Novelty Journals

ISSN 2394-7330

International Journal of Novel Research in Healthcare and Nursing
Vol. 6, Issue 1, pp: (165-176), Month: January - April 2019, Available at: www.noveltyjournals.com

Effect of Sexual Health Nursing Intervention on Knowledge of Female Adolescent

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Abstract: **The sexual health of adolescents is a growing global public health issue it is important for adolescent girls to understand her sexuality. Many adolescent girls approach adulthood faced with conflicting and confusing messages about sexuality and gender. Purpose of the study: examine the effect of sexual health nursing intervention on knowledge of female adolescent. Design: The study was conducted using quasi experimental design (pretest – posttest) was used to achieve the purpose of the study. Setting: The study was conducted at El Shahid Osama Saied Secondary School at Elshohdaa city from January 2017 to end of Jun 2017.Sample: Simple random sample (100) was included to assess the girls' sexual health knowledge. All girls their age ranged between (13-16years), single and did not attend any educational programm about sexual health. Tools used for data collection consisted of (1) Structured Interviewing Questionnaire Sheet to assess the girls Demographic Data, Age, School year, number of family members, Number of rooms in the house , The educational level of the father and mother and Father's Mother's job (2) sexual health knowledge and (3) sexual health education knowledge. Results of the study showed highly significant difference in knowledge of females sexual health p-value was <0.001**. Conclusion: In conclusion the present study drew attention that sexual health education is a worthwhile activity to prevent reproductive health hazards, sexual dysfunction, marital distress, divorce, and family breakdown. This will save the society and allow people to enjoy life. Recommendations: The study recommended Ministries of health, education and media need to collaborate closely to ensure access to sexual and reproductive health services for adolescent and integration with primary health care, creating a supportive and enabling environment, especially in the education and empowerment of girls, Securing political will, Formulating and implementing policies and regulations and mobilizing resources to ensure sustainability**

Keywords: **adolescent females, sexual health, sexual health education.**

1. INTRODUCTION

1.1 Introduction

Sexual health is a state of physical, emotional, mental and social well-being in relation to sexuality; it is not merely the absence of disease, dysfunction or infirmity. Sexual health requires a positive and respectful approach to sexuality and sexual relationships, as well as the possibility of having pleasurable and safe sexual experiences, free of coercion, discrimination and violence. For sexual health to be attained and maintained, the sexual rights of all persons must be respected, protected and fulfilled." (WHO, 2013).Sexual health is an important target throughout life. It starts to give self-esteem and empowerment—physical development and the accompanying feelings. Provide the sense of being a part of a larger group that shares the same issues and building skill of sexuality education provides information and opportunity to practice skills that assist youth in recognizing and responding to social and sexual situations appropriately. Improved communication youth learn to communicate without guilt or embarrassment when sexuality education provides the foundation of anatomically accurate vocabulary, setting the stage-accurate and age-appropriate sexuality education sets the stage for future topics and discussions. Articulating goals-discussions about sexuality and social skills assist youth in

envisioning their future. Preventing negative outcomes-sexuality education provides youth with information and skills to recognize and prevent sexual abuse (Maurer, 2014)

Sexual health is influenced by a complex web of factors ranging from sexual behavior, attitudes and societal factors, to biological risk and genetic predisposition. It encompasses the problems of HIV and sexually transmitted infections (STIs)/reproductive tract infections (RTIs), unintended pregnancy and abortion, infertility and cancer resulting from STIs, and sexual dysfunction. Sexual health can also be influenced by mental health, acute and chronic illnesses, and violence (WHO, 2011). Educational of sexual health is a lifelong process of acquiring information and forming attitudes, beliefs, and values about such important topics as identity, relationships, and intimacy , a combination of educational experiences will enable learners to acquire knowledge that is pertinent to specific health issues; develop the motivation and personal insight that are necessary to act on this knowledge; acquire the skills they may need to maintain and enhance sexual health and avoid sexual problems; help create an environment that is conducive to sexual health (Douglas, 2014).

Effective sexual health education maintains an open and nondiscriminatory dialogue that respects individual beliefs. It is sensitive to the diverse needs of individuals irrespective of their age, race, ethnicity, gender identity, sexual orientation, socioeconomic background, physical/cognitive abilities and religious background. (ASHA, 2012). Adolescence is the period from10-19 years of age. It is the period characterized by physical, psychological and social changes and generally it is classified into two: early adolescence between 10-14 years and late adolescence between 15-19 years (Dorn and Biro, 2011). Confidentiality is a major issue to consider with adolescents. For an adolescent to feel comfortable revealing or accessing sensitive information from the nurse, confidentiality must often be assured. Nurses must understand the legal and ethical implications of gaining knowledge about the behaviors of adolescents and when not to keep this information private (Maria et al., 2013). Although adolescence is only one phase in a life-long process of sexual development and learning, adolescent sexuality is a central and positive part of the total well-being of young people. As a result, comprehensive sexual health education for adolescents involves far more than the prevention of unintended pregnancy and STI/HIV (CDC, 2014).

Nurses must communicate with families to empower parents, and their children to monitor and intervene with them engaging in risky or even dangerous problem behaviors. First, nurses must educate parents about the risks that may be face their children and direct them to community resources needed to help them. For parents expressing concerns about parenting or talking with their children, resources include parenting information and opportunities for parents to learn how to talk with their adolescent (Basavanthappa, 2011). School nurses have ready access to school personnel and have a responsibility to educate these professionals. Information on the prevalence of problem behaviors, Behaviors that might indicate the presence of a problem, and the risks associated with critically needed. In addition, nurses must teach school personnel how they might help in preventing and identifying problem behaviors among youth (WHO, 2015).

Nurses, with their unique knowledge, skills, and entree into the lives of adolescents, have the opportunity to assess and intervene with adolescents, parents, and school personnel with the goal of preventing or intervening in problem behaviors often seen in adolescents. Developing and testing interventions that bring to bear the unique contributions of nurses must be undertaken. The need for effective nursing interventions both to prevent and alter existing risky behaviors in adolescents is great (Lal, et al., 2012).

1.2 Significance of the study

Egypt health issues survey 2015 founded that the number of adolescent girls aged 15-19 years 8 million only 4, 1 have enough information about sexual health and sexual transmitted diseases 8,22 of them living in towns but 4,7 of them living in village (ADHS, 2015).Youth surveys conducted in the 1995s and 2010s indicate a consistently poor level of awareness among Egyptian adolescents and youths about human development, physiology, sexually transmitted infections, and protection from HIV/AIDS (Population Council Survey, 2011). The Egyptian Population Council (2009) found that 67% of females feel shock and fear from menarche. Here comes the role of professionals in promoting or restoring sexual health, and from the clarification of this role come the recommendations to raise awareness about sexuality health among adolescent in order to enjoy better sexual life health. In Egypt, the available information on STIs epidemiological status is limited and can't quantify the situation, guide program planning or assess the impact of interventions. STIs epidemiological data are largely driven from fragmented researches focusing chiefly on HIV-related aspects, with negligence of other STIs. The prevalence and incidence of STIs in Egypt have remained mostly unknown,

and its impact on public health was largely undetermined despite the apparent social changes, the emergent risk groups, the demographic and migratory trends

Sexual health education is a worthwhile activity to prevent reproductive health hazards, sexual dysfunction, marital distress, divorce, and family breakdown. This will save the society and allow people to enjoy life. The need among Egyptian youths for sexuality education can no longer be ignored. Adolescents are tomorrow's adult population and neglecting their sexual health and well-being can have adverse effects both now and on their future health and wellbeing. So, the researcher found that it is important to examine the effect of sexual health nursing intervention on knowledge of female adolescent.

1.3 Purpose of the Study

The purpose of the present study was to examine the effect of sexual health nursing intervention on knowledge of female adolescent

1.4 Research Hypothesis:

Sexual health nursing intervention will improve knowledge of adolescent girls

2. MATERIAL AND METHODS

2.1 Research design:

The study was conducted using quasi experimental design (pretest – posttest) was used to achieve the purpose of the study

2.2 Setting of the study:

The study was conducted at El Shahid Osama Saied Secondary School at Elshohdaa city (Dragil village), Menuofia Governorate

2.3 Sample:

2.3.1 Sample type: Simple random sample

2.3.2 Sample size: The total number of all students for the three levels is 670. A convenient sample of 100 adolescent female, the sample randomly selected.

2.3.3 Sampling technique:

- All girls in the three grades of the secondary school (670) A convenient sample of 100 adolescent female were included to assess the girls' sexual health knowledge

- And then divided in to three groups according to their class level

- Sunday, Monday and Thursday were selected to collect data the students came in Sunday was the first level but the second level came in Monday and the third level came in Thursday.

2.4 Tools:

2.4.1 Inclusion criteria:

-Female secondary school their age ranged between (13-16)

-Did not attend any educational programme about sexual health

-Single

-Accept to participate in the study were included in the studied sample.

2.4.2 Tools of data collection:

Two tools were used in the current study to collect the necessary data

2.4.3 Structured Interviewing Questionnaire Sheet: It was developed by the research team after reviewing the related literature; it was consisted of three parts:

Part I: It covered the females' sociodemographic data such age, school year, number of family members, number of room, and level of education for both mother and father….. Etc.

Part II: Females sexual health knowledge such as female and male reproductive system, sexual health definition, sexual health response cycle

Part III: This part is concerned with knowledge of students on sexual health education such approval of sexual health education, cultural back ground regarding sexuality, sexual health and sexual health education and families' point of view about speaking in sex. Scoring system of the girls has been scaled according to summation of knowledge. The scale was ranged between 50% to 75% and is divided into 3 grades; Poor (less than 50%), fair (50% to less than 75%) and good (scores 75%).

2.4.4: Tools Validity and Reliability:

The tools and the life style change program were reviewed for comprehensiveness, appropriateness, and legibility by an expert panel consisting of three obstetrics and woman health nursing as well as obstetric medicine specialty experts. The panel ascertained the face and content validity of the tools. The reliability was done by Cronbach's Alpha coefficient test which revealed that each of the two tools consisted of relatively homogenous items as indicated by the moderate to high reliability of each tool.

3. ETHICAL CONSIDERATIONS

This study was conducted under the approval of the faculty of nursing Ethics Committee, Menuofia University. Participants were given explanations about the purpose of the study, and they were also informed that they could withdraw from the study at any time before the completion of the study. Participants who agreed to complete in this study were asked to sign a consent form. Confidentiality of participants‟ information was assured and the data were accessed only by the investigators involved in the study.

4. PILOT STUDY

The pilot study was conducted on 10.0% (10girls) of the total sample to test the feasibility and the applicability of the tool, find out the possible obstacles and problems that might face the researcher and interfere with data collection, detect any problems peculiar to the statements as sequence of questions and clarity and estimate the time needed for data collection. The samples of the girls included in the pilot study were excluded from the main study sample.

5. FIELD OF WORK

A written official letter was obtained from the Dean of the Faculty of Nursing, Menuofia University. At the time of data collection a verbal agreement was taken from every participant in the study after clear and proper explanation of the study purpose and its importance for them. The study was carried out through four phases: initial assessment, planning, implementation, and follow up and evaluation. These phases were carried out from beginning of January 2017to end of Jun 2017.Covering a long period of one year. The previous mentioned settings were visited by the researchers three days/week (Sunday, Monday and Thursday) from 9.00 am to 2.00 pm.

5.1 Initial assessment phase

At the beginning the researcher distributed the questionnaires to find out the general characteristics of the girls who received sexual health education in all the three levels for 10 weeks. Then application of the study according to the inclusion criteria. Then at the beginning of interview the researcher greeted the girls, introduced herself to all girls included in the study, Every girl was interviewed to collect general sociodemographic data, sexual health and sexual health education knowledge in a time ranged from 10 to 15 minute at from the first session.

5.2 Planning and Implementation phase

5.2.1 Implementation phase: this study hypothesized that sexual health nursing intervention will improve the knowledge among adolescents at secondary schools. The implementation of sexual health education guideline was implemented to the adolescent females group through small group discussion.it consisted of 10 sessions were conducted for 6group each group involved 10-15 adolescent girls (small group) .Three days of three sessions /week each day special for one level of

Novelty Journals

ISSN 2394-7330

International Journal of Novel Research in Healthcare and Nursing
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school to cover three levels through the week . Duration of each session ranged from 45-60 minutes. The school held a class to researcher to give the sessions. Each session started by a summary of the previous session and objectives of the new sessions, using a very simple slang language that suit the educational level of the adolescent girls and their cultural values. These health educational sessions include definition of each key concept and its objective. The sexual health education booklet was used as a learning material. Booklet was developed by the researcher as guidelines for adolescents to be used in the school. Different learning methods were used during the educational session namely interactive lecture and discussion

5.2.2 Pretest: - assessing adolescent girls, knowledge and attitude by self-administrated instrument were distributed on adolescent girls to explore their knowledge and attitude. Initial data collection was carried out to obtain information about girls' socio-demographic and academic data, knowledge, cultural, preference and attitude. The preliminary assessment showed that the adolescent girls had poor score level of knowledge about sexual health, sexual problems and diseases. Further they had negative attitude toward sexual health education.

5.2.3 Developing guideline:-According to the preliminary data assessment of knowledge, attitude, and the evidence based recommendations of sexual health education guideline was developed by the researcher according to the girls' knowledge defect.

5.2.4 Evaluation phase: The last phase in which the researcher assess the achievement of the aim of the study through reintroducing the research tools

5.2.4.1 Posttest determine whether there was effective and comprehensive sexual health education through evaluation of adolescent girls' knowledge and attitude about sexual health and sexual health education by using post-test.

5.2.4.2 Follow up test after 3 months determine whether there was effective and comprehensive sexual health education through evaluation of adolescent girls' knowledge and attitude about sexual health and sexual health education by using follow up test

6. DATA ANALYSIS

From the research and its goals the data collected were tabulated and analyzed by SPSS (statistical package for the social science software) program by using :Frequencies and percentages for calculate demographics data , Means and standard deviations, Person correlation to calculate the validity, Cronbach's Alpha to calculate the Reality and Mann-Whitney Test to approve that The group who received the sexual health nursing intervention will have health knowledge more than the group who not received the intervention.

Result:

Table (1) Socio Demographic Data of Studied Group

Variables	N	percent	Total degree Mean ± SD
Age			
13 years	**44**	**44%**	**42.67 ± 3.04**
14 years	**31**	**31%**	**46.25 ± 5.88**
15 years	**20**	**20%**	**51.79 ± 4.55**
Other	**5**	**5%**	**50.33 ± 3.53**
School year			
First grade	**35**	**35%**	**47.59 ± 5.31**
Second grade	**25**	**25%**	**46.88 ± 6.31**
Third grade	**40**	**40%**	**53.7 ± 5.03**
number of family members			
From 3-4	**31**	**31%**	**51.55 ± 3.18**
From 4-6	**58**	**58%**	**54.92 ± 6.66**
7 and more	**11**	**11%**	**50.65 ± 3.56**

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Number of rooms in the house					
1	**8**	**8%**	**47.74**	**±**	**4.69**
2	**32**	**32%**	**50.09**	**±**	**3.03**
3	**38**	**38%**	**46.85**	**±**	**4.10**
4 or more	**22**	**22%**	**52.66**	**±**	**3.26**
The educational level of the father					
Illiterate	**8**	**8%**	**40.18**	**±**	**5.78**
Reads and writes	**12**	**12%**	**45.49**	**±**	**6.19**
Diploma	**28**	**28%**	**50.03**	**±**	**4.03**
University	**47**	**47%**	**54.08**	**±**	**7.13**
Other	**5**	**5%**	**46.03**	**±**	**4.32**
Father's job					
Working	**78**	**78%**	**56.09**	**±**	**4.33**
Not working	**22**	**22%**	**48.79**	**±**	**4.26**
The educational level of the mother					
Illiterate	**12**	**12%**	**46.64**	**±**	**5.74**
Reads and writes	**15**	**15%**	**49.79**	**±**	**4.70**
Diploma	**30**	**30%**	**47.86**	**±**	**4.92**
University	**41**	**41%**	**55.58**	**±**	**3.23**
Other	**2**	**2%**	**54.68**	**±**	**3.05**
Mother's job					
Working	**34**	**34%**	**56.11**	**±**	**3.46**
Not working	**66**	**66%**			
					4.06
Socio economic class					
Low	**31**	**31%**			
Moderate	**58**	**58%**	**50.13**	**±**	**46.25±5.88**
High	**11**	**11%**			**54.92±8.66**
					50.65±3.65

This table represents sociodemographic data of study group. The majority of the study sample their age 13 years (44%), while the others ranged between14 years (31%) and15 years (20%).While 47% of them their fathers highly educated level, (28%) diploma ,(12%)read and write and (8%) illiterate . Also (78%) of the study group their fathers work and (22%) not work. (41%) of the study group have high level educated mother, (30%) diploma, (15%) read and write (12%) illiterate. But (66%) working mothers and (34%) not work.

Table (2)) Sources of knowledge of sexual health for female adolescent students

Variables	N	Percent %
Do you know about sexual health:-		
Yes	**38**	**38%**
No	**62**	**62%**
Source of knowledge about sexual health:-		
Friends	**44**	**44%**
Parents	**10**	**10%**
sisters	**8**	**8%**
School	**12**	**12%**
Media sources	**20**	**20%**
Other	**6**	**6%**

Novelty Journals

ISSN 2394-7330

International Journal of Novel Research in Healthcare and Nursing
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Discussing sexual information comfortably with:-		
Friends	**32**	**32%**
relatives	**17**	**17%**
Older sister	**10**	**10%**
Mother	**27**	**27%**
Other	**14**	**14%**
Role of parents in sexual knowledge:-		
Both parents took over the explanation	**12**	**12%**
My mother only took over the explanation	**22**	**22%**
I had no cooperation from either.	**66**	**66%**

Table (2) represents Sources of sexual knowledge for female adolescent students. It reveals that 38%of the studied group has sexual knowledge and 62%of them haven't any information about sexuality. 40%of them source of sexual knowledge from their friends, 16%from parents, 8%from sisters, 12% from school, 18% from mass media and 6%from others. On other hand 32% of adolescent females Discussing sexual information comfortably with friends, 17% with relatives , 10% with older sisters , 27%with mother and 14% others .Also 12% of them their both parents took over the explanation in sexual knowledge ,22% mother only took over the explanation and 66% had no cooperation from either.

Table (3) School curriculum sufficiency regarding knowledge about sexual health.

Variable	N	percent
School curriculum include knowledge about sexual health		
Yes	**20**	**20%**
No	**80**	**80%**
School curriculum sufficient in knowledge about sexual health		
Yes	**30**	**30%**
No	**70**	**70%**
Attitude of teachers towards questions onknowledge about sexuality		
Positive	**20**	**20%**
Negative	**80**	**80%**

Represents school curriculum sufficiency regarding sexual health knowledge. It reveals that the majority of the females students 80% said that school curriculum isn't sufficient in knowledge about sexual health and also 70% of them confirmed that school curriculum isn't enough to include knowledge about sexual health on other hand 80% of them confirmed that teachers have negative attitude towards questions on knowledge about sexuality.

Table (4) Difference between Pretest –Posttest –Follow up Scores Regarding Sexual Health Information Study Group

Variables	Pretest		Posttest		Follow-up		Total		Anova Test	
	N	%	N	%	N	%	N	%	Anova Test	P-value
Poor	**56**	**56.0**	**0.0**	**0.0**	**1**	**1**	**17**	**5.7**	**5.75**	**0.005***
Fair	**28**	**28.0**	**20**	**20**	**25**	**25**	**73**	**24.3**		
Good	**16**	**16.0**	**80.0**	**80.0**	**74**	**74**	**210**	**70**		
Total	**100**	**100**	**100**	**100**	**100**	**100**	**300**	**100**		

Table (4) reveals that difference between Pretest –Posttest –Follow up scores regarding sexual health information study group. There was highly statistical significance differences between pre and posttest regarding to background knowledge about sexual health information (p-value <0.05).

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Table (5) Difference between study group scores of knowledge regarding to definition and anatomy of reproductive system

Variables	Pre		Post		Follow-up		Total		Anova Test	
	N	%	N	%	N	%	N	%	Anova Test	P-value
Poor	52	52.0	18	18.0	22	22	92	30.7	9,17	<0.001**
Fair	12	12.0	10	10.0	18	18	40	13.3		
Good	36	36.0	72	72.0	60	60	168	56.0		
Total	100	100.0	100	100.0	100	100	300	100.0		

Table (5) reveals that difference between Pretest –Posttest –Follow up scores regarding definition and anatomy of reproductive system There is highly statistics significant differences between pre and posttest when p-value was <0.001** regarding to definition and anatomy of reproductive system.

Table (6) difference between study group scores regarding knowledge of sexual transmitted diseases

Variables	Pre		Post		Follow-up		Total		Anova Test	
	N	%	N	%	N	%	N	%	Anova Test	P-value
Poor	46	46.0	2	2.0	4	4	52	17.3	16.23	<0.001**
Fair	46	46.0	68	68.0	70	70	184	61.3		
Good	8	8.0	30	30.0	26	26	64	21.3		
Total	100	100.0	100	100.0	100	100	300	100.0		

This table reveals that difference between Pretest –Posttest –Follow up scores regarding knowledge of sexual transmitted disease. There is highly statistically significance differences between pre and posttest when p-value was <0.001regarding knowledge of sexual transmitted diseases.

Table (7) difference between study group scores regarding acceptance of sexual health education

Variables	Pre		Post		Follow-up		Total		Anova Test	
	N	%	N	%	N	%	N	%	Anova Test	P-value
Poor	4	4.0	2	2.0	3	3	9	3.0	8.05	<0.001**
Fair	82	82.0	46	46.0	47	47	175	58.3		
Good	14	14.0	52	52.0	50	50	116	38.7		
Total	100	100.0	100	100.0	100	100	300	100.0		

Table (7) reveals that difference between Pretest –Posttest –Follow up scores regarding acceptance of sexual health education There is highly statistically significance differences between pre and posttest (p-value was <0.001) regarding acceptance of sexual health education

Table (8) Difference between study group scores regarding sexual health education knowledge

Variables	Pre		Post		Follow-up		Total		Anova Test	
	N	%	N	%	N	%	N	%	Anova Test	P-value
Poor	56	56.0	0	0.0	2	2	6	2.0	7.49	<0.001**
Fair	40	40.0	10	10.0	12	12	62	20.7		
Good	4	4.0	90	90.0	86	86	232	77.3		
Total	100	100.0	100	100.0	100	100	300	100.0		

Table (8) reveals that difference between Pretest –Posttest –Follow up scores regarding sexual health education knowledge. This table show highly statistical significance difference between pre and posttest (p-value was <0.001) regarding sexual health education knowledge.

Novelty Journals

ISSN 2394-7330

International Journal of Novel Research in Healthcare and Nursing
Vol. 6, Issue 1, pp: (165-176), Month: January - April 2019, Available at: www.noveltyjournals.com

Figure (1) Comparison between pre and posttest of study group as regard Total degree

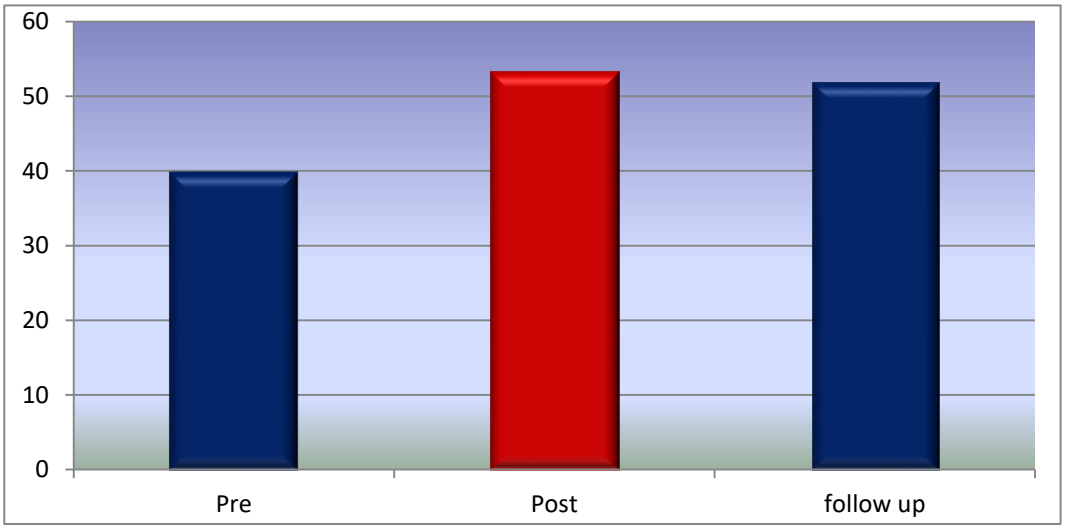

Figure (1) reveals that difference between Pretest –Posttest –Follow up scores regarding total degree .This table show highly statistics significant deference between pre and post as regarded Total degree when p-value was <0.001**.

7. DISCUSSION

The sexual health of adolescents is a growing global public health issue it is important for adolescent girls to understand her sexuality. Many adolescent girls approach adulthood faced with conflicting and confusing messages about sexuality and gender. (Tolli, 2012).

Regarding the characteristics of studied female adolescents the age of female studied group ranged between 13 – 15 years this related to the risky and importance of this stage of life the current study revealed that all the female students who belong to high socioeconomic class, had poor sexual knowledge and more than half of the students from low socioeconomic also had poor knowledge that mean there is no relationship between socioeconomic class and sexual health knowledge , also the parent educational level has no relationship with knowledge about sexuality .this results due to culture believes and shame of parents to talk about this topics. Such findings came in agreement This was also in agreement with **Frohlich et al., (2014)** who conducted a study about "Meeting the sexual and reproductive health needs of high school students in South Africa " who showed that different social levels are in need for continuous sexual health education with no difference between low, middle or high socioeconomic class, **Fonner et al., (2014)** who conducted a study about "School based sex education and HIV prevention in low and middle income countries" who confirmed that there was no correlation between socioeconomic level sexual health knowledge. On the other hand findings came in dis-agreement with **Atkins et al., (2012)** who conducted a study about "The Effects of School Poverty on Adolescents' Sexual Health Knowledge" who confirmed that all students who belong to high social class have good sexual knowledge and more than half of the students from low socioeconomic had poor knowledge. Also **Karam et al., (2018)** who conducted a study about "Relation between sexual knowledge versus attitudes among female adolescents" Descriptive comparative study was conducted on a sample of 154 students (77 nursing and 77 arts) who found that there was a statistical significant relationship found between female adolescents' total percent scores of knowledge concerning sexuality and their mothers' level of education.

Regarding to sources of knowledge of sexual health for female adolescent students the majority of female adolescents reported that friends were the main source of their knowledge regarding sexuality because they spent a long time together at school and groups, while media sources were the second source. It is obvious that there is a gap between mothers and daughters in discussing sexual matters as this study revealed that the majority os the studied sample had no cooperation from both parents. This can be understood if we take into consideration the religious and cultural beliefs in Egypt, Islam forbids pre-marital sexual contact, and Arabic culture emphasizes the issue of virginity for girls. There is a widespread view that discussion of sexual health with adolescents will provoke pre-marital activities. Such finding came in agreement

with **Alquaiz, et,al, (2012)** who conducted a study about "Knowledge, attitudes, and resources of sex education among female adolescents in public and private schools in Central Saudi Arabia" he found that Forty-two percent of the participants reported that they discussed sexual matters with their friends. Only 15.8% discussed these matters with their parents (mothers). Interestingly, 17.3% discussed sexual matters with the domestic helper. On other hand such findings came disagreement with **Qazi,(2013)** who conducted a study about "exploring the sexual and reproductive health of adolescents in South Asia" he found that the main source of their knowledge regarding sexuality were teachers this may related to schools in the West have incorporated sex education into their curricula so as to provide correct and accurate information to high school students

Concerning to school curriculum sufficiency regarding knowledge about sexual health the current study revealed that the majority of the females students reported that school curriculum isn't sufficient in knowledge about sexual health and also they confirmed that school curriculum isn't enough to include knowledge about sexual health on other hand more than two third of them confirmed that teachers have negative attitude towards questions on knowledge about sexuality this related to the neglecting of sexual health knowledge learning in Egypt . Such results came in agreement with **Alquaiz, et. al, (2012**) found that only 30.7% of students said that curriculum was enough to provide accurate sexual knowledge and 60.7% of them said that reported that their teachers had negative attitudes towards questions related to sexual issues .Such findings came disagreement with **Qazi,(2013)** he find that schools in the West have incorporated sex education into their curricula so as to provide correct and accurate information to high school students

Concerning scores of female adolescents regarding sexual health knowledge pre intervention; quarter of female adolescents had good score, while minority had fair scores and majority had poor scores. This may related to our society culture and believes which limit the family and school in such speaking in knowledge about sexual health. But posttest showed that majority of female adolescents had good score, minority had fair scores and no one had poor scores .Such finding came in agreement with **Kirby, Lori, (2012)** who conducted a study about "Impact of Sex and HIV Education Programs on Sexual Behaviors of Youth in Developing and Developed Countries," found that adolescents knowledge was poor about sexual health information. On other hand it came in disagreement with **Kann et al., (2016)**who conducted a study about "Sexual identity, sex of sexual contacts, and health-related behaviors among students in grades 9–12 — United States" it reported that more than two thirds of studied sample have good score level of sexual health information . From the researcher perspective this could be related to the difference of cultures and habits.

Concerning to the level of adolescent girls knowledge about reproductive system, the preliminary assessment of the present study showed poor score level of knowledge among the majority of adolescent girls that associated with reproductive system and maturation changes this related to poor curriculum knowledge while post education revealed that improvement in females students related to raise of their knowledge level with good sources of information.Such findings came in agreement with **Kasiye et al., (2014)** who conducted a study about "assessment of adolescent's communication on sexual and reproductive health matters with parents and associated factors among secondary and preparatory schools' students in Debremarkos town, North West Ethiopia, reproductive health" found poor knowledge about sexuality. Such findings came in dis-agreement with **Shaawat et al., (2015)** who conducted a study about "Effect of health teaching program on female adolescents 'sexual knowledge and attitudes" it mentioned that 75% of studied sample have good score in knowledge about reproductive system and maturation changes . This could be related to the setting her setting was Nursing technical institute.

As regarding to the level of knowledge about sexual transmitted diseases, the present study shows poor score level of knowledge among the majority of adolescent girls that associated with sexually transmitted diseases (STDs) as showed pretest results related to little knowledge in school curriculum related STD. These finding was in agreement with **Tolll.., 2012** who conducted a study about" Effectiveness of peer education interventions for HIV prevention adolescent pregnancy prevention and sexual health promotion for young people " he said found a large proportion of adolescents were not aware of STDs . On other hand these findings came in dis agreement with **Nasr. et al, 2018** she fined the results of that study indicated that the knowledge of studied nursing female adolescents regarding HIV was good. It may be related to difference in education level.

Regarding to acceptance of sexual health education the before intervention program implementation the majority of females didn't accept sexual health education this related to the believes they grow up on it that it is taboo in such

speaking about sexuality. This came in agreement with **AlJoharah. et al(2012**) he mentioned that only 14%-18% accept sexual health education. On other hand these findings came in dis agreement with Nasr Nermeen K. K. et al, 2018 she said the findings reflected that more than three quarters of female adolescents of nursing group had positive attitudes toward sexuality and **El Shaawat et al, (2015)** three quarters of female adolescents (72.5%) had positive attitudes and fifth of them (20.8%) had uncertain attitudes and only 6.7% had negative attitudes. This may be related to the difference in the age of the studied sample their sample age is age of university.

Regarding to sexual health education knowledge the preliminary assessment of the present study shows poor score level of knowledge and lack of accurate source of knowledge the present study revealed that the majority of females have poor score in such topic this related to neglecting of sexual health education in Egyptian schools. This results was in agreement with **Elrefaay, (2016)** who conducted a study about" developing a valid cultural based sexual health education guideline for adolescent girls" it found that poor score level of knowledge about sexual health education. On other hand it came in disagreement with **Svensson et al., (2013)** who conducted a study about "Knowledge of and attitudes to sexually transmitted diseases among Thai University students "it founded that that the knowledge of studied female adolescents regarding sexual health education was good.

Concerning the effect of sexual health nursing intervention on their knowledge before the health education; more than two third of female adolescents scores poor and minority of them had good scores.

After the nursing intervention and three months later, female adolescents exhibited more scores regarding sexuality the majority of the studied sample had good scores and little of them poor .This means that Sexual health nursing intervention improved knowledge of adolescent girls.

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