

Study of Knowledge of Adolescent Female Students regarding their Reproductive Health

Randa M. Abobaker¹, Hany S. Elbarbary^{2,3} and Doaa M. Elian^{4,5}

1- Nursing Department, Collage of Applied Medical Science, Hafr El Batin University, Saudi Arabia.

2- Internal Medicine Department, Faculty of Medicine, Menoufia University, Egypt.

3- Medical Education Department, College of Medicine, King Faisal University, Saudi Arabia.

4- Pediatrics Department, Faculty of Medicine, Menoufia University, Egypt.

5- Pediatrics Department, Collage of Medicine, King Faisal University, Saudi Arabia.

Corresponding author: Correspondence to Randa M Abobaker

Abstract

Background: Reproductive health (RH) is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity, in all matters relating to the reproductive system and to its functions and processes. Reproductive health care includes having access to a range of good-quality information and services. **Aim of the study:** To Study Knowledge of Adolescent Female regarding their Reproductive Health in Hafr Al Batin University. **Design and Methods:** A descriptive study design was carried out at three faculties. Through purposive sample: 500 female students who were available at the time of data collection. **Data were collected** through a self- administered structured questionnaire sheet: It composed of two main parts: Socio-demographic characteristics and knowledge about RH matters. **Results, and Practice Implications:** The present study revealed that (70.8%) have a fair knowledge and (38.2%) of them have a good knowledge regarding reproductive health matters. Also, a statistically significant difference between age and their knowledge, while a highly statistically significant difference between residence, marital status, family size of them, and their RH knowledge. **The study concluded** that more than two third of studied female knowledge regarding reproductive health matters. **The study recommended,** develop reproductive health education programs for female adolescents to satisfy their needs and to motivate them. Further researches are needed to explore adolescents' obstacles for the utilization of reproductive health services.

Key words: Reproductive health, Females, Adolescents, Knowledge

Introduction

Reproductive health (RH) as a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity, in all matters relating to the reproductive system and to its functions and processes and include having access to a range of good-quality information and services especially for adolescences, because this period is one of

the most rapid phases of human development (**United Nations, 2017**). Adolescence is a period of life with specific health and developmental needs. It is also a time to develop knowledge and skills, learn to manage emotions and relationships, and acquire attributes and abilities that will be important for enjoying the adolescent years and assuming adult roles, (**United Nations International Conference, 2010**). One of the most

important aspects that should be investigated in our population is the reproductive health needs of young people, so that governments should provide information and services on reproductive health as a right to human life and a guarantee for the future development and health of nations **(World Health Organization, 2020)**.

Reproductive health is an important measure of general health and a central feature of human development. Therefore, meeting adolescent reproductive health needs requires not only providing services, but also overcoming community opposition, building understanding, and educating adults about the reproductive health needs of young people. **(Yehia, 2012 and Abelfath, 2008)**. Reproductive health addresses the reproductive processes, functions, and systems at all stages of life. Therefore, it implies that people can 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 **(World Health Organization 2014, 2018)**.

Furthermore, elements of reproductive health include the following: Empowerment and care of adolescent's girls, adolescent's nutrition, 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 **(Reproductive Health Organization, 2010)**.

Adolescents establish a large and important section of the population worldwide. Young people make up approximately 1.8 billion young people between the ages of 10 and 24 and account for 27% of the world's population. 85 percent of them live in countries that are developing. 600 million adolescent girls with specific needs, challenges and aspirations for the future are part of this generation. **(United Nations Population Fund, 2020)**. The Kingdom of Saudi Arabia (KSA) has a population exceeding 27 million, and 20% of its population is adolescents. Local research has largely focused on adults; however, it becomes evident that optimal adolescent health and well-being are essential prerequisites for advances to be made with decreasing the burden of disease witnessed among adults **(AlBuhairan et al, 2015 and Al Macadam, 2017)**.

Adolescents mean that in the second decade no longer children, not yet adults. 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) **(Deshmukh and Chaniana, 2020)**.

Adolescents face a variety of reproductive health risks with an increased risk of injury, illness, and death for mother and infant, such as too-early pregnancy and childbearing. Adolescents may know little about reproductive health, and information about fertility and contraception may be incorrect or misleading. **(Ebrahim et al., 2017)**.

Promoting healthy behaviours during adolescence and taking steps to better protect young people from health risks are critical for the prevention of health problems in adulthood, and for countries' future health and ability to develop and thrive (World Health Organization 2020).

Aim of the study

To Study of Knowledge of Adolescent Female regarding their Reproductive Health

Methodology

Study setting: The study was conducted at three colleges from the available seven colleges; namely: College of Applied Medical Science, College of Science, and College of literature, affiliated to the University of Hafr Albatin.

Study design: A descriptive research design was utilized.

Type of sample and size :

The total sample size is (500 female students) in the academic year (2018/2019) were included in the study, (150 from College of literature, 150 from College of Applied Medical Science and 200 from College of science). They were selected according to the following inclusion criteria:

- 1) Age ranging from 18-24 years.
- 2) Willing to participate in the study.

Tools

Data collection self-administered questionnaire sheet, after revising the present related literature. It was divided

into two parts. It includes the following sections :

Part I: Included assessment students' data as age, family size, residence, marital status, and their parent's characteristics .

Part II: Included assessment of female knowledge related to reproductive health matters, for example, the definition of reproductive health, components, and objective of reproductive health and rights of women in reproductive health.

Scoring system:

The correct answers were encoded according to the literature. Each knowledge element with a true answer was scored (2) and (1) score for an untrue answer. For all areas 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 knowledge 75 % or more are correct answers.
- Fair knowledge 50 % - 74 % are correct answers.
- Poor knowledge less than 50 % are correct answers.

Validity and reliability

The questionnaire sheet was tested for content validity a panel of five experts in the field of Paediatric, Maternity and Gynaecological nursing, and Community nursing. Before data collection, the Pilot study was conducted on (50) students under study; its aim was to evaluate the efficiency and content validity of the tool and to find the possible obstacles and

problems that might be faced during data collection. The adolescents recruited in the pilot study were excluded from the current study subjects .

Administrative design :

Approval with a written letter was taken before starting data collection from the college administrative authority of Applied Medical Science to conduct the study. Then, a copy of the approval letter was directed to the previously selected colleges deans to gain approval to meet the students. A consent was obtained from each participated student after full explanation of the study purpose from those who agree to participate in the study and they assured about the confidentiality, privacy, and right to withdraw from the study at any time.

Operational design:

Preparatory phase: Review of the past and currently available related literature on the various aspects of the study to develop the tools for data collection .

Fieldwork :

The interview with the students take place previous mentioned setting, in the first day the researcher spent 15 minutes in the beginning with all students, firstly introduce herself, briefly clarified the objectives and the aim of the study to adolescents to gain confidence and trust to satisfy them to participate in the study. Data was collected during the academic year 2018- 2019. All students who participated in the study and fulfilled the criteria were given a tool (Self-administered questionnaire sheet to assess personal data and knowledge related to reproductive health matters in the break period and provided direction to fill the

questions when needed. Some of the students completed the tool and gave it to the researcher on the same day and the second part took it to the home and gave him in the next visit. The visits were conducted 3 days per week for 3 months in each college the College of Applied Medical Science (150 students, College of literature (150 students), and College of Science (200 students). The researcher repeated the previous steps until fished predetermined numbers

Statistical analysis:

The data were obtained, reviewed, prepared for computer entry, coded, analysed, and tabulated. Data entry and analysis were done using SPSS 23 statistical software package and Microsoft excel program. Proper statistical tests were used to determine whether there were statistically significant differences between the variables of the study. Statistically significant differences were considered when P -value ≤ 0.001 .

Results:

Table (1): reveals the distribution of adolescent females according to their knowledge regarding reproductive health matters, total knowledge score of adolescents (70.8%) have a fair knowledge, and (38.2%) of them have good knowledge.

Table (2): clarifies the association between socio-demographic characteristics of the study sample and reproductive health knowledge, it was noticed that a statistically significant difference between age and their knowledge being higher in older age, while a highly statistically significant difference between residence, marital status, family size of them and

their RH knowledge. Knowledge increase in adolescents who inside Hafr El-Batin Governorate, in single and in less size family.

Table (3): illustrates the association between study sample reproductive health knowledge and their parent's characteristics. It was observed that a highly statistically significant difference between parent's characteristics of the

studied subject and their educational level and occupation, knowledge increase with the increased level of education (university level), and worker parents.

Figure (1): Represents the study sample source of knowledge, it was found 35% & (25%) were internet sources and media, respectively compared to mothers and teachers (20% and 5%) respectively.

Table (1): Distribution of study sample according to their knowledge regarding reproductive health matters. (n=500)

Knowledge Aspect	Incorrect		Correct	
	No	%	No	%
Reproductive health definition & Aim	191	38.20	309	61.80
Reproductive health elements	300	60.00	200	40.00
Population group involved in reproductive health	351	70.20	149	29.80
Reproductive health important	311	62.20	189	37.80
Women's rights in reproductive health	352	70.40	148	29.60
Factors affecting reproductive health	318	63.60	182	36.40
Reproductive health problems face adolescent	411	82.20	86	17.20
Total knowledge score %				
Poor	Fair		Good	
0.0%	70.8%		38.2%	

Table (2): Association between knowledge of the study sample about reproductive health and their socio-demographic characteristics.

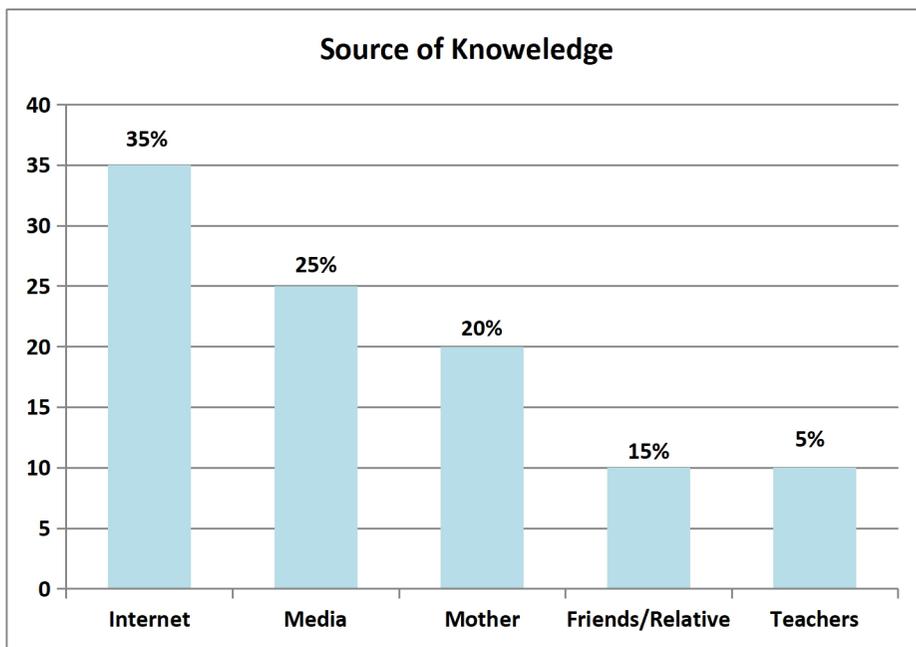
Socio-demographic characteristics		Student Knowledge				χ^2 P
		Fair		Good		
		No	%	No	%	
Age	18 - < 21	100	20.00	71	14.20	9.898 (0.024*)
	21 - 24	180	36.00	149	29.80	
Residence	Inside Governorate	200	40.00	65	13.00	7.299 (0.001**)
	Outside Governorate	175	35.00	60	12.00	
Marital status	Married	19	3.80	20	4.00	18.912 (0.001**)
	Single	240	48.00	210	42.00	
	widowed	2	0.4	1	0.2	
	Divorced	4	0.8	4	0.8	
Family size	2- 4	110	22.00	140	28.00	12.580 (0.004**)
	5- 7	90	18.00	80	16.00	
	>8	35	7.00	45	9.00	

** Highly Significant $P \leq 0.001$

* Significant $P < 0.05$

Table (3): Association between knowledge of study sample about reproductive health and their parent's characteristics

Parent's characteristics	Knowledge				χ^2 P
	Fair		Good		
	No	%	No	%	
Father data:					
Level of education:					
Illiterate/ read & write	30	6.00	35	7.00	19.030 ($<0.001^{**}$)
Basic education	35	7.00	39	7.80	
Secondary education	67	13.40	60	12.00	
University or more	118	23.60	116	23.20	
Occupation:					
Retired	30	6.00	25	5.00	26.888 ($<0.001^{**}$)
Working	210	42.00	235	47.00	
Mother data:					
Level of education:					
Illiterate/ read & write	20	4.00	23	4.60	19.025 (0.004^{**})
Basic education	60	12.00	62	12.40	
Secondary education	67	13.40	69	13.80	
University or more	100	20.00	99	19.80	
Occupation:					
Worker	150	30.00	160	32.00	25.708 ($<0.001^{**}$)
Housewife	90	18.00	100	20.00	

** Highly Significant $P \leq 0.001$ * Significant $P < 0.0$ **Figure (1):** Distribution of study sample according to their source of knowledge (n=500)

Discussion:

Adolescence is a period of life characterized by significant biological, physical, psychological, and emotional changes, and hence, it is important for the future of both individuals and nations (**Al Makadma, 2017**). The present study has shown that the reproductive health knowledge of the studied subjects was more than two-thirds of the sample had fair knowledge and more than one-third of them had good knowledge. The current study is in congruence with the study of (**Ebrahim et al, 2017**) where they found that nearly two-thirds of the sample had fair knowledge and more than one-third of them had good knowledge. In addition, the present finding falls in line with the study of (**Bobhate and Shrivastava, 2011**) they found that one-third of the studied subject had good knowledge about reproductive health. Moreover, the present finding is in conformity with the study of (**Moussa, 2012**) who mentioned that a large proportion of the participants exhibited fair knowledge about important reproductive health issues. The match between the results of these studies could be due to the 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 (**Kyereme et al, 2014**) which reported that more than three-quarters of the 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 differences and differences in accessing reproductive health information.

As regards the relation between adolescents' total knowledge and socio-demographic characteristics, age of adolescent, and level of knowledge. The result of the present study showed that there was a statistically significant relationship between adolescents' knowledge scores about reproductive health and their age, knowledge about reproductive health increase with increasing age of the studied subject. This was consistent with (**Ebrahim et al, 2017**) who mentioned that there was a statistically highly significant relation between adolescents' total knowledge score about reproductive health and sample age. The previous finding in contrast with the study carried in India cited by (**Dube and Sharma, 2017**) identified that there was no statistically significant relationship between adolescent's total knowledge score about reproductive health and their age. Also, study carried out by (**Gebremichael and Chaka, 2015**) mentioned that there was no statistically significant relationship between adolescent's total knowledge score about reproductive health and their age. This difference might be due to cultural differences. Also, the study showed that there was a highly statistically significant relation between the place of residence and knowledge about reproductive health. This finding matching with a study cited by (**Yehia, 2012 & Ebrahim et al, 2017**) who found that there was highly statistically significant relation between the place of residence and knowledge about reproductive health, On the other hand

the result of the present study had demonstrated that there were highly statistically significant relation between marital status and knowledge. This was consistent with **(Ebrahim et al, 2017)** who observed that a highly statistically significant relation between marital status and knowledge, single adolescent had knowledge than married adolescent. On the other hand, **(Ebrahim et al, 2017)** found a statistically significant difference between the age of the studied sample and RH knowledge with a highly statistically significant difference between residence, marital status, family size of them, and their RH knowledge.

Regarding the source of knowledge, (34.2%) of the studied sample do not remember, mother and media are equal percentages (22.6%). While, according to results of our study, it can be noticed that a highly statistically significant difference between parent's characteristics of the studied subject and their educational level and occupation, knowledge increase with the increased level of education (university level) and worker parent's. In addition, 35% & 25% of the studied sample was knowledge from internet sources and media, respectively.

In addition, this relatively matches with the study of **(Deshmukh & Chaniana, 2020)** they found that parents were found to be among the least common source of information and concluded that parents need to have adequate communication with their adolescents regarding reproductive health. Moreover, the present finding is unlike the study of **(Kyllieh et al, 2018)** where they found that most adolescents relying on their peers for information on

reproductive health. Furthermore, the current finding is in harmony with the study of **(Gebremichael and Chaka, 2015)** which reported that the sources of adolescent information about the reproductive health aspect were the mass media, internet, and mother. Moreover, this finding is also in congruence with **(Abobaker, 2017)** who found that the Internet is the first choice for adolescent females as a source of reproductive health information to explore sensitive topics online. In Contrary, a study conducted by **(Malleshappa et.al, 2011)** **(Bazarganipour et.al, 2013)** stated that health professionals were the main sources of information for 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, and also because of cultural aspect of community related to RH.

Regarding the educational level of the parents of studied subjects and knowledge of the studied sample about reproductive health issues, this study revealed that there was a highly statistically significant relationship between the educational level of parents and knowledge of adolescents about the reproductive health aspect. The current finding is in harmony with the study of **(Ebrahim et al, 2017)** who found that statistically significant relationships between the educational level of the father and mother with their knowledge about reproductive health. This indicated that parents could play an important role in socializing the reproduction health.

This result supported by **(Yehia, 2012)** who found that there was a highly

significant relation between adolescents' total knowledge about reproductive health and their mothers' level of education. Comparing with other studies (**Dube and Sharma, 2017**) who reported that the relationship between knowledge score of reproductive health and parent education was not significant, this might be due to easy access to information and knowledge from many sources as media, education not just parents.

Conclusion:

The study concluded that more than two-third (70.8%) of female adolescents have a fair knowledge, regarding reproductive health matters. Unexpectedly mothers were found to be among the least common sources of information regarding RH matters while, Internet and social media came on the top of the list of sources of RH matters.

Recommendations:

1. Develop reproductive health education programs for female adolescents satisfy their needs and to motivate them.
2. Further researches are needed to evaluate the outcome of parent-adolescent communication on adolescent reproductive health matters.

References

Abelfath, I. (2008): Assessment of Knowledge and Attitude Regarding Reproductive Health among Late Adolescents Female, master degree P.P19-86.

Abobaker R (2017): Adolescents Utilization of websites as a source of

Reproductive health information. *International Journal of Advanced Research (IJAR)*, Vol 5(8).

Al Makadma A. Adolescent health and health care in the Arab Gulf countries: Today's needs and tomorrow's challenges. *International Journal of Pediatrics and Adolescent Medicine* 4 (2017) 1-8.

AlBuhairan S, Tamim H, Al Dubayee M, AlDhukair Sh, Al Shehri S, Tamimi W, El Bcheraoui Ch, Magzoub M, de Vries N, Al Alwan I. *Adolesc Health.* 2015 Sep; 57(3):263-9. doi: 10. 1016/ j. jadohealth. 2015.06.009

Bazarganipour F,, Foroozanfard F, Taghavi S , Hekmatzadeh F , M.Sc.,4 Sarviye M , Hosseini N. Evaluation of Female Youth Educational Needs about Reproductive Health in Non-Medical Students in the City of Qom. *J Family Reprod Health.* 2013 Jun; 7(2): 67–72.

Bobhate P, Shrivastava S. (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.

Deshmukh D, Chaniana S. Knowledge About Sexual and Reproductive Health in Adolescent School-Going Children of 8th, 9th, and 10th Standards. *Journal of Psychosexual Health* . 2020 ;2 (1) . <https://doi.org/10.1177/2631831819898916>.

- Dube Sh, Sharma K.** Knowledge, Attitude and Practice Regarding Reproductive Health among Urban and Rural Girls: A Comparative Study. Department of Human Development. Journal Studies on Ethno-Medicine 2017; 6(2): 85-94.
- Ebrahim E, Fahmy N, Ahmed Sh.** Knowledge of Adolescent Female regarding their Reproductive Health. Egyptian Journal of Health Care (EJHC), 2017; 8 (4) 232 -244.
- Gebremichael M, Chaka E (2015):** 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.
- Kyereme A, Asare K, Darteh E. (2014):** Attitudes of Gatekeepers towards Adolescent Sexual and Reproductive Health in Ghana African Journal of Reproductive Health 18(3):146.
- Kyilleh J, Tabong Ph, Konlaa B.** Adolescents' reproductive health knowledge, choices and factors affecting reproductive health choices: a qualitative study in the West Gonja District in Northern region, Ghana. Kyilleh et al. BMC International Health and Human Rights (2018) 18:6 DOI 10.1186/s12914-018-0147-5.
- 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.
- Malleshappa, K., Krishna Sh, Nandini, C. (2011):** Knowledge and attitude about reproductive health among rural adolescent girls in Kuppam Mandal: 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. Available at URL: http://www.who.int/topics/reproductive_health/en. Retrieved on 30 April 2020.
- United Nations International Conference on Population and Development (2010):** Cairo, Egypt, 5–13 September.
- United Nations Population Fund.** The state of world population 2014. Adolescents, youth, and the transformation of the future. Available at URL: https://www.unfpa.org/sites/default/files/pub-pdf/EN-SWOP14-Report_FINAL-web.pdf. Retrieved on 5 April 2020.
- United Nations,** Department of Economic and Social Affairs, Population Division. Reproductive Health Policies 2017. World Population Policies Database. Available at; URL: https://www.un.org/en/development/desa/population/publications/pdf/policy/reproductive_health_policies_2017_data_booklet.pdf. Retrieved on; 7 January 2020.

World Health Organization (2014):

Reproductive Health. Available at URL: <http://www.who.int/topics/reproductive-health/en>. Retrieved on 30 April 2020.

World Health Organization.

Adolescents: health risks and solutions.2018. Retrieved on; 7-7-2020. Available at: <https://www.who.int/news-room/fact-sheets/detail/adolescents-health-risks-and-solutions>.

World Health Organization. Maternal, newborn, child, and adolescent health.2020. <https://www.who.int/maternal-child-adolescent/topics/adolescence/development/en>. Retrieved on 1 February 2020.

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