

Perception of Adolescents in Orphanage Regarding Reproductive Health

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Abstract

Background: Reproductive health (RH) is a crucial aspect of general health; it is a reflection of health during adolescence and adulthood. Meeting the reproductive health needs of adolescents is a serious challenge that frequently becomes overwhelming, particularly for orphaned adolescents. **Aim:** To assess the perception of adolescents in orphanage regarding reproductive health. **Design:** A descriptive study design was utilized. **Setting:** The present study was conducted at two orphanage home at El-Fayoum city namely (Aisha Hassanein House and Social Care Association in EL-Hadqa). **Sample:** A convenience sample of 47 adolescent orphans (30 male and 17 female), they aged up to 21 years. **Tools of data collection:** The data was collected by using two tools. A structured questionnaire sheet to assess knowledge of adolescent orphans' regarding Reproductive health and attitude rating scale to assess their attitude regarding Reproductive health. **Results:** The study revealed that (70.2%) had poor level of knowledge and (57.4%) had negative attitude regarding Reproductive health. There was highly statistically significant relation between total knowledge regarding RH and their educational level and length of stay at the orphanage home. **Conclusion:** Over two-thirds of the adolescent orphans in the study lacked adequate knowledge about reproductive health issues and nearly three-fifths of them had negative attitude towards Reproductive health. **Recommendation:** Create programs for educating adolescents who are orphans about reproductive health in order to meet their needs and motivate them, further researches to evaluate and examine the barriers to using reproductive health services among adolescent orphans.

Key words: Perception, Adolescent orphans', Orphanage, reproductive health.

Introduction

Reproductive health is defined as “A state of complete physical, mental, and social wellbeing and not merely the absence of disease or infirmity, in all matters related to the reproductive system and to its functions and process”. It addresses the human sexuality and reproductive processes, functions and system at all stages of life and implies that people are able to have “a responsible, satisfying and safe sex life and that they have the capability to reproduce and the freedom to decide if, when and how often to do so (**World Health Organization, 2023**). As a key component of human development, reproductive health is a significant indicator of overall health. In order to address the reproductive health requirements of adolescents, it is necessary to not only offer services but also to overcome community resistance, foster understanding, and inform adults about the needs of young people in terms of reproductive health (**Abobaker, R. M., S Elbarbary, H., & M Elan, D. 2020**). Sexual and reproductive health rights are the rights of anyone, regardless of age, sex, or other characteristics, to make decisions regarding their own sexuality and reproductive issues. These rights include access to sexual

and reproductive health care and information, as well as autonomy in sexual and reproductive decision-making. These rights are universal, indivisible, and indisputable; they are based on other fundamental human rights, such as the right to health, the right to be free from discrimination, the right to privacy, the right not to be tortured or subjected to ill-treatment, the right to choose the number and spacing of one's children, and the right to be free from sexual violence (**Mohan, V., & Ngunjiri, E. W. 2025**).

According to **UNICEF**, an orphan is "anyone aged 0-17 who has lost one parent." Of the almost 153 million orphans in the world, 14 million have lost both of their parents, and 116 still have a live parent (**UNICEF, 2021**). In 2022, the Egyptian Ministry of Social Solidarity reported that there were 1,430,000 orphans in Egypt. Seventy percent of these orphans had lost their fathers, 27% had lost their mothers, and 3% had lost both parents (**Ministry of Social Solidarity, 2022**). The World Health Organization (**WHO**) defines an adolescent as any individual between the ages of 10 and 19. Adolescence and puberty are closely related, and most teenagers exhibit risk-taking behaviors throughout this developmental phase.

Adolescents around the world struggle greatly to meet their reproductive health needs, that frequently becomes overwhelming, particularly for orphaned adolescents (**Faramade, I. O., Olugbenga-Bello, A. I., & Goodman, O. O. 2023**).

Compared to teenagers living with their parents, adolescents living in orphanages face more serious issues. Their resources are extremely limited. Adolescents who don't learn enough about the changes that come with puberty will feel anxious, ashamed, and uneasy about themselves (**Fidora, I., Putri, S. A., & Ningsih, R. 2020**). Parents and educators have always shared responsibility for educating children about sexuality, however, the consequences are frequently insufficient (**Punjani, N. S., Papathanassoglou, E., & Hegadoren, K. 2020**).

Significance of the Study:

250 orphanages in Egypt are home to 7749 children aged 6 to 18, including 102 orphanages that house 2068 children aged 1 to 6. Children aged six to eighteen are presumed to be accepted into government orphanages. For children who lack family care, these orphanages or shelters offer social and medical support as well as educational, religious, and recreational opportunities. However,

the orphaned residents typically face more obstacles and hardships than their peers who live with their parents (**Osamy Zaid Anbar, H., Mahmoud Elewa, S., & Elias Abdel-Aziz, A. 2023**).

Furthermore, the majority of orphans experience social exclusion or lack of basic financial support, which makes them vulnerable to a range of health, social, psychological, and developmental issues. They have unmet emotional and sexual cognitive needs, limited access to reproductive health experiences, and a lack of information about sexuality and dangerous sexual behaviors. Adolescents in developing countries lack certain fundamental rights, according to the majority of research conducted there. Many adolescents have misconceptions about their sexuality and reproductive health needs because they don't know enough about reproductive health, especially contraception. There is little information on the sexual risk behavior and reproductive health care of orphaned adolescents despite the abundance of information on the major challenges they meet. (**Fidora et al., 2020**). Because of their susceptibility and need for reproductive health services, adolescent orphans must have

knowledge about these services in order to obtain and use the services that are provided. Therefore, this study will conduct to assess the reproductive health knowledge and attitude among adolescent in orphanage.

Operational definitions:

Perception of Adolescents means male and female adolescents' knowledge and attitude.

Orphanage is a residential institution that provides care and housing for children who have lost their parents or are unable to live with their biological families due to various reasons.

Aim of the study:

This study aimed to assess the perception of adolescents in orphanage regarding reproductive health. **This aim was achieved through:**

-Assessing knowledge of adolescent orphans about reproductive health.

-Assessing attitude of adolescent orphans regarding reproductive health.

Research questions:

-What is the male and female adolescent orphans' knowledge regarding reproductive health?

-What is the male and female adolescent orphans' attitude regarding reproductive health?

Subjects and Methods:

Research design:

A descriptive study design was adopted to accomplish the aim of this study.

Setting:

The study was conducted at two orphanage home at El-Fayoum city namely (Aisha Hassanein House and Social Care Association in EL-Hadqa), affiliated with the Social Solidarity Directorate in Fayoum City.

Sample type: Convenience sample technique was utilized in this study.

Sample size: The study was included all adolescents in the orphanages. The total number of adolescent orphans were (47), (30 male and 17 female), 30 adolescents from Aisha Hassanein House and 17 adolescents from Social Care Association in EL-Hadqa will be recruited for this study, they aged up to 21 years.

Tools of Data collection:

The data was collected by using two tools.

Tool I: Structured Interviewing Questionnaire:

This tool was developed by the researcher after reviewing the national and international related literature. It was written in a simple Arabic language, it was divided into two parts.

Part 1: Socio-demographic characteristics:

It was designed to assess the orphan's characteristics such as sex, age, level of education, and duration of stay in orphanage.

Part 2: Adolescent orphans' knowledge regarding reproductive health:

It was divided into many parts;

-Assessment knowledge regarding reproductive health issues as the concept of reproductive health, components of reproductive health, goals of reproductive health services, personal rights in reproductive health, factors affecting on reproductive health, problems affecting on reproductive health and negative behavioral factors in reproductive health.

-Orphans' knowledge regarding nutrition and the effects on reproductive health such as component of healthy diet and importance of healthy diet on one's reproductive health.

-Adolescent knowledge regarding marriage such as proper age for marriage, importance of pre-marital examination, places offer pre-marital examination and source information about pre-marital examination.

-Adolescent knowledge regarding normal pregnancy such as proper age of pregnancy, aim from follow up

during pregnancy, warning signs of pregnancy and places offer care during pregnancy.

-Adolescent knowledge regarding sexual and reproductive diseases such as definition of sexual disease, symptoms of sexual transmitted diseases and Protection ways from sexual transmitted diseases.

-Adolescent knowledge regarding contraceptive methods such as types of contraceptive methods, source of information regarding contraceptive method.

Scoring system:

The complete correct answer was given score 3, the correct but incomplete answer was given score 2, and the wrong answer was given score 1. These scores was summed and converted into a percent score

It was classified in to 3 categories;

-**Good** knowledge if score > 80%.

-**Average** knowledge if score from 70 to 80%.

-**Poor** knowledge if score < 70%.

Tool II: attitude rating scale

Likert Rating Scale, utilized in this study was adopted by psychologist Rensis Likert. (**Likert, R, 1932**) It was translated into Arabic language to help students understand and easy fulfill statement it was designed to assess attitude of the adolescent orphans towards

reproductive health. It contained (17) statements and was rated by the three-point scale; agree, uncertain and disagree.

Scoring system:

A scoring system was followed to be assessing adolescent orphan attitudes toward reproductive health. Each statement was assigned a score according to adolescent orphans' responses and attitude; they will be classified to positive and negative attitude.

-Agree response was assigned as 3

-Uncertain response was assigned as 2

- Disagree response was assigned as 1

The scores of the items was summed up and converted into a percentage score.

It will be classified into 2 categories:

- **Positive** attitude if score $\geq 60\%$.

- **Negative** attitude if score $< 60\%$

Validity:

The study tools were tested and evaluated for their face and content validity by a panel of expertise composed of 3 professors of Maternal and Newborn Health Nursing to ascertain relevance, clarity, understanding, completeness and applicability of the tools. The required corrections and modifications were done by adding, modifying, and rearranging some questions.

Reliability:

The Cronbach's Alpha was used to determine the internal reliability of the tools, it is indicated that the questionnaire is reliable to detect the objectives of the study.

Pilot study:

The pilot study was carried out on 10% of the sample which equal (5) adolescent orphans from the studied sample to test the feasibility, clarity, applicability and the efficiency of the tools in addition to estimate the time needed to fill in the tools. Based on the results, no modifications done. Subjects included in the pilot study were included in the sample.

Ethical approval:

Ethical aspects were considered before starting the study as the following:

-Approval from the Ethical Research Committee of Fayoum University was obtained before conducting the study.

-An official permission from the selected study settings was obtained for the fulfillment of the study.

-Prior the study, oral consent was obtained from each participated adolescent orphan and the researcher clarified the aims and objectives of the study.

-The researcher informed the participant that the information they had gathered would be kept private,

and each participant had a right to withdraw at any time without giving a reason.

-The study didn't harm dignity, tradition and religious aspects of the participant.

-Anonymity, privacy, safety and confidentiality will absolutely assured throughout the whole study.

Field work:

-After attaining the approval to conduct the study, sample was collected 2 days weekly from the Aisha Hassanein House from 12 pm to 3 pm and the Social Care Association in EL-Hadqa from 2 pm to 5 pm.

-Actual field work was carried out in the period from March 2024 up to June 2024.

-At the beginning, the researcher introduced herself to the adolescent orphan and explained the purpose of the study to establish trust and encourage their participation. Oral consent will be obtained from each participated adolescent orphan after clarification of the study nature.

-The assessment process was conducted individually by the researcher and other time in group according the adolescent orphan free time. A structured interviewing questionnaire sheet was used to gather information about the adolescent orphan's characteristics, as well as

knowledge regarding reproductive health. Tool I took from 10-15minutes.

-The attitude of the adolescent orphans toward reproductive health was assessed using the Likert rating scale (Tool II). Tool II took from 5-10 minutes.

-The total time needed to fill in the questionnaire was about 15 to 25 minutes.

-The researcher gave 10 minutes health education on reproductive health issues to the adolescent orphans who are interviewed at the end of every data collection.

Limitations of the study:

-Some students were not available most of the time because they were outside the orphanage for recreational activities or to attend courses related to their studies, which led the researcher to go more than several times in order to be able to collect the research tools

-Some of studied sample had poor Arabic reading and writing skills which led to wasting more time from the researcher to collect the research data and also some of them had poor communication skills.

Statistical design:

-The statistical analysis of data was done by using the computer software of Microsoft Excel Program and

Statistical Package for Social Science (SPSS) version 25. Data were presented using descriptive statistics in the form of frequencies and percentage for categorical data, the arithmetic mean (X) and standard deviation (SD) for quantitative data. Qualitative variables were compared using chi square test, P-value to test association between two variables. Correlation coefficient test (r) was used to test the correlation between studied variables. Reliability of the study tools was done using Cronbach's Alpha.

-Degrees of significance of results were considered as follows:

- P-value ≥ 0.05 Not significant (NS)
- P-value < 0.05 Significant (S)
- P-value < 0.01 Highly Significant (HS).

Administrative design:

An official letter to carry out this study clarifying the purpose and setting of the study was obtained from the Dean of the Faculty of Nursing, Fayoum University to the directors of the previously mentioned-setting as an approval to obtain permission and cooperation.

Results:

Table (1): shows that, slightly more than three fifth (61.7%) of the studied adolescents orphans were in the age group 16-18 years, the Mean SD of

age was 16.04 ± 1.61 years. As regard to gender, more than three fifth (63.8%) of them were male. Also, 61.7% of them have secondary education. Moreover, slightly more than one third (34.0%) of them stayed at orphans' home from $5 < 10$ years, the Mean SD of stay was 9.96 ± 5.89 years.

Table (2): shows that, more than half of the studied adolescent orphans (53.2% and 51.1%) had complete correct knowledge about the definition of reproductive health and target population for reproductive health services, respectively. While, near to three fifth of them (57.4% and 59.6%) had incomplete correct knowledge about the personal rights in reproductive health and factors affecting on reproductive health, respectively. Also, 55.3% and 53.2% of them don't know the problems affecting on reproductive health and negative behavioral factors in reproductive health, respectively.

Figure (1): shows that, near to three fifth of the studied adolescent orphans (57.4%) have information regarding reproductive health from internet and social media. Also, slightly more than one fifth of them (21.3%) have information from friends.

Figure (2): shows that, more than two-third of the studied adolescent

orphans (70.2%) had poor level of total knowledge score. While, slightly more than one fifth of them (21.3%) had average level of total knowledge. Also, (8.5%) of them had good level of total knowledge.

Table(3): shows that, near to three fifth and more than half of the studied adolescent orphans (59.6% and 51.1 %) agreed that, education raises awareness of the concept of reproductive health and lifestyle affects reproductive health. respectively. Also, more than three fifth of them (63.8% and 68.1%) not sure that, providing information about reproductive health in early adolescence and before marriage contributes to healthy sexual attitudes and reproductive tract infections have a negative impact on reproductive health, respectively. While, more than half of them (55.3% and 51.1%) disagreed that, periodic examination helps to ensure reproductive health and circumcision negatively affects reproductive health, respectively.

Figure (3): shows that, near to three fifth of the studied adolescent orphans (57.4%) had negative attitude regarding reproductive health. While, more than two fifth (42.6%) of them had positive attitude.

Table (4): displays that, there was highly statistically significant relation between total adolescent orphans' knowledge regarding reproductive health and their educational level and length of stay at the orphanage home at ($P = < 0.01$). Also, there was statistically significant relation with their age at ($P = < 0.05$). While, there was no statistically significant relation with their gender at ($P = > 0.05$).

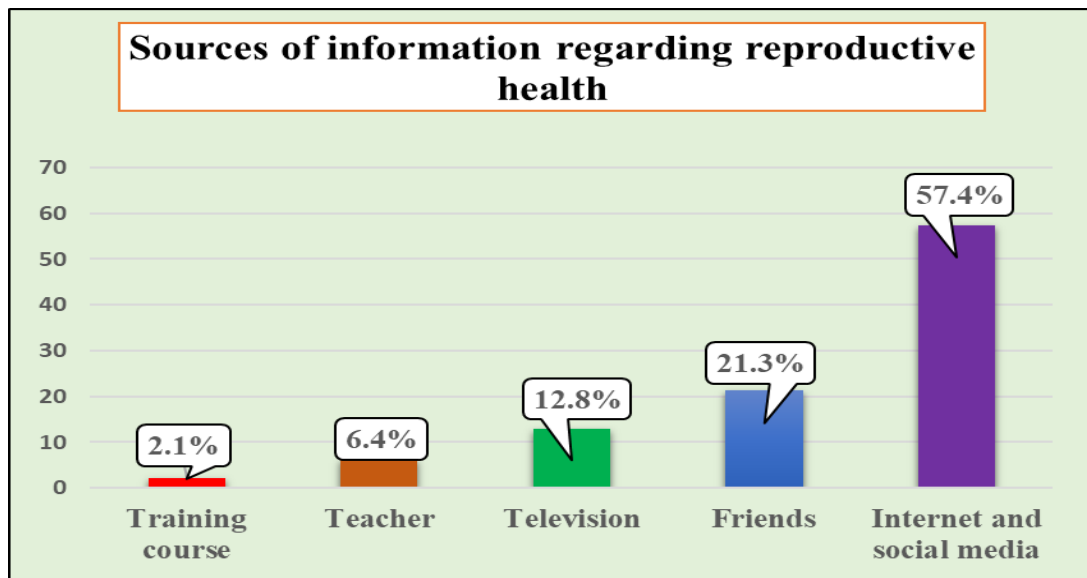
Table (5): indicates that, there was highly statistically significant positive correlation between total knowledge and total attitude regarding reproductive health among the studied adolescent orphans at ($r = 0.723$, $p = 0.000$).

Table (1): Distribution of the studied orphans adolescents according to their socio-demographic characteristics (n=47).

| Socio-demographic characteristics | No. | % |
|---|----------------------------------|------|
| Age (years) | | |
| 12<14 | 2 | 4.3 |
| 14<16 | 16 | 34.0 |
| 16-18 | 29 | 61.7 |
| Mean \pm SD | 16.04\pm1.61 | |
| Gender | | |
| Male | 30 | 63.8 |
| Female | 17 | 36.2 |
| Educational level | | |
| Illiterate | 0 | 0.0 |
| Basic education (primary and preparatory) | 18 | 38.3 |
| Vocational education | 0 | 0.0 |
| Secondary education | 29 | 61.7 |
| High education | 0 | 0.0 |
| Length of stay at the orphanage home | | |
| <1 year | 2 | 4.3 |
| 1-<5 years | 5 | 10.6 |
| 5-<10 years | 16 | 34.0 |
| 10-<15 years | 11 | 23.4 |
| 15- \leq 18 years | 13 | 27.7 |
| Mean \pm SD | 9.96\pm5.89 | |

Table (2): Distribution of the studied orphans adolescents according to their knowledge regarding reproductive health (n=47).

| Knowledge regarding reproductive health | Complete correct answer | | Incomplete correct answer | | Don't know | |
|--|-------------------------|------|---------------------------|------|------------|------|
| | No. | % | No. | % | No. | % |
| Definition of reproductive health | 25 | 53.2 | 5 | 10.6 | 17 | 36.2 |
| Components of reproductive health | 18 | 38.3 | 12 | 25.5 | 17 | 36.2 |
| Target population for reproductive health services | 24 | 51.1 | 19 | 40.4 | 4 | 8.5 |
| Goals of reproductive health | 13 | 27.7 | 26 | 55.3 | 8 | 17.0 |
| Personal rights in reproductive health | 10 | 21.3 | 27 | 57.4 | 10 | 21.3 |
| Factors affecting on reproductive health | 10 | 21.3 | 28 | 59.6 | 9 | 19.1 |
| Problems affecting on reproductive health | 11 | 23.4 | 10 | 21.3 | 26 | 55.3 |
| Negative behavioral factors in reproductive health | 11 | 23.4 | 11 | 23.4 | 25 | 53.2 |

**Figure (1): Percentage distribution of the studied orphans adolescents according to their sources of information regarding reproductive health (n=47).**

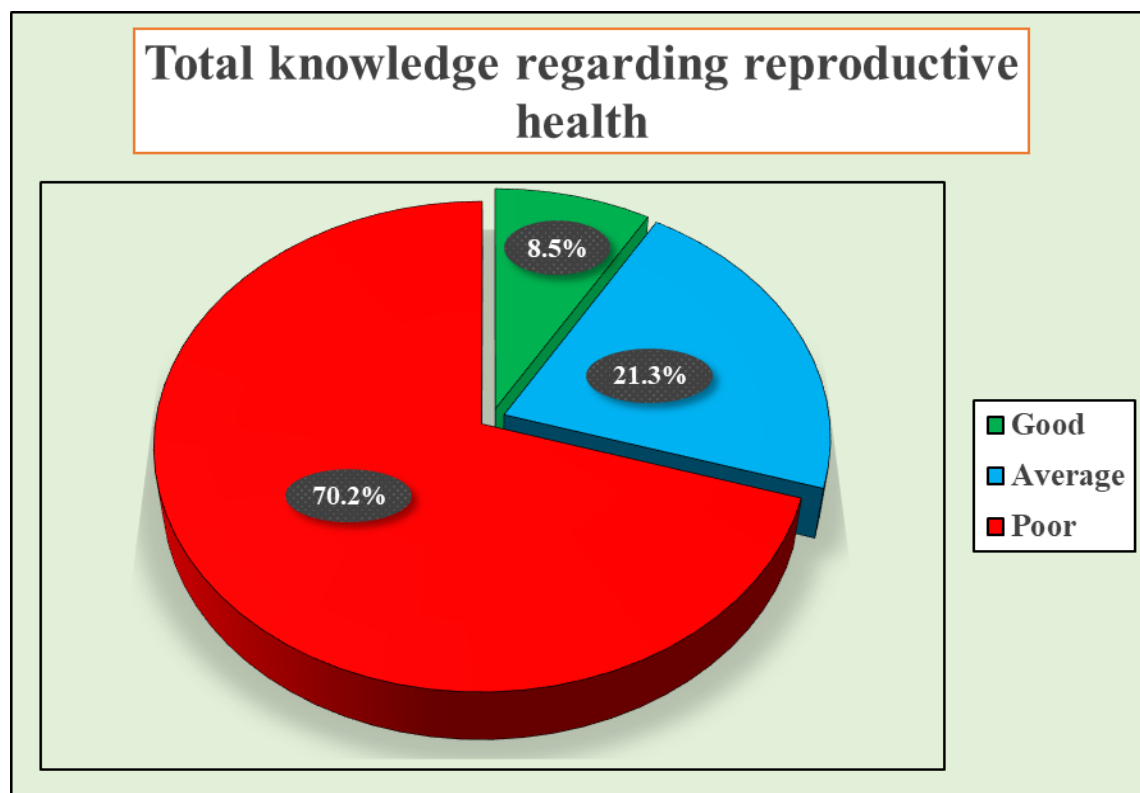


Figure (2): Percentage distribution of the studied orphans adolescents according to total knowledge regarding reproductive health (n=47).

Table (3): Frequency distribution of the orphans adolescents's attitude regarding reproductive health (n=47).

| Statements | Agree | | Not sure | | Disagree | |
|---|-------|------|----------|------|----------|------|
| | No. | % | No. | % | No. | % |
| Education raises awareness of the concept of reproductive health | 28 | 59.6 | 16 | 34.0 | 3 | 6.4 |
| Lifestyle affects reproductive health. | 24 | 51.1 | 11 | 23.4 | 12 | 25.5 |
| Providing information about reproductive health in early adolescence and before marriage contributes to healthy sexual attitudes | 14 | 29.8 | 30 | 63.8 | 3 | 6.4 |
| Disseminating information among young people and increasing religious awareness is the best way to prevent sexually transmitted diseases and AIDS | 16 | 34.0 | 28 | 59.6 | 3 | 6.4 |
| Follow-up with reproductive health care services provides important information to maintain reproductive health. | 14 | 29.8 | 29 | 61.7 | 4 | 8.5 |
| Both men and women should use reproductive health services. | 13 | 27.7 | 21 | 44.6 | 13 | 27.7 |
| Early marriage has harmful effects on reproductive health. | 14 | 29.8 | 28 | 59.6 | 5 | 10.6 |
| Premarital counseling and testing are components of reproductive health. | 13 | 27.7 | 28 | 59.6 | 6 | 12.7 |
| Reproductive tract infections have a negative impact on reproductive health. | 12 | 25.5 | 32 | 68.1 | 3 | 6.4 |
| Regular check-ups help detect reproductive health problems. | 16 | 34.0 | 24 | 51.1 | 7 | 14.9 |
| The nurse has a major role in spreading awareness of reproductive health. | 14 | 29.8 | 21 | 44.7 | 12 | 25.5 |
| Family planning methods maintain reproductive health. | 14 | 29.8 | 26 | 55.3 | 7 | 14.9 |
| Addiction affects reproductive health | 15 | 31.9 | 26 | 55.3 | 6 | 12.8 |
| Smoking is harmful to health, especially reproductive health. | 13 | 27.7 | 18 | 38.3 | 16 | 34 |
| Good nutrition leads to good reproductive health. | 14 | 29.8 | 15 | 31.9 | 18 | 38.3 |
| Periodic examination helps to ensure reproductive health. | 10 | 21.3 | 11 | 23.4 | 26 | 55.3 |
| Circumcision negatively affects reproductive health. | 7 | 14.9 | 16 | 34.0 | 24 | 51.1 |

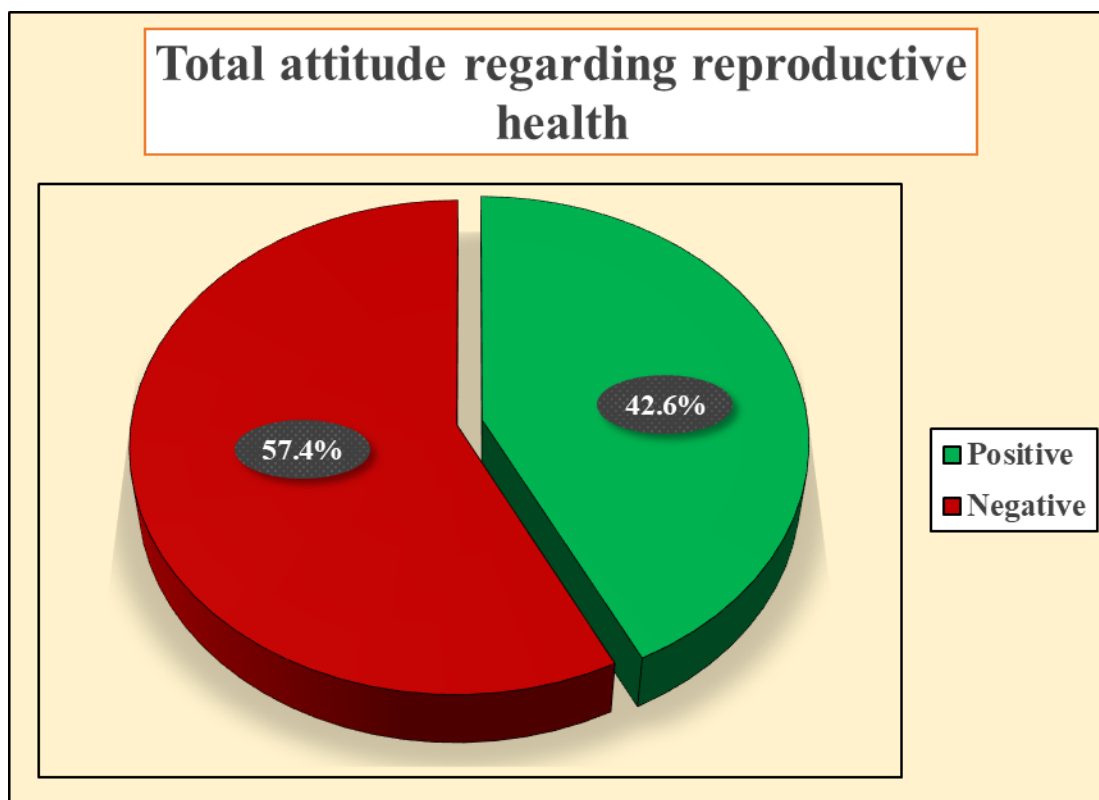


Figure (3): Percentage distribution of the studied orphans adolescents according to total attitude regarding reproductive health (n=47).

Table (4): Relation between socio-demographic characteristics of the studied orphans adolescents and their total knowledge regarding reproductive health (n=47).

| Socio-demographic characteristics | | Total knowledge regarding reproductive health | | | | | | X ² | P-Value |
|--------------------------------------|---|---|-------|----------------|-------|-------------|------|----------------|---------|
| | | Good (n=4) | | Average (n=10) | | Poor (n=33) | | | |
| | | No. | % | No. | % | No. | % | | |
| Age (year) | 12<14 | 0 | 0.0 | 0 | 0.0 | 2 | 6.1 | 12.37 | 0.015* |
| | 14<16 | 0 | 0.0 | 0 | 0.0 | 16 | 48.5 | | |
| | 16-18 | 4 | 100.0 | 10 | 100.0 | 15 | 45.4 | | |
| Gender | Male | 1 | 25.0 | 7 | 70.0 | 22 | 66.7 | 2.892 | 0.235 |
| | Female | 3 | 75.0 | 3 | 30.0 | 11 | 33.3 | | |
| Educational Level | Basic education (primary and preparatory) | 0 | 0.0 | 0 | 0.0 | 18 | 54.5 | 12.37 | 0.002** |
| | Secondary education | 4 | 100.0 | 10 | 100.0 | 15 | 45.5 | | |
| Length of stay at the orphanage home | <1 year | 0 | 0.0 | 0 | 0.0 | 2 | 6.1 | 21.67 | 0.006** |
| | 1-<5 years | 0 | 0.0 | 0 | 0.0 | 5 | 15.1 | | |
| | 5-<10 years | 1 | 25.0 | 2 | 20.0 | 13 | 39.4 | | |
| | 10-<15 years | 1 | 25.0 | 0 | 0.0 | 10 | 30.3 | | |
| | 15-≤18 years | 2 | 50.0 | 8 | 80.0 | 3 | 9.1 | | |

X²= Chi-square test. No statistically significant at $p > 0.05$.

* Statistically significant at $p < 0.05$. ** Highly statistically significant at $p < 0.01$.

Table (5): Correlation between total knowledge and total attitude regarding reproductive health among the studied orphans adolescents (n=47).

| Variables | Total knowledge | |
|----------------|-----------------|---------|
| Total attitude | r | p-value |
| | 0.723 | 0.000** |

r= Pearson correlation coefficient test. **Highly statistically significant at $p < 0.01$.

Discussion:

Understanding reproductive health is crucial for both men and women, particularly youth. Adolescence, on the other hand, is a time when children grow up and become adults. A number of physical, psychological, and social changes take place in teenagers throughout this time. Adolescents frequently face this transitional phase in confusing situations, lacking a sense of belonging, and not fitting in with either the child or adult groups (**Dinengsih, S., & Hakim, N. 2020**). Upon reaching puberty, adolescents will undergo rapid physical changes. One of these physical changes is the ability to carry out the reproductive process. However, the phenomenon indicates that some teenagers do not know and understand reproductive health, including menstruation and pregnancy (**Astarani, K., Richard, S. D., Taviyanda, D., Rose, S., & Amallo, M. P. 2023**).

Regarding socio-demographic characteristics of the studied sample, the current study revealed that the age of slightly more than three fifth of the studied adolescents' orphans were in the age group 16-18 years, with the mean age (16.04 ± 1.61) years. These findings are in the same line with **Kumalasari, N., Kuswardinah, A.,**

& Deliana, S. M. (2020) who assessed " The Influence of Reproductive Health Education to Knowledge and Perceived Behavior Sexual Adolescent Control "and revealed that, the majority of respondents aged 17 years.

Concerning the Gender, the results revealed that more than three fifth of the sample were male. These findings are corresponding with **Menshawy et al., (2021)** who reported in a published study conducted in Egypt, entitled as " Break the Silence: Knowledge and Attitude Towards Sexual and Reproductive Health Among Egyptian Youth" that more than half 53% of our sample were males.

From the researcher point of view, the number of boys in orphanages is often higher than girls because boys are more likely to be placed in institutional care, while girls may be taken by extended families due to cultural or protective reasons.

On the other hand, these results are incongruent with **Klu et al., (2023)** who evaluated " Adolescent perception of sexual and reproductive health rights and access to reproductive health information and services in Adaklu district of the Volta Region, Ghana" and clarified that nearly to three

fifth of the respondents were females.

As regard to the level of education, the results showed that, slightly more than three fifth of the studied sample have secondary education. The current finding matches with **faramade et al., (2023)** who studied Sexual knowledge, risk behavior, and access to reproductive health services among orphaned adolescents in Southwest Nigeria: implications for institutionalized care, illustrated that over three-quarters of the group under study finished secondary school.

Moreover, more than one third of them stayed at orphans' home from 5<10 years, the Mean SD of stay was 9.96 ± 5.89 years. These findings are reinforced by **Sapkal, D. A. B., Shah, D. A. K., Deshpande, D. S., More, D. A., & Swami, D. A. (2025)** who evaluated "Personal Hygiene Status of Adolescent Girls Living in Orphanages of a Metropolitan City", reported that near to one third the studied sample were staying at the orphanage for 6-10 yrs.

From the researcher point of view, the teenagers who live in orphanages for a long time often know less about reproductive health. This is because they do not have parents to guide them, and most orphanages do not teach about

these topics clearly. Also, talking about reproductive health seen as shameful, so no one discusses it, so many teens learn from friends or internet, which can give them wrong information.

Concerning the knowledge regarding reproductive health, the results of the current study illustrated that more than half of the studied adolescent orphans had complete correct knowledge about the definition of reproductive health and target population for reproductive health services, respectively. These results are supported by **Hamdi Mabrouk, H., Elsaad Farouk, O., & Sarhan Eldesoky, A. (2022)** who evaluated "Fayoum University Students Perception Regarding Reproductive Health" and revealed that fewer than half of the study group correctly defined RH, and that more than half of them correctly identified the RH services target population.

In contrast, this result is disagreed with **Abobaker et al., (2020)** who carried out a study titled " Study of Knowledge of Adolescent Female Students regarding their Reproductive Health" and showed that almost three-fifths of the groups had the right answer on the definition and purpose of RH, however, fewer than one quarter had

accurate information regarding the RH services target group.

The present study showed that, near to three fifth of the studied sample had incomplete correct knowledge about the personal rights in reproductive health and factors affecting on reproductive health, respectively. This finding is matched with **Abobaker et al., (2020)** who reported that more than three fifth the studied sample had incorrect answer about the personal rights and factors affecting on reproductive health.

On the other hand, this result is contradicted with **Hamdi Mabrouk et al., (2022)** who reported that near to the majority of the studied sample had correct knowledge about the rights in RH and the factor affect RH.

As well as the present study revealed that more than half of the adolescent orphans don't know the problems affecting on reproductive health. This result is in alignment with **Abobaker et al., (2020)** and also with **Ebrahim, E., Fahmy, N., & Ahmed, S. (2017)** who assessed "Knowledge of Adolescent Female regarding their Reproductive Health." and reported that more than four fifth the studied sample had incorrect knowledge about the Reproductive health problems face adolescent.

As regard to the source of information about reproductive health, the results of the current study illustrated that more than half of the studied sample reported that the internet and social media was the main source of their information about RH followed by friends, television and then the minority were from teachers and training course. This study is agree with **Nashat, N. N., Kabbash, I., & Attalla, A. O. (2020)** who studied "Reproductive health Knowledge needs among secondary school students in Mid Nile Delta Region, Egypt." and revealed that, the primary data sources were internet, media, friends, schoolbooks and relatives.

From the researcher point of view, this outcome may be attributed to lifestyle choices, the rapid growth of technology, and the prevalence of social media platforms like Google, Facebook, WhatsApp, Twitter, and Instagram, as well as global mass media like TV, radio, and newspapers. It can also be because they are orphans and lack the direction of their families.

Regarding the total reproductive health knowledge score the present study indicated that, more than two-third of the studied adolescent orphans had poor level of total

knowledge score. While, slightly more than one fifth of them had average level of total knowledge. Also, minority of them had good level of total knowledge. These findings are in the same line with **Nashat et al., (2020)** who reported that, adolescents' alarmingly low levels of sexual and reproductive knowledge.

The researcher believes that the current study's low level of awareness on reproductive health can be partially explained by the absence of parents' roles in explaining these subjects, the absence of appropriate health education in the orphanages, the fear or shyness associated with asking questions, and the lack of reliable information.

Similarly, **Gausman et al., (2019)** in a concept mapping study protocol about how do Jordanian and Syrian youth living in Jordan envision their sexual and reproductive health needs? which reported that Jordanian had poor RH knowledge and stressed that youth need more study about reproductive health-related information.⁹

Concerning the adolescent orphans' attitude regarding reproductive health, the findings of the current study showed that more than half of adolescent orphans in the survey believed that, education raises

awareness of the concept of reproductive health and lifestyle affects reproductive health, respectively. Also, more than three fifth of them not sure that, providing information about reproductive health in early adolescence and before marriage contributes to healthy sexual attitudes and reproductive tract infections have a negative impact on reproductive health, respectively. While, more than half of them disagreed that, periodic examination helps to ensure reproductive health and circumcision negatively affects reproductive health, respectively with total score, near to three fifth of the studied adolescent orphans had negative attitude regarding reproductive health. While, more than two fifth of them had positive attitude.

The present study is congruent with , **Kashefi, F., Bakhtiari, A., Pasha, H., Amiri, F. N., & Bakouei, F. (2021)** in A Cross-Sectional Study that assess Student Attitudes About Reproductive Health in Public Universities, who showed a poor reproductive health attitude in study group, indicated that the students' level of attitude on reproductive health was not satisfactory and stressed about the importance of Intervention programs related to reproductive health taking into

account the cultural aspects of Iranian society can protect young people from risky behaviors and unwanted pregnancies by creating a positive attitude.

On the other hand, the findings are contrasted with **Alegado, V. M., Domingo, A. P., Rogayan, D. V., & Albeza, J. (2025)** who studied "College Students' Knowledge, Attitudes, and Practices Regarding Reproductive Health: Implications to Science Education Curriculum" and reported that, the level of attitude among teacher education students towards reproductive health was very favorable.

Regarding the relation between socio-demographic characteristics of the studied adolescent orphans and their total knowledge regarding reproductive health, the present study showed that there was highly statistically significant relation between total adolescent orphans' knowledge regarding reproductive health and their educational level and length of stay at the orphanage home. Also, there was statistically significant relation with their age. With regard to their gender, however, there was no statistically significant relation.

These results are similar to **Cameron, A., Smith, E., Mercer, N., & Sundstrom, B. (2020)** who performed a study titled "It is our

duty: understanding parents' perspectives on reproductives on and sexual health education" and noted that the personal characteristics of the students under study were positively related with their knowledge.

The previous findings are in contrast with study carried out by **Gebremichael, M. A., & Chaka, E. E. (2015)** who studied "Assessment of Knowledge, Attitude and Practices on Reproductive Health among Ambo University Students in Ambo, Oromia National Regional State" mentioned that, the relationship between the age of adolescents and their overall reproductive health knowledge score was not statistically significant. Cultural differences could be the cause of this difference.

Regarding the correlation between total knowledge and total attitude regarding reproductive health among the studied adolescent orphans the present study indicated that, there was highly statistically significant positive correlation between total knowledge and total attitude regarding reproductive health among the studied adolescent orphans. This result is in alignment with **Ashry, F. K., Elaty, A., Hasan, I., Abo Shabana, K. R., & Ali, M. R. (2020)** who evaluated "

Effect of educational Guideline on student Nurse Knowledge and Attitude Regarding women reproductive Rights" and stated that, there was a positive correlation between the knowledge and attitude of the participants in the study. Further matching was also observed in a study by **DeBeaudrap et al., (2019)** who assessed " Disability and access to sexual and reproductive health services in Cameroon: a mediation analysis of the role of socioeconomic factors" and discovered that attitudes and knowledge on reproductive rights were positively correlated.

Conclusion:

Based on the research and research questions, the present study concluded that:

Over two-thirds of the adolescent orphans in the study lacked adequate knowledge about reproductive health issues and nearly three-fifths of the adolescent orphans in the study had a poor attitude towards reproductive health. Also, among the adolescent orphans within study, there was a very statistically significant positive correlation between their overall knowledge and attitude towards reproductive health. Overall, the findings of the current study achieved the study's aim and answered the research questions.

Recommendations:

Based on the findings of this study the following recommendations are derived and suggested:

- The needs of students in orphanages should be regularly evaluated.

- Create programs for educating adolescents who are orphans about reproductive health in order to meet their needs and motivate them.

- Encourage medical experts, including physicians and nurses, to visit orphanages on a regular basis to provide guidance and counselling regarding reproductive health.

-Further researches:

- Additional research is required to evaluate and examine the barriers to using reproductive health services among adolescent orphans.

- Additional studies to educate caregivers caring for orphans about reproductive health and how to address the reproductive health issues of the adolescents living in the orphanage.

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