions), such as (having any type of STDs, times of occurrences, causes of not going to doctor.....etc.).

Part III- Assessment of the participants' knowledge regarding STDs through (56 questions) in the form of multiple choice questions. These questions tested the participants' knowledge regarding causes, types, and ways of transmission of STDs, as well as signs &symptoms, high risk factors,

complications of STDs and its preventive measures....., etc).These were used as pre-post test.

### A written permission

An official permission was obtained from the dean of Benha Nursing Faculty contains the title and objectives of the study and directed to the chairman of medical surgical nursing department to conduct the study.

### Ethical considerations

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Ethical aspects considered before starting the study were included:

- The aim of the study was explained to each student before applying the tools to gain their confidence and trust.
- An oral consent was obtained from each student to participate in the study
- The study has no any physical, social or psychological risks on the participant.
- Data were collected and treated confidentially.
- Freedom to withdraw from participation in the study at any time.

### Data collection procedure:

To fulfill the aim of the study, the following phases were adopted. Interviewing and assessment phase, designing of the program phase, implementation of the program phase and evaluation of program phase. These phases were carried out from the beginning of February, 2016 and completed at the end of April, 2016. covering three months.

The researcher visited the previously mentioned setting two days/week, (Sunday, Tuesday), from 9.00 Am to 2.00 Pm.

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- a) An educational program was designed and implemented through the following steps :
1. Assessment of the knowledge of male students regarding S.T.D through using the developed tools as pre-test.
  2. Analysis of pre-test findings to detect male student's needs toward STDs Based on results obtained from preprogram assessment. The educational program was developed, session's number and its contents, different methods of teaching, and instructional media were determined.
  3. After the pre-test and analysis, educational programs were implemented.
  4. Program's objectives were constructed.
  5. Implementation of educational program:

Educational program was conducted through two sessions. Total time for all sessions took about one hour and half, each session took about 45-60 minutes. At the beginning of the session students were oriented with the program contents that include the following items:

- Sexually transmitted diseases (definition, causative organism, types, signs & symptoms, mode of transmission, risk factors, complications, preventive measures and nursing role regarding STDs ).

- The impact of disease on the general health especially reproductive health.

- Different methods of teaching were used such as group discussion. Instructional media included educational booklet about

STDs with colored posters contain all content of program distributed to all study sample to achieve its objectives.

The effect of educational program (students' knowledge regarding STDs post program) was evaluated by the end of the sessions using post- test.

Limitation of the study:

- Sexual and reproductive health is a sensitive topic; so that some students (non-responsive sample) refused to participate in our study.
- Some students were absent extra days which made time of conducting study longer.
- About 25 participants were dropped from the study due to the lack of complete information.
- Sometimes the sessions were protracted due to noise and other individuals' interruption.

Statistical design

After completion of data collection, computerized data entry and statistical analysis were fulfilling scored using Statistical package for social science (SPSS). (Version 24)

**Data summarizing uses:**

Arithmetic mean: as average describing the central tendency of observation.

The standard deviation: as a measure of dispersion of results around the mean (for quantitative variable).

The observed difference associated was considered as following:

Qualitative data were compared using chi square test ( $\chi^2$ ) as the test of significance. The p- value is the probability that an observed difference is due to chance and not a true difference. A significance level

value was considered when  $p\text{-value} \leq 0.05$  and a highly significance level was considered when  $p\text{-value} \leq 0.001$ , while  $p\text{-value} > 0.05$  indicates non- significance results.

## Results

**Table (1):** Distribution of studied male students regarding their personal characteristics. n= (108)

personnel characteristics	N=108	%
<b>Age in years</b>		
18-	30	27.8
19-	40	37.0
$\geq 20$	38	35.2
<b>Mean <math>\pm</math>SD</b>	<b>19.20<math>\pm</math>.78251</b>	
<b>Academic year</b>		
First	78	72.2
Second	30	27.8
<b>Working beside study</b>		
Yes	68	63.0
No	40	37.0
<b>Residence</b>		
Urban	49	45.4
Rural	59	54.6
<b>Students live with</b>		
Parents	81	75.0
Friends	19	17.6
Alone	8	7.4
<b>Father education</b>		
Primary	9	8.3
preparatory	7	6.5
Secondary	46	42.6
University	46	42.6
<b>Mother education</b>		
Primary	10	9.3
preparatory	14	13.0
Secondary	46	42.6
University	38	35.2

**Table (1):** showed that 37.0% aged from 19 years old, with the mean age of (19.20 $\pm$ .78251).72.2% are at the first academic year.54.6% of them were resident at rural settings. In addition 75.0% of them lived with their parents. Moreover 42.6% of their fathers had a secondary and university educational qualification.

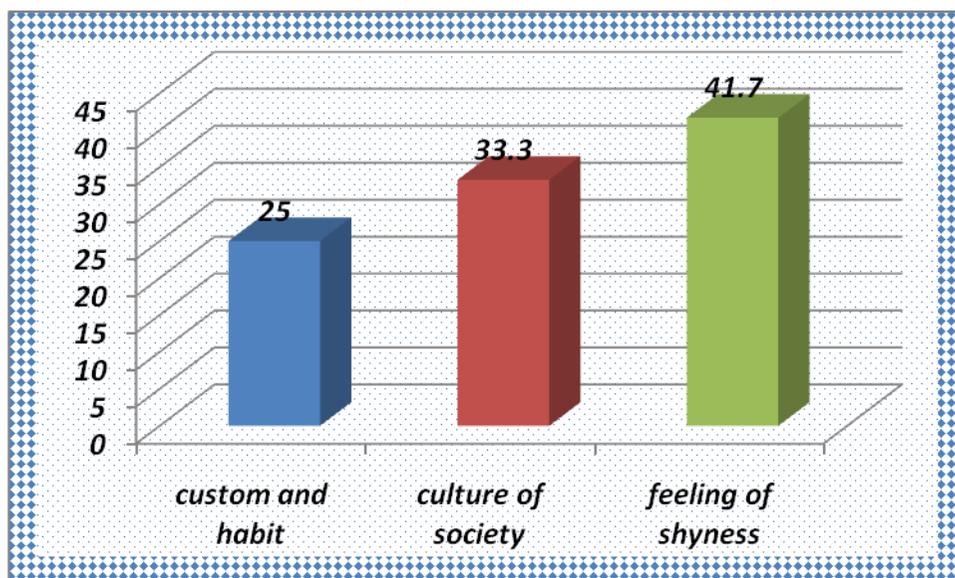
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**Table (2):** Distribution of studied male students regarding history of sexually transmitted diseases (STDs). n= (108)

<b>Male students history of STDs.</b>	<b>N= 108)</b>	<b>%</b>
<b>Complaint of STDs.</b>		
Yes	50	46.3
No	58	53.7
<b>Times of occurrence of STDs through previous year (N=50).</b>		
Once	26	32.0
Twice	14	28.0
three time	10	20.0
<b>Consultation (N=50).</b>		
Yes	26	52.0
No	24	48.0
<b>Causes of not going to doctor (N=24)</b>		
customs and habits	6	25.0
culture of society	8	33.3
feeling of shyness	10	41.7

Table (2) indicates distribution of studied male students regarding history of STD. it was showed that 46.3 % of them had a history of STDs.32.0% of these who had a once history of STDs, 52.0% of them go to doctor. On the other hand 48.0% of them didn't go to doctor, 41.7% of these didn't go to doctor because of feeling of shyness.

**Figure (1):** percentage distribution of causes of not counselling doctor among studied students. (n=108)



**Table (3):** Distribution of studied male students' general knowledge regarding sexually transmitted diseases pre and post intervention. n= (108)

General knowledge regarding STDs.	Pre-intervention				Post-intervention				Chi square test	P value
	Incorrect		Correct		Incorrect		Correct			
	No	%	No	%	No	%	No	%		
STD also known as venereal diseases.	79	73.1	29	26.9	11	10.2	97	89.8	88.07	<0.001**
Most of the common STDs can be prevented.	78	72.2	30	27.8	18	16.7	90	83.3	67.50	<0.001**
Most of the common STDs can be cured with treatment.	81	75.0	27	25.0	27	25.0	81	75.0	45.00	<0.001**
STDs affect men and women of all ages and backgrounds, including children.	72	66.7	36	33.3	17	15.7	91	84.3	57.80	<0.001**
Many STDs can be passed from a mother to her baby before, during, or immediately after birth.	73	67.6	35	32.4	33	30.6	75	69.4	29.64	<0.001**

As shown in table (3) there was a highly statistical significant difference between their general knowledge regarding sexually transmitted disease pre and post intervention ( $p < 0.001^{**}$ ).

**Figure (2):** percentage distribution of total knowledge score of the studied male students at both pre- post intervention phases.

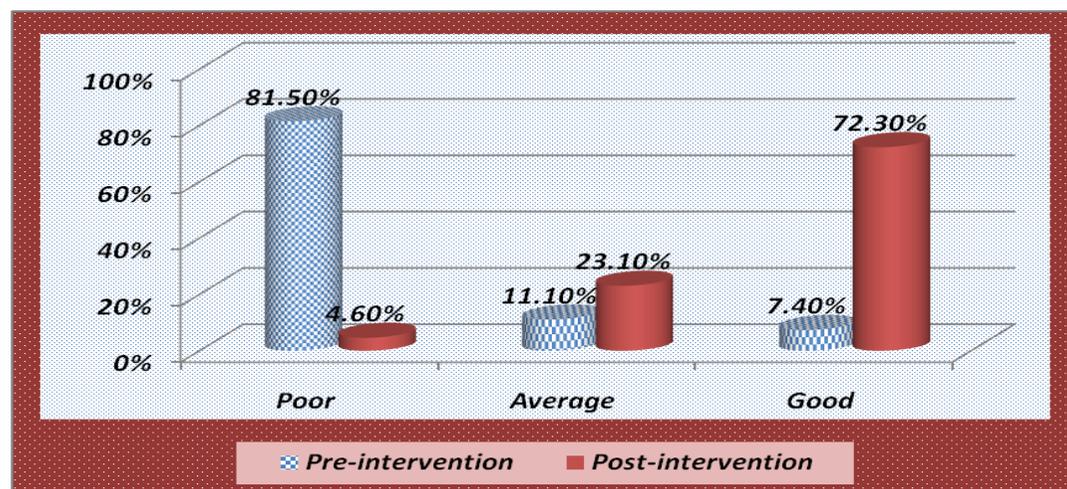


Figure (2) indicates that, there was a highly statistical significant difference between their total knowledge score pre and post intervention ( $p < 0.001^{**}$ ). 81.5% of them their total knowledge

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score pre intervention was poor but 72.3% of them their total knowledge score post intervention was good.

**Table (4):** Relation between of studied male students' total knowledge score at post intervention phase and their personnel characteristics. n= (108)

personnel characteristics	Total knowledge score at post intervention						Chi square test	P value
	Poor N=5		Average N=25		Good N=78			
	No	%	No	%	No	%		
Age in years							4.89	>0.05
18-	1	20.0	9	36.0	20	25.6		
19-	3	60.0	11	44.0	26	33.3		
≥20	1	20.0	5	20.0	32	41.0		
Academic year							2.44	>0.05
First	3	60.0	21	84.0	54	69.2		
Second	2	40.0	4	16.0	24	30.8		
Working beside study							1.13	>0.05
Yes	4	80.0	17	68.0	47	60.3		
No	1	20.0	8	32.0	31	39.7		
Residence							0.459	>0.05
Urban	3	60.0	11	44.0	35	44.9		
Rural	2	40.0	14	56.0	43	55.1		
Person live with							2.44	>0.05
Parents	5	100.0	19	76.0	57	73.1		
Friends	0	0.0	5	20.0	14	17.9		
Alone	0	0.0	1	4.0	7	9.0		
Father education							1.35	>0.05
Primary	0	0.0	2	8.0	7	9.0		
preparatory	0	0.0	2	8.0	5	6.4		
Secondary	3	60.0	11	44.0	32	41.0		
university	2	40.0	10	40.0	34	43.6		
Mother education							4.38	>0.05
Primary	0	0.0	3	12.0	7	9.0		
preparatory	0	0.0	1	4.0	13	16.7		
Secondary	3	60.0	11	44.0	32	41.0		
university	2	40.0	10	40.0	26	33.3		

Table (4) demonstrates that, there was no statistical significant relation between their age, academic year, residence, and father and mother educational qualification in relation to studied male students' total knowledge score at post intervention phase(p>0.05).

**Discussion**

Sexually transmitted diseases are a major worldwide growing health problem in

both developed and developing countries. Approximately one million people contract sexually transmitted infections every day and 50% of them are adolescents aged 15-24

years (**Lazarus, et al., 2015**). Adolescence remains the age group at the greatest risk for acquiring STDs. A variety of factors contribute in increasing the adolescent's risk of STDs such as biological aspects, behavioral aspects (risk taking behavior), in addition to cognitive and psychological factors (perceived lack of risk)(**WHO, 2012**).

Regarding the personnel characteristics of the students the present study showed that the mean age for the study sample was (19.20±.78251). On the same line, most of the studies concerned with STDs among the adolescents considered the same age group. As an instance, **Goldsberry and Jennifer, (2016)**, who carried out a study "assessing the effects of a STDs educational intervention on Greek society college students' knowledge and attitudes toward safe sex behaviors" The mean age of their study population was 19.8 (SD = 1.2) years with a range of 18 to 24 years. In additional, a study by **Kerzib an and O' zlem (2013)**, who assessed the effect on the knowledge levels of nursing school students of the educational activities undertaken for sexually transmitted infections, the average age of the study sample, was 21.67 years.

As regards history of STDs, the present study showed that 46.3 % of them had a history of STDs. On the same line, **Qayed (2005)**, who studied reproductive health among 1000 adolescents in Assuit found that 48% of respondents had STDs symptoms. In additional, this result differs with **Goldsberry and Jennifer, (2016)**, who revealed that none of the participants reported a previous STDs diagnosis. Participants in their study may have misreported their STD history; another possible explanation is that the majority of STDs have no clinical picture or the symptoms may go unrecognized (**Healthy People 2020, 2010**). Therefore, some of the participants may have STD but were unaware. This reflects the importance of education of adolescents to reduce their vulnerability to STDs.

Concerning health seeking behaviors, the present study revealed that 48.0% of the study sample didn't consult doctor; these findings are nearly similar to that reported by **Bereket et al., (2013)**, who assessed the prevalence and associated factors of sexually transmitted infections among students of Wolaita Sodo University, Southern Ethiopia. They showed that 41.7% of study subjects had no treatments for the recent syndrome they had. They revealed that the most important reasons for not receiving treatment were feeling guilty of telling problem to a health worker, thinking symptom as incurable, thinking Symptom not serious, thinking symptom as curable without treatment, lack of money, not knowing where to get treatment, and others including lack of time. Significant number of study subjects did not get treatment; this indicates great majority of students had poor awareness about the problem and its treatment.

Regarding barriers against health seeking behaviors among the study sample, the present study showed that 41.7% of these didn't consult doctor because of shyness. These findings are in accordance with **Qayed (2005)**, who found that shyness is the major barrier against health seeking care for STDs in 40.30% of the study sample.

On investigating male students' general knowledge regarding sexually transmitted diseases pre and post intervention, it was observed that there was a highly statistical significant difference between their knowledge post intervention than those before intervention. These findings were in accordance with **Larki M et al. (2015)**, who found a significant difference in the knowledge score between pre- and post-intervention periods; the pure effect of the intervention was estimated at 53%.

These findings are supported by **Moore, et.al (2012)**, who showed increased STDs knowledge from baseline to immediately post intervention. In additional to, these findings are in agreement with

**Kerzib an and O' zlem (2013)**, who reported a statistically significant difference between the before and after education. On the same line, in a study made on nursing and midwife students by **Ok et al. (2012)**, they stated that 45 % of students having education and 11 % of students not having education received 50 and above points.

These findings disagree with **Herrman and Waterhouse (2012)**, who found that education was given to females in juvenile detention on the subject of healthy sexually behaviors. At the end of the education, there were not observed changes in the knowledge, attitudes and behaviors of the juvenile females.

Concerning relation between male students' total knowledge score at pre and post intervention the findings of the current study showed that the majority of study sample had poor unsatisfactory knowledge about STDs before program implementation. Meanwhile, most of study sample had good knowledge level about STDs immediately after program implementation. Generally, it can be stated that education made with different methods made a positive contribution to the knowledge levels of youth on the subject of STIs.

As regards correlation between male students' total knowledge score at post intervention phase and their personal characteristics, the present study demonstrated no statistical significant relation between age, academic year, residence, and father and mother educational qualification in relation to male students' total knowledge score at post intervention phase ( $p > 0.05$ ). These findings agree with **Qayed (2005)**; who revealed no statistical significant association between mother's educational level and their girl's knowledge regarding STDs. This may be attributed to culture and traditions in Egyptian society that discourages the discussion of sexual matters such as seeking STDs health care. In

addition, parent's knowledge regarding these issues may be limited.

On the other hand, these findings disagree with the results of **Warren (2010)**, who studied the short term effectiveness of HPV education in "Tirana" and reported a strong linear association between parent's educational level and level of knowledge regarding STDs among their study sample. This difference in findings may be attributed to the difference in cultures and morals among the two societies.

### **Conclusion**

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Based on the results of the present study it could be concluded that; there was a considerable percent of university students suffer from STDs in their history. Shyness, customs, traditions and culture remain as barriers that prevent adolescents from seeking health care. Also there was a highly statistical significant difference between students' knowledge regarding STDs pre and post intervention. Moreover, the current study found that a two session educational intervention was beneficial in increasing STDs knowledge in university students. Finally, there were obvious positive effects of the educational guidelines on students STDs knowledge improvement.

### **Recommendation**

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-Application of continuous comprehensive health education programs for students in different grades focus on STDs with implementation of a practical training course to improve the students' nurses' knowledge.

-Involvement of community leaders, NGOs, places of worship (mosques and churches), and social establishments in counseling programs.

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