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Knowledge of Adolescent Female regarding their Reproductive Health

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Abstract

Background Reproductive health (RH) is an increasingly important component of global health, while adolescence generally is a healthy and special period in life cycle of adolescent female as it requires specific and special attention. **The study aimed** to assess female adolescent knowledge regarding reproductive health. **A descriptive study design** carried out at technical institute of nursing, Ain Shams University and faculty of nursing Ain Shams University through **purposive sample**: 190 students were included in the study, and were subjected to the following criteria: adolescent female their age not more than 21 years in first academic year. Data were collected through **self- administered structured questionnaire sheet**: It composed of two parts: Socio-demographic characteristic and knowledge about RH issues. **Results:** The present study revealed that nearly two thirds of the sample had fair knowledge and more than one third of them had good knowledge about reproductive health aspects. There were a statistically significant difference between age, religion of studied subject and knowledge about RH, there were highly statistically significant difference between residence, marital status, family size of studied subject and knowledge about RH, there were a highly statistically significant difference between educational level of the mother, Father's occupation of studied subject and knowledge about RH and also there were statistically significant difference between educational level of the father of studied subject and level of knowledge about RH. **The study concluded** that nearly two thirds of the sample had fair knowledge and more than one third of them had good knowledge about reproductive health aspects. **The study recommended** that; develop reproductive health educational programs targeted to adolescents. **Further researches** are needed to aassess effect of parent-adolescent communication on adolescent sexual and reproductive health matters.Further researches are needed to investigate adolescents' barriers for utilization of reproductive health services.

Key words: Reproductive health, Female, Adolescent.

Introduction

The major human resource for the development of any nation is the energy and creativity of a healthy young-adult population. The reproductive and sexual health needs of young people are one of the most aspects that should be researched in our population so governments should provide reproductive health information and services as a right of human life and a warranty for the future development and health of nations ***(United Nations International Conference on Population and Development,2010).***

Reproductive health is an important part of general health and a central feature of human development. The health of the present generation has an impact on the health of the next generation, so the health of the infant and child of tomorrow is greatly dependent on the health of the adult of today ***(Yehia, 2012).***

So meeting the reproductive health needs of adolescents requires not only providing services, but also overcoming community opposition, building understanding and educating adults about young people's reproductive health needs ***(Abel fath, 2008).***

Additionally WHO define the reproductive health as a state of complete physical, mental and social well-being, and not merely the absence of reproductive diseases or infirmity, reproductive health addresses the reproductive processes, functions and system at all stages of life. therefore, it implies that people are able to have a responsible, satisfying and safe sex life and that they have the capability to decide if, when and how often to do so. Implicit in this are the right of men and women to be informed of and to have access to safe methods of fertility regulation of their choice, and the right of access to appropriate health care services ***(WHO, 2014).***

While elements of reproductive health include the following: Empowerment and care of adolescent's girls, adolescent's nutrition, safe sexual behaviour, widely available family planning services, elimination of unsafe abortion, prevention of unwanted pregnancy, prevention and management of infertility, adolescent's reproductive health needs are a continuum from sexual health, fertility by choice, not by chance, pre-conception care and safe motherhood to provide couples with the best chance of having a healthy infant ***(RHO,2010).***

Adolescents constitute a large and important segment of population worldwide. Young people between ages 10–24 years constitute around 1.8 billion and represent 27 % of the world's population. 85% of them live in developing countries ***(Farzaneh et al., 2011).*** One in five people in Egypt is between the ages of 15 and 24, a total of 16 million in 2012, adolescents in Egypt constitute nearly 25%of the country's population ***(United Nations Population Division, 2012).***In the next 15 years, 26 million Egyptians will reach age 15 ***(United Nations Commission on Population and Development, 2012).***

Adolescents means that the second decade no longer children, not yet adults. Adolescents are individuals who are going through a very special phase in their lives, adolescence is a time of rapid physical and psychological growth and development, and individuals develop new capacities. It is also a time of changing social relationships, expectations, roles, responsibilities and requires a special attention and sustained support. Adolescence can be divided into three stages, early adolescence (11-14 years of age, middle adolescence (15-17 years of age and late adolescence (18-21 years of age) ***(Ganguli, 2103).***

The nurse play an important role such asproviding adolescent with confidential, private, respectful and culturally competent services, complete information and communicated effectively with adolescents and counseling services about the reproductive health. More ever provide health promotion(avoid illness, disease and disability related to sexuality and reproduction and give appropriate care when needed on other hand, be free from violence and other harmful practices as female genital mutilation ***(Lynna and Joan 2013).***

Significance of the study:

Aadolescents face a variety of reproductive health risks, sexually transmitted infections (STIs) including HIV infection, too-early pregnancy and childbearing with an increased risk of injury, illness and death for mother and infant, and unintended pregnancy, often leading to unsafe abortion and its complications. Adolescents may know little about reproductive health and may have incorrect or misleading information about fertility and contraception ***(Abel fath, 2008).***

About 16 million girls aged 15 to 19 years and two million girls under the age of 15 give birth every year. Worldwide, one in five girls has given birth by the age of 18. An estimated three million girls aged 15–19 undergo unsafe abortions every year. In low- and middle-income countries, complications from pregnancy and childbirth are a leading cause of death among girls aged 15–19 years ***(WHO, 2012)***.

Additionally stillbirths and new born deaths are 50% higher among infants of adolescent mothers than among infants of women aged 20–29 years and more than one million infants born to adolescent girls die before their first birthday. Almost one-third of all new sexually transmitted infections are experienced by people younger than 25 years of age ***(WHO, 2012)***.

Aim of the study

To assess female`s adolescent knowledge regarding their reproductive health.

Research question:

What is the knowledge of female adolescent regarding reproductive health issues?

Subject and methods

Research design: A descriptive research design was used.

Setting: The study was conducted at technical institute of nursing, faculty of nursing Ain Shams University and faculty of Nursing Ain Shams University.

Subject:

Type of sample and size:

A purposive sample, total sample size is (190) female student, in the academic year (2014/2015).

Sampling technique:

First, researcher started study in technical institute of nursing Ain Shams University until finished all determined numbers of studied sample then the second setting was started until finished all determined numbers of studied sample.

Sampling criteria:

Female adolescent, age less than or equal 21 years and at first academic year.

Tools of data collection: Self-administered structured questionnaire sheet: The researcher developed questionnaire sheet after reviewing the current related literature. It was divided in two parts and consisted of (19) questions of multiple-choice type.

The first part:

Included assessment personal data as age, religion, and place of residence, marital status and their parent's characteristics, questions from (1-10).Included assessment personal data as age, religion, and place of

residence, marital status and their parent's characteristics, questions from (1- 10).

The Second part:

Included assessment knowledge related to reproductive health issues, example concept of reproductive health, elements and aim of reproductive health and rights of women in reproductive health, questions from (11-19).

Scoring system:

The correct answers were predetermined according to literature. Each knowledge item with a correct answer was scored two and one score for incorrect answer. For each area of knowledge, the scores of the items were summed up and the total divided by the number of the items, giving a mean score for the part. These scores were converted into percent scores. Adolescents' total score was classified as follows:

- Good represents 75 % or more are correct answers.
- Fair represents 50 % - 74 % are correct answers.
- Poor represents less than 50 % are correct answers.

Administrative design:

Before starting data collection, an official approval with written letter clarifying the title, aim and setting of the study was be obtained from the director of the Faculty of Nursing, Ain Shams University and the director of technical clinical institute, Faculty of Nursing , Ain Shams University.

Operational design:

Preparatory phase: Review of the past and current local and international available related literature on the various aspects of the study using books, articles and magazines, internet search to develop the tools for data collection**.**

Validity: It was established by a panel of seven experts in Maternity and gynecological nursing specialty who reviewed the tools for clarity, relevance, comprehensiveness, applicability and according to their opinions researcher made modifications.

Pilot study: A pilot study was been carried out on 10% of total sample size (19) student under study; for testing clarity, arrangement of the items, applicability of the data collection tools and time consuming for each tool. Items were been rearranged and modifications to the tools were done based on the findings of the pilot study. Some questions were omitted, added, rephrased and then the final form was developed. The adolescents recruited in the pilot study were excluded from the current study subjects.

Field work:

Data was been collected after obtaining the official approval for data collection within about 5 months from September 2015 until January 2016 in the first academic semester. In first setting (technical institute of nursing, faculty of nursing Ain Shams University), in the first day the researcher spent 10 minutes at the beginning with all students, firstly introduce herself, briefly explained the objectives and the aim of the study to adolescents to gain confidence and trust to convince them to participate in the study.

All students who participated in the study and fulfilled the inclusion criteria were given tool (Self-administered questionnaire sheet to assess personal data and knowledge related to reproductive health issues in the break time and gave guidance to fill the questions when needed. Part of students filled tool and gave it to researcher in the same day

and the second part took it to the home, the students who did not fill tool gave the tool to the researcher after completion in the next visit. The students' numbers were 10-15 students.

The researcher repeated the same previous steps of data collection with the students who did not attend in the previous visit. The visits were conducted 3 days per week for 8 weeks in the first setting. The researcher repeated the previous steps until fished predetermined numbers (100 students). In the second setting (faculty of Nursing Ain Shams University) researcher conducted the same steps conducted in the first setting. The time of research in second setting was 3 days per week for 7 weeks.

Statistical Design:

The data were collected, coded and entered to personal computer. The data were analyzed with the program (SPSS) Statistical Package for Social Sciences. The collected data were organized, revised, categorized, tabulated and analyzed using number and percentage distribution; proper statistical tests were used to determine whether there were statistically significant differences between variables of the study. Quantitative variables are described by mean, standard deviation (SD), while qualitative categorical variables are described by proportions and percentages. The statistical test used in this paper was Chi-square test.

Significance of the results

-P<0.05 significant differences.

-P< 0.01highly significant differences.

-P> 0.05 no significance

Results:

Table (1) reveals that, the age of Adolescents' ranged from 17-21years, with a mean age of 19.4 ±.58. The majority of sample is Muslims (91.1%). On the other hand (77.9%) of sample are single. (67.4%) of adolescents are from urban. The family size of the studied sample ranged from two to eight persons.

Table (2) shows that (51.6%) of mothers of the studied sample obtained a secondary level of education. As regards mother's occupation, the highest percentages (72.6%) of mothers are housewives. Regarding education level of the father of the studied sample (52.1%) obtained a secondary level of education. Concerning father's occupation (48.9%) employed in private sector.

Table (3) describes distribution of adolescent female according to their knowledge regarding reproductive health issues, total knowledge score of adolescent (65.8%) have fair knowledge and (34.25%) of them have good knowledge.

Figure (1) illustrates distribution of study sample according to source of knowledge. The highest percentage (34.2%) of studied sample do not remember the source of knowledge, mother and media are equal percentage (22.6%). while the other sources represent (14.7%, 3.2%, 2.6%) respectively.

Table (5) illustrates that the relation between socio-demographic characteristics of study sample and their knowledge about reproductive health. it shows that there is a statistically significant difference between age, religion of studied subject and knowledge about RH, knowledge about RH increase with increase age and knowledge increase in Muslims adolescent. In addition, there is highly statistically significant difference between residence, marital status,

family size of studied subject and knowledge about RH**,** knowledge increase in adolescent who from rural, in single and in middle size family.

Table (6) shows the relation between study sample total knowledge about reproductive health and their parent's characteristics. It indicates that there is a highly statistically significant difference between educational level of the mother, Father's occupation of studied subject and knowledge about RH, knowledge increase with the increase level of education (university level) and knowledge of adolescent increase with father not working also there is statistically significant difference between educational level of the father of studied subject and level of knowledge about RH.

Table (1): Distribution of study sample according to their socio-demographic characteristics (n = 190).

Adolescent females' characteristic	No.	%
Age in years		
17-19	166	87.4
20 – 21	24	12.6
Mean ±SD		
19.4 ±.58		
Religion		
Muslim	173	91.1
Christian	17	8.9
Marital status		
Single	148	77.9
Married	17	8.9
Widow	20	10.5
Divorced	5	2.6
Residence		
Rural	62	32.6
Urban	128	67.4
Family size		
2- 4	96	50.4
6- 8	94	49.4

Table (2): Distribution of study sample according to parent's characteristics (n: 190).

Parent's characteristic	No.	%
Educational level of the mother		
Illiterate	54	28.4
Primary	28	14.7
Secondary	98	51.6
University	10	5.3
Mother's occupation		
Governmental sector	29	15.3
Private sector	23	12.1
Housewife	138	72.6
Educational level of the father		
Illiterate	27	14.2
Primary	38	20.0
Secondary	99	52.1
University	26	13.7
Father's occupation		
Governmental sector	55	28.9
Private sector	93	48.9
Not working	42	22.1

Table (3): Distribution of study sample according to their knowledge regarding reproductive health issues (n=190).

Knowledge Aspect	Incorrect		Correct	
	No	%	No	%
Concept of reproductive health	55	28.9	135	71.1
Elements of reproductive health	123	64.7	67	35.3
Population group involved in reproductive health	138	72.6	52	27.4
Aim of reproductive health	122	64.2	68	35.8
Women's rights in reproductive health	126	66.3	64	33.7
Factors affecting reproductive health	124	65.3	66	34.7
Reproductive health problems face adolescent	154	81.1	36	18.9
Total knowledge score %				
Poor	Fair		Good	
0.0%	65.8%		34.2%	

Figure (1): Distribution of study sample according to their source of knowledge (n=190).

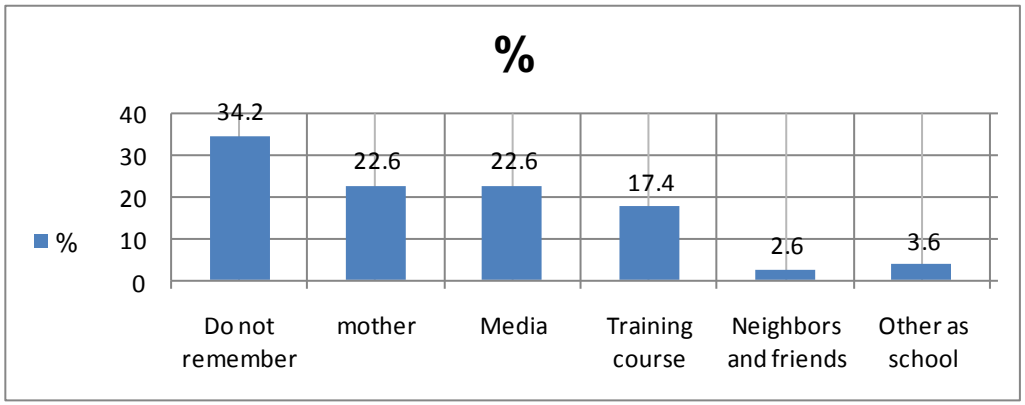

Table (5): Relation between total knowledge of study sample about reproductive health and their socio-demographic characteristics (n= 190)

Socio-demographic characteristics		Total Knowledge				Chi square test	P value
		Fair		Good			
		No	%	No	%		
Age	17-18	10	66.7	5	33.3	8.797	0.026 *
	19-20	105	69.5	46	30.5		
	21	9	37.5	15	62.5		
Religion	Muslim	109	63.0	64	37.0	6.657	0.01 *
	Christian	16	94.1	1	5.9		
Place of residence	Rural	31	50.0	31	50.0	10.194	0.001 **
	Urban	94	73.4	34	26.6		
Marital status	Married	11	64.7	6	35.3	17.811	<0.001 **
	Single	89	60.1	59	39.9		
	widowed	20	100.0	0	0.0		
	Divorced	5	100.0	0	0.0		
Family size	2	31	86.1	5	13.9	13.579	0.004 **
	4	30	50.0	30	50.0		
	6	51	68.	23	31.1		
	8	13	65.0	7	35.0		

** Highly Significant P≤0.001 * Significant P<0.05

Table (6): Relation between total knowledge of study sample about reproductive health and their parent's characteristics

Parent's characteristics		Total Knowledge				Chi square Test	P value
		Fair		Good			
		No	%	No	%		
Educational level of the mother	Illiterate	25	46.3	29	53.7	19.025	<0.001 **
	Primary	19	67.9	9	32.1		
	Secondary	77	78.6	21	21.4		
	University	4	40.0	6	60.0		
Educational level of the father	Illiterate	22	81.5	5	18.5	14.708	0.002 *
	Primary	30	78.9	8	21.1		
	Secondary	63	63.6	36	36.4		
	University	10	38.5	16	61.5		
Father's occupation	Not working	13	31.0	29	69.0	29.958	<0.001 **
	Public	39	70.9	16	29.1		
	Private	73	78.5	20	21.5		

** Highly Significant P≤0.001 * Significant P<0.05

Discussion:

The current study was conducted to assess female adolescent knowledge regarding their reproductive health.

As regard to knowledge of studied subject about reproductive health, the present study indicated that nearly two thirds of the sample had fair knowledge and more than one third of them had good knowledge. This finding was at the same line with ***(Abelfath, 2008)*** who reported that less than half of adolescent girls had good knowledge in total score about reproductive health.In addition a study conducted by ***(Kasiye Shiferaw et al., 2013)*** who found that three quarters of studied subject had fair knowledge related to reproductive health aspects.

This finding matching with (***Bobhate and Shrivastava, 2011)*** who reported that one third of studied subject had good knowledge about reproductive health. Also these results were supported by ***(Moussa, 2012)*** who mentioned thata large proportion of the participants exhibited fair knowledge about important reproductive health issues and a study conducted by ***(Malleshappa, 2011)*** who reported that more than half of adolescent girls had lack knowledge regarding reproductive health.

The similarity between the results of these studies could be due to similarity of socio- demographic characteristics of studied subject e.g. educational level and age group.

The previous finding in contrast with a study conducted by **(*Shivaram et.al, 2014)*** stated thatmore than two-thirds of the adolescents had good knowledge about reproductive health.A study conducted by ***(Foroozanfard et.al, 2010)*** revealed that most of participants had good knowledge. A study conducted by **(*AkwasiKumi et.al, 2014)*** which reported that more than three quarters of studied subject had good knowledge about reproductive health aspects and study cited by***(Li Pong Wong, 2012)*** who reported that the most adolescents had good knowledge about reproductive health aspects. This may be due to demographic and cultural difference

and difference in accessing reproductive health information.

Regarding the source of knowledge, the results of the present study showed that less than one quarter of them were informed from media and mother which indicates that mass media is effective in disseminating information, this finding is consistent with ***(Malleshappa, 2011)*** who found that the source of adolescent information about reproductive health aspect were television and radio. This result also is in agreement with the study carried out by (***Gebremichael and Chaka, 2013)*** who mentioned that the sources of adolescent information about reproductive health aspect were the mass media, internet and mother. This similar to study cited by ***(Moussa, 2012)*** which revealed that media was the most important source of knowledge.

And a study conducted by ***(Akhter, 2008)*** revealed that the source of adolescent information about reproductive health aspect was mother. This might be due to media explosion and technological advances; the world was fasting becoming a global village.

In Contrary, a study conducted by **(Shivaram et.al,** ***2014)*** stated that health professionals were the main sources of information for reproductive health aspects, and also study carried out by ***(Foroozanfard et.al, 2010)*** which revealed that adolescent's information about reproductive health from medical staff followed by book and magazine and study cited by **(*AkwasiKumi et.al, 2014)*** which reported that schools were the main sources of information about reproductive health aspects. This difference may be due to improving health services and facilities related to reproductive health in the setting and places of these studies.

As regard the relation between adolescents' total knowledge and socio-demographic characteristics, age of adolescent and level of knowledge. The result of present study showed that there were statistically significant relation between adolescents' total knowledge score about reproductive health and their age, knowledge about reproductive health increase with increase age of studied subject. This was consistent with ***(Sanad, 2009)*** who mentioned that there were statistically highly significant relation between adolescents' total knowledge score about reproductive health and sample age.

The previous finding in contrast with study carried in India cited by **(*Dube and Sharma, 2012)*** who identified that there were not statistically significant relation between adolescent's total knowledge score about reproductive health and their age**.** Also study carried out by (***Gebremichael and Chaka, 2013)*** who mentioned that there were not statistically significant relation between adolescent's total knowledge score about reproductive health and their age**.** This difference might be due to culture differences.

Also the study showed that there were highly statistically significant relation between place of residence and knowledge about reproductive health. This finding matching with a study cited by (***Yehia, 2012)***who found that there were highly statistically significant relation between place of residence and knowledge about reproductive health, but the study conducted by ***(Sanad, 2009)*** stated that there were not significance relation between the place of residence and the total knowledge about reproductive health aspect, these differences might be due to different in the setting of the studies and socio economic characteristics of studied sample . As study conducted by ***(Sanad, 2009)*** reported that studied sample lived in bride well.

On the other hand the result of the present study had demonstrated that there

were highly statistically significant relation between marital status and knowledge, single adolescent had knowledge than married adolescent. This result was disagreeing with the study conducted by ***(Sanad, 2009)*** who stated that there were not significance relation between the marital status and the total knowledge about reproductive health aspect.

In addition the result of the present study indicated that there were statistically significant relation between religion and knowledge about reproductive health, this result give attention about the role of religion rules and its impact on female adolescent knowledge and awareness regarding reproductive health. This finding supported by ***(Tawfiket.al, 2013*)** who reported that there were statistically significant relation between religion and knowledge about reproductive health.

As regard educational level of the parents of studied subject and knowledge of studied sample about reproductive health issues, this study revealed that there were a highly statistically significant relation between educational level of the mother and knowledge of adolescent about reproductive health aspect and also there were statistically significant relation between educational level of the father and level of knowledge of studied sample about reproductive health, knowledge of adolescent whose mother had university level of education was significant better than adolescent whose mother had low level of education. This indicated that parents could play an important role in socializing the reproduction health.

This result supported by ***(Yehia, 2012)*** who found that there were highly significant relation between adolescents' total knowledge about reproductive health and their mothers' level of education. Also this result was congruent with **(*Abel fath, 2008)*** who reported found that there were highly significant relation between adolescents' total knowledge about reproductive health and their mothers' level of education . In addition this result was supported by study conducted by ***(Rondini1and Krugu, 2009)*** who found that were a highly significant relation between educational level of the parents and knowledge about reproductive health aspects.

Comparing with other studies **(*Dube and Sharma, 2012)*** who reported that the relation between knowledge score of reproductive health and parent education were not significant, this might be due to easy access of information and knowledge from many sources as media, education no just parents.

Conclusion:

The study concluded that nearly two thirds of the sample had fair knowledge and more than one third of them had good knowledge about reproductive health aspects.

Recommendations:

1-Develop reproductive health educational programs targeted to adolescents and involve adolescents in the design of reproductive health programs to ensure its validity in satisfying their needs and to motivate them.

2-Establishing training programs to teachers in nursing schools, institute of nursing and faculty to enable them to tackle the "sensitive" reproductive health issues delivered to adolescent girls and putting this section as the first part of the curriculum.

3-Further researches are needed to aassess effect of parent-adolescent

communication on adolescent sexual and reproductive health matters.

4- Further researches are needed to investigate adolescents' barriers for utilization of reproductive health services.

Reference:

Abel fath, I., H. (2008): Assessment of Knowledge and Attitude Regarding Reproductive Health among Late Adolescents Female, master degreeP.P19-86.

Akhter, H. (2008): Knowledge, Attitudes and Practices on Reproductive Health and Rights of Urban and Rural Women in Bangladesh. Available at: ka-mome.lib.you.ac.jp/dspace/bitstream/10/31/3157/1/3-131-akhter.pdf

AkwasiKumi, Kofi- Awusare and Eugene (2014): Attitudes of Gatekeepers towards Adolescent Sexual and Reproductive Health in Ghana African Journal of Reproductive Health 18(3):146

Bobhate, P.S., and Shrivastava, S.R. (2011): A Cross Sectional Study of Knowledge and Practices about Reproductive Health among Female Adolescents in An Urban Slum of Mumbai'.Journal of Family and Reproductive Health.5 (4):117-124.

Dube and Sharma (2012): Knowledge, Attitude and Practice Regarding Reproductive Health among Urban and Rural Girls: A Comparative Study. Department ofHuman Development.University of Rajasthan, Jaipur, Rajasthan, India. Ethno Med, 6(2): 85-94.

Farzaneh, R. Lori, A., and Karima, K. (2011): Advancing research to inform reproductive health policies in the Middle East and North Africa.

Foroozanfard, M.D., Abdolvahab, Ph.D., Fatemeh, M.Sc., and Malihe, S. (2010): Evaluation of Female Youth Educational Needs about Reproductive Health in Non-Medical Students in the City of Qom B.Sc. Available at: http:// www.ncbi.Nlm.nih.gov/ pummed. Accessed, Decemder 15, 2015.

Ganguli,s S.K. (2103): Adolescent health. Indian J Public Health 47: 6-15. Available at: http://www.gfmer.ch/SRH-Course-2012/adolescent-health/pdf/Introduction-adolescence-adolescent-health-WHO-2012.pdf. Accessed, July, 2015.

Gebremichael and Chaka (2014): Assessment of Knowledge, Attitude and Practices on Reproductive Health among Ambo University Students in Ambo, Oromia National Regional State, Ethiopia.Science Journal of Public Health; 3(2): 222-228.

Li Pong Wong (2012): An exploration of knowledge, attitudes and behaviours of young multiethnic Muslim- majority society in Malaysia in relation to reproductive and pre-marital sexual practices. BMC Public Health; 12: 865.

Lynna,Y.L., and Joan C.E. (2013): Maternity Nursing Care 2nd edition United Stated 94. Macmillan Dictionary for Students Macmillan, Pan Ltd. (1981), page 14, 456. Retrieved 2010-7-15.

Malleshappa, K., Shivram Krishna and Nandini, C. (2011): Knowledge and attitude about reproductive health among rural adolescent girls in KuppamMandal: An intervention study. Biomedical Research; 22 (3): 305-310

Moussa,O., (2012): Reproductive health awareness among educated young women in Egypt, master degree P.P110-130.

Reproductive Health Organization (2010): reproductive health retrieved

from http: www.who.int/topics/reproductive_health/en.

ShubhaDube and Kirti Sharma (2012): Knowledge, Attitude and Practice Regarding Reproductive Healthamong Urban and Rural Girls: A Comparative Study. Department of Human Development University of Rajasthan, Jaipur, Rajasthan, India**.** . Ethno Med; 6(2); 85-94**.**

Tawfik, M., Omneya G., El-Sharkawy, M. and Sara, A. (2013):school-based reproductive health education among adolescent girls in Alexandria, Egypt Population Reference Bureau. www.prb.org.

United Nations Commission on Population and Development (2012): Adolescents and Youth, Session 45, accessed at www.un.org/esa/population/cpd/cpd2012/cpd45.htm, on Aug. 21, 2012.

United Nations International Conferenceon Population and Development (2010): Cairo, Egypt, 5–13 September.

World Health Organization (2014):reproductive health retrieved 22 April 2014. Retrieved 3 September 2014. From http: www. Who.Int/topics/reproductive health/en.

Yehia, M., I., E. (2012): Assessment of knowledge, attitudes and practices and effect of reproductive health education program among school adolescent girls. Master degree P.P11.50**.**