Original Research

Volume 06, Issue 1, pp. 168-177, June 2024

AGHIEVERS JOURNAL OF SCIENTIFIC RESEARCH

Opecn Access Publications of Achievers University, Owo Available Online at www.achieversjournalofscience.org

Knowledge and Perception on Causes, Social Consequences, and Preventive Strategies of Teenage Pregnancy among Secondary School Students in North-Central Nigeria

^{1*}Onasoga, O.A., ²Anyebe, E.E., ³Aderibigbe, A.O. and ⁴Fadare, R.I.

Submitted: May 5, 2024; Revised: May 30, 2024; Accepted: June 3, 2024; Published: June 29, 2024

DOI: 10.5281/zenodo.13306702

Abstract

Teenage pregnancy remains a major contributor to maternal and child mortality globally. This study examined knowledge and perceptions of the causes, social consequences, and preventive strategies of teenage pregnancy among secondary school students in selected schools in Ilorin. A descriptive cross-sectional design was used, and 150 respondents were selected using simple random sampling technique. A self-administered questionnaire was used for data collection. The data collected were analyzed using descriptive and inferential statistics at 0.05 level of significance. The findings revealed that 68% of the respondents were between 14 and 17 years, 64.7% were female. 66.7% of the respondents had good knowledge of the causes of teenage pregnancy, and 72.7% had a positive perception of the social consequences of teenage pregnancy. There was no significant association discovered between the respondents' class and their level of knowledge regarding the causes of teenage pregnancy; similarly, no significant association was found between the respondents' age and their perception of the social consequences of teenage pregnancy with a P-value > 0.05. The major preventive strategies identified to curb teenage pregnancy were seminars and advocacy, provision of adolescent-friendly health services, development of strategies to alleviate poverty, laws and policies discouraging teenage pregnancy, the provision of contraceptives to sexually active teenagers, and periodic sex education in schools. It was recommended that the strategies documented in this study to curb teenage pregnancy and its social consequences be adhered to by the government, teachers, and health care professionals in order to promote the health and well-being of teenagers.

Keywords: Causes; Knowledge; Perception; Preventive Strategies; Social Consequences; Teenage Pregnancy

^{1,2,3}Department of Nursing Sciences, Faculty of Clinical Sciences, College of Health Sciences, University of Ilorin, Nigeria

⁴Department of Nursing Sciences, College of Health Sciences, Afe Babalola University, Ado Ekiti, Nigeria

^{*}Correspondence Author: yinka_onasoga@yahoo.com; onasoga.oa@unilorin.edu.ng

1. Introduction

Teenage pregnancy is a major global public health issue, and contributes significantly to maternal and child mortality, and perpetuates the cycle of ill health and poverty (Bello, 2015; WHO, 2023). The World Health Organization (WHO, 2023), estimates that 21 million girls aged 15–19 years in developing countries become pregnant approximately 12 million of them give birth yearly. Furthermore, 3.9 million teenagers have unsafe abortions accounting for almost 15% of the total global incidence of unsafe abortion and a significant cause of maternal death and morbidity (Darroch et al., 2016). The vast majority of teenage pregnancies occur in low- and middle-income countries with poor health-care services and consecutive reproductive health problems or even death. Sub-Saharan Africa recorded the highest prevalence of teenage pregnancy globally at 97.9 births per 1000 women, which accounted for more than half of all births in the region, though disparities in teenage pregnancy based on location exist in sub-Saharan Africa (WHO, 2023).

In Nigeria, an estimated 44% of girls are married before their 18th birthday (Musa et al., 2021), and the country ranked the 11th in the world for child marriage with the North having the highest prevalence (Bolarinwa et al., 2022). The high rate of adolescent pregnancy in Nigeria has been attributed to various factors, including early onset of menarche among females, early initiation of activity, marriage, sexual early socioeconomic status, economic insecurity, ineffective use of contraception, educational and career aspirations, residence in a single-parent home, poor family relationships, and deterioration of traditional African values (Bolarinwa et al., 2022). Lumenpouw et al. (2016) argued that teenage pregnancy is caused by many reasons which include peer pressure, poor education,

underage drinking habit, sexual abuse, lack of role models, and poverty amongst others. Teenage pregnancy is commonly associated with adverse psychosocial, socioeconomic, and health outcomes (Sedgh et al., 2015). Apart from the physical health risks, there are barriers to pursuing further education, negative implications for the future of both parent and child, higher risk of being single mothers, a lack of rights and gender equity, and higher fertility rates among poorer adolescents (Bello, 2015). Previous studies also reported that teen mothers are more likely to drop out of school and have low educational attainment, to be unemployed, to face poverty and be welfare dependent, to become single mothers, and to experience divorce if they marry (Alabi & Oni, 2017; Murphy-Graham et al., 2020; Mezmur et al., 2021). Furthermore, Sedgh et al. (2015) stated that unmarried pregnant teenagers may face stigma or rejection by parents and peers as well as threats of violence. Girls who become pregnant before age 18 are also more likely to experience violence within a marriage or partnership.

Lack of knowledge is one of the predisposing factors for teenage pregnancy. Limited knowledge about teenage pregnancies and the dangers that will be experienced also increase the incidence of behavioral and socioeconomic effects (Lumenpouw et al., 2016). Knowledge of comprehensive sexual education at the adolescent stage is the basis of healthy behavior at a later stage in life. According to NDHS (2018), teenage childbearing decreases with increasing knowledge on teenage pregnancy and problems arising from lack of knowledge of reproductive health such as teenage pregnancy, abortion, early marriage, STIs and HIV/AIDS. Pregnant teenagers have relatively low level of education, low-socioeconomic status, and socio-psychological immaturity. Induced abortion rate

high, and antenatal care is often poor, since most teenagers do not intend to become pregnant (Varma,2017). Higher obstetric complications have been associated with teenage pregnancies and some studies have shown that these complications are not due to the age alone but also due to unwanted motherhood, small anatomical size of patients, poor socio-demographic characteristics, primigravidity, and poor antenatal care (Varma,2017).

To the best of the researcher's knowledge, few researches on the knowledge and perception on the causes and social consequences of teenage pregnancy has been carried out in Kwara state, and a few has been carried out in Nigeria at large, despite the increase in teenage pregnancy and its social economic consequences. Due to this reason the researchers decided to carry out research study on the knowledge and perception of secondary school student on the causes, consequences, social and preventive strategies of teenage pregnancy.

2.0 Materials and Methods

2.1 Research design and Study population

A descriptive cross sectional research design was used to assess knowledge and perception on the causes, social consequences, and preventive strategies of teenage pregnancy among secondary school students in north-central Nigeria. The study was conducted in a government-owned secondary schools in Ilorin East Local Government Area of Kwara State. The two schools were randomly selected.

2.2 Sample and sampling techniques

The sample size for this study was 150 which was calculated using Fisher's formula: $(S)=(Z^2) PQ/d^2$. Using test statistic (z) of 1.96 at 95% confidence interval, estimated proportion of an attribute in a population (p) is 0.50, q is 1-p, and the desired level of precision (d)=0.05. Additionally, an attrition

rate of 10% was considered. Simple random sampling technique was used to select 186 senior secondary school students.

2.3 Instrument for Data Collection

The instrument used for data collection was a self-structured questionnaire. The instrument consists of five sections (sections A-D); section A was designed to elicit the sociodemographic data of respondents; section B was designed to assess knowledge on the causes of teenage pregnancy; section C was designed to measure perception on social consequences of teenage pregnancy; and section D was designed to assess perceived strategies to reduce teenage pregnancy. Face and content validity of the instrument was done by nursing researcher experts, while the internal consistency of the instrument was measured using Cronbach Alpha, which showed a score of 0.82. This indicates that the questionnaire is reliable.

2.4 Method of data analysis

The data collected were collated and analyzed using Statistical Product and Service Solution (SPSS) version 25 and results were presented using both descriptive and inferential statistics. Descriptive statistic in the form of frequency, percentage and bar chart. Pearson's Chi Square (X²) was also used to establish significant association between variables at 0.05 level of significance.

2.5 Ethical considerations

Written permission to use the selected schools for the research were obtained from the appropriate authorities. Information about the research was discussed in detail with participants and consent forms were duly signed by the participants and parents. Confidentiality and anonymity were ensured as names were not required on questionnaires and cannot be traced to the participants. Respondents were granted the freedom to withdraw at any point they want.

3.0 Results

3.1 Sociodemographic Characteristics

The study elicited responses from a total of 150 respondents, and the findings, as presented in Table 1, shows that 102 (68%) of the respondents were between 14-17 years, 25 (16.7%) were between 10-13 years while 23 (15.3%) were between 18-21 years. Most of the respondents 97 (64.7%) were female while others 53 (35.3%) were male. Majority of the respondents 116 (77.3%) practice Islam religion, 33 (22.0%) practiced Christianity and only 1 (0.7%) practiced Traditional religion. 132 (88%) of the respondents were Yoruba, 9 (6.0%) were

Nupe, 3 (2.0%) were Hausa, 3 (2.0%) were also Fulani, 2 (1.3%) were Igbo while only 1 (0.7%) was Egbira. Most of the respondents 129 (86.0%) are living with their parents, 6 (4.0%) are living with mother, grandparent and others each while only 3 (2.0) are living with their father. 140 (93.3%) reported that both of their parents are working, 4 (2.7%) said their father stays at home and the mother works, 3 (2.0%) reported that their mother stay at home and the father works while 3 (2.0%) also said neither of their parents have jobs.

Table 1: Socio-demographic data of respondents (n=150)

| Variable | ole Response | | | |
|--------------------------|-----------------------------------|-----|------|--|
| Age | 10-13 | 25 | 16.7 | |
| X = 15.41 | 14-17 | 102 | 68.0 | |
| SD = 2.020 | 18-21 | 23 | 15.3 | |
| Gender | Male | 53 | 35.3 | |
| | Female | 97 | 64.7 | |
| Religion | Christianity | 33 | 22.0 | |
| | Islam | 116 | 77.3 | |
| | Traditional | 1 | 0.7 | |
| Ethnicity | Yoruba | 132 | 88.0 | |
| | Hausa | 3 | 2.0 | |
| | Igbo | 2 | 1.3 | |
| | Nupe | 9 | 6.0 | |
| | Fulani | 3 | 2.0 | |
| | Egbira | 1 | 0.7 | |
| Who are you living with? | Living with parents | 129 | 86.0 | |
| , , | Living with mother | 6 | 4.0 | |
| | Living with father | 3 | 2.0 | |
| | Living with grandparents | 6 | 4.0 | |
| | Others | 6 | 4.0 | |
| Working status of parent | Both parents are working | 140 | 93.3 | |
| | Mother stays at home father works | 3 | 2.0 | |
| | Father stays at home mother works | 4 | 2.7 | |
| | Neither of your parents have jobs | 3 | 2.0 | |

3.2 Knowledge on the causes of teenage pregnancy

Table 2 shows that the major causes of teenage pregnancy identified by respondents were peer pressure 122 (81.3%), followed by family background 121 (80.7%), sexual abuse such as rape 110 (73.3%), lack of

sexual education 108 (72%), early sexual practice 107 (71.3%), poor parenting style 106 (70.7%), poverty 103 (68.7%), lack of communication between parents100 (66.7%), drug abuse 96 (64%), non-usage of contraceptives 91 (60.7%) and culture supporting teenage pregnancy 90 (60.0).

Table 2 Knowledge on the causes of teenage pregnancy among respondents (n=150)

| Variable | Yes |
|---------------------------------------|------------|
| | Freq (%) |
| Family background | 121 (80.7) |
| Peer pressure | 122 (81.3) |
| Sexual abuse e.g. Rape | 110 (73.3) |
| Early sexual practice | 107 (71.3) |
| Lack of sexual health education | 108 (72.0) |
| Poverty | 103 (68.7) |
| Lack of communication between parents | 100 (66.7) |
| Rebellion | 88 (58.7) |
| Drug abuse | 96 (64.0) |
| Poor parenting style | 106 (70.7) |
| Non usage of contraceptives | 91 (60.7) |
| Culture supporting teenage pregnancy | 90 (60.0) |
| Illiteracy | 62 (41.3) |

3.4 Perception on social consequences of teenage pregnancy

Table 3 shows that the majority of the respondents, 136 (90.7%) agreed that dropping out of school is a social consequence of teenage pregnancy; 132 (88%) said abandonment or disownment by parents; 129 (86%) said limited social interaction with peers; and 131 (87.3%) mentioned missing out on childhood as a social consequence of teenage pregnancy. The majority of the respondents 127 (84.7%) agreed that teenage pregnancy brings about

unpleasant responsibilities of parenthood; 120 (80%) disagreed that teenage pregnancy brings honor to the girls' family; 102 (68%) of the respondents agreed that teenage pregnancy increases poverty; 108 (72%) respondents said that pregnant teenagers are likely to end up as single parents; 133 (88.7%) respondents agreed that teenage pregnancy can result in dropouts and low educational status for the teenage girl; and 131 (87.3%) respondents agreed that teenage pregnancy can result in disgrace and stigmatization.

Table 3 Perception on social consequences of teenage pregnancy among respondents (n=150)

| Variable | Agree | Disagree | Undecided | |
|---|------------|------------|-----------|--|
| | Freq (%) | Freq (%) | Freq (%) | |
| It is right for a teenager to be pregnant | 15 (10.0) | 127 (84.7) | 8 (5.3) | |
| Teenage pregnancy has social consequences | 117 (78.0) | 23 (15.3) | 10 (6.7) | |
| Teenage pregnancy leads to drop out from school | 136(90.7) | 11(7.3) | 3(2.0) | |
| Teenage pregnancy leads abandonment/disowned by parent | 132(88.0) | 15(10.0) | 3(2.0) | |
| Teenage pregnancy leads in limited social interaction with peers | 129(86) | 17(11.3) | 4(2.7) | |
| Teenage pregnancy leads to missing out on childhood | 131(87.3) | 16(10.7) | 3(2.0) | |
| Teenage pregnancy brings about increase in economic status of the family | 72 (48.0) | 69 (46.0) | 9 (6.0) | |
| Teenage pregnancy brings about unpleasant responsibility of parenthood | 127 (84.7) | 19 (12.7) | 4 (2.6) | |
| Teenage pregnancy brings about honor to the girl's family | 24 (16.0) | 120 (80.0) | 6 (4.0) | |
| Teenage pregnancy increases the rate of poverty | 102 (68.0) | 35 (23.3) | 13 (8.7) | |
| Pregnant teenagers are likely to end up as single parents | 108 (72.0) | 24 (16.0) | 18 (12.0) | |
| Teenage pregnancy can result in low educational status | 133 (88.7) | 14 (9.3) | 3 (2.0) | |
| Teenage pregnancy can result in disgrace and stigmatization | 131 (87.3) | 15 (10.0) | 4 (2.7) | |

3.5 Perceived strategies to reduce of teenage pregnancy

The main preventive strategies to curb teenage pregnancy identified by respondents in Table 4 shows that 128 (85.3%) respondents identified seminars and advocacy on the risk associated with teenage pregnancy as a preventive strategy to reduce teenage pregnancy. 106 (70.7%) mentioned the provision of contraceptives to sexually active teenagers in order to reduce the occurrence of teenage pregnancy; 95 (63.3%)

said the organization of community-based programs on abstinence; and 118 (78.7%) said the provision of adolescent-friendly health services along with counseling. 111 (74%) respondents agreed to the development of strategies on how to reduce the rate of poverty; 99 (66%) mentioned periodic sex education for teenagers in schools; and 108 (72.0%) opined the installation of laws and policies to curb teenage pregnancy.

Table 4: Perceived strategies to reduce of teenage pregnancy among respondents (n=150)

| Variable | Agree Disagree | | Undecided | | | | | |
|---|----------------|-----------|-----------|--|--|--|--|--|
| | Freq (%) | Freq (%) | Freq (%) | | | | | |
| Seminars and advocacy on risk associated with teenage | 128 (85.3) | 21 (14.0) | 1 (0.7) | | | | | |
| pregnancy | | | | | | | | |
| Provision of contraceptives to sexually active teenagers in order | 106 (70.7) | 42 (28.0) | 2 (1.3) | | | | | |
| to reduce the occurrence of teenage pregnancy | | | | | | | | |
| Organization of community-based programs on abstinence | 95 (63.3) | 51 (34.0) | 4 (2.7) | | | | | |
| Provision of adolescent's friendly health services along with | 118 (78.7) | 27 (18) | 5 (3.3) | | | | | |
| counseling. | | | | | | | | |
| Development of strategies on how to reduce the rate of poverty | 111 (74.0) | 30 (20.0) | 9 (6.0) | | | | | |
| Periodic sex education to teenagers in schools | 99 (66.0) | 46 (30.7) | 5 (3.3) | | | | | |
| Installment of law and policy to curb teenage pregnancy | 108 (72.0) | 35 (23.3) | 7 (4.7) | | | | | |

3.6 Hypothesis

Table 5 shows that there is no significant association between the class of students and their knowledge level on the causes of teenage pregnancy with P-value=0.363>

0.05. Since the P-value is greater than the significance value (0.05), the null hypothesis was therefore accepted.

Table 5: Statistical illustration of the association between the class of students and their knowledge level on the causes of teenage pregnancy (n=150)

| Variable | Responses | knowledge on causes of teenage pregnancy | | | Chi- Square | Df | P- Value | Remark |
|------------------|-----------|---|-------------------|-------|--------------------|----|-------------|-------------|
| | | Poor knowledge | Good knowledge | Total | \mathbf{X}^2 | | | |
| Class of Student | SS1 | 32 | 37 | 69 | 2.028 ^a | 2 | 0.363 | Not |
| | SS2 | 10 | 40 | 50 | | | | Significant |
| | SS3 | 8 | 23 | 31 | | | | Ho accepted |
| | Total | 50 | 100 | 150 | | | | |

Table 6 shows that there is no significant association between age of student and their perception on the social consequences of teenage pregnancy with P-value=0.650>

0.05. Since the P-value is greater than the significance value (0.05), the null hypothesis was therefore accepted.

Table 6: Statistical illustration of the association between age of student and their perception on the social consequences of teenage pregnancy (n=150)

| Variable | Responses | Perception on the social consequences of teenage pregnancy | | | Chi- Square X ² | Df | P- Value | Remark |
|----------|-----------|--|---------------------|-------|----------------------------------|----|-------------|--------------------|
| | | Negative perception | Positive perception | Total | | | | |
| | 10-13 | 6 | 19 | 25 | 8.693 ^a | 11 | 0.650 | Not Significant |
| Age | 14-17 | 30 | 72 | 102 | | | | |
| | 18-21 | 5 | 18 | 23 | | | | Ho accepted |
| | Total | 41 | 109 | 150 | | | | |

4.0 Discussion

4.1 Knowledge on the causes of teenage pregnancy

there are several factors that contribute to teenage pregnancy. This study revealed that the major causes of teenage pregnancy were peer pressure (81.3%), family background (80.7%), sexual abuse (73.3%), lack of sexual education (72%), early sexual practice

(71.3%), poor parenting style (70.7%), poverty (68.7%), lack of communication between parents (66.7%), drug abuse (64%) and non-usage of contraceptives (60.7%). This result is in line with Lumenpouw *et al.* (2016) where majority of the respondents linked teenage pregnancy to a number of factors, including peer pressure, poor education, underage drinking habit, sexual

abuse, lack of role models, and poverty amongst others. Furthermore, more than half of the participants pointed out that culture supporting teenage pregnancy contributing factor to high incidence of teenage pregnancy in the country. According to WHO (2023), teenage girls are under pressure to marry and bear children in many countries including some part of Nigeria. As of 2021, the estimated global number of child brides was 650 million which places girls at increased risk of pregnancy because girls who are married very young have less power to influence decisions about delaying childbearing and contraceptive use. Sometimes teenage girls choose to become pregnant because they have limited educational and employment prospects and motherhood is valued in the society. The finding is in contrast to a similar study done by Bello (2015) where majority of the respondent stated that culture curbs the rate of teenage pregnancy.

4.2 Perception towards social consequences of teenage pregnancy

Most of the respondents 127 (84.7%) perceived that it is wrong for a teenager to be pregnant. Over 70% of the respondents concurred that the social consequence of teenage pregnancy includes school dropout, parental abandonment, limited social interaction with peers, missing out on childhood, unpleasant responsibilities of parenthood. dishonor to family, poverty, shame and stigmatization, single parenting, and low educational attainment among teenage girls.

Similarly, a Ugandan study found that some of the social consequences of teenage pregnancy included expulsion, negative repercussion on school attendance, low educational attainment, and ending of educational career, as well as stigma and social isolation within the community, at school, at home, and from male partners

(Maly et al., (2017). In addition, Alabi and Oni (2017) reported that there are preexisting social deficits associated with adverse health and social outcomes for teen mothers and their children when compared with women who delay childbearing until their 20s as the teen mothers are more likely to drop out of school and have low educational attainment, to be unemployed, to face poverty and be welfare dependent, to become single mothers, and to experience divorce if they marry. Similarly, the World Bank (2022) stated that teenage mothers are less likely to finish school, which prevents them from realizing their full potential and finding better economic opportunities resulting in reduced lifetime earnings and poverty. Furthermore, adolescent pregnancy can also affect future generations by increasing the likelihood of daughters of teenage mothers having teenage pregnancy themselves thus, perpetuating intergenerational cycles of poverty.

4.3 Perceived strategies to reduce teenage pregnancy

This study revealed that main preventive strategies to curb teenage pregnancy as identified by respondents were seminars and advocacy on risk associated with teenage pregnancy, provision of adolescent friendly health services along with counseling, development of strategies to alleviate poverty, installment of law and policy that discourage teenage pregnancy, provision of contraceptives to sexually active teenagers and periodic sex education to teenagers in schools. This finding aligns with the results of previous studies (Varma, 2017; WHO, 2023; Shalsabila et al., 2023; Mande et al., 2023). Similarly, Li et al. (2023) argued that ensuring that teenage girls receive education and ending the vicious cycle of high pregnancy rates and low education attainment; implementing poverty alleviation initiatives and eliminating child, early, and forced marriage in line with SDG by 2030; as

well as strengthening promotion to support teenagers in accessing sexual and reproductive health education and contraceptive services. Odejimi (2014) stated that installment of law and policy with periodic sex education should be employed to curb teenage pregnancy and reduce its social consequences.

4.4 Tested Hypotheses

This study showed that no significant association was found between the class of respondents and their knowledge level on the causes of teenage pregnancy; likewise, no significant association was found between age of respondents and their perception of the social consequences of teenage pregnancy with P-value > 0.05. This implies that the age of students and class level does not have influence on their knowledge and perception of causes and social consequences of teenage pregnancy.

5.0 Conclusion and Recommendations

Teenage pregnancy is a global phenomenon that significantly affects the physical, social and psychological well-being of the teenage girl especially those in developing countries. Adequate knowledge on the causes and perception positive on the consequences regarding teenage pregnancy has significant contribution to reducing its incidence and outcome. This study revealed that the students had relatively good knowledge on its causes and strategies to prevent teenage pregnancy; as well as perception positive on the social consequences. as this may in turn curb the incidence and prevent consequences associated with teenage pregnancy Therefore, the following recommendations were made:

 Development of educational programs by the government as well as health professionals that will assist

- in correcting false perceptions associated with teenage pregnancy.
- Public enlightenment programs, seminars and advocacy on risk associated with teenage pregnancy and its preventions should be given to teenagers periodically
- Provision of youth friendly family planning centers for the teenagers to enhance accessibility and utilization of contraceptives among sexually active teenage.
- Periodic sex education to teenagers in schools should be done by teachers, health educators and the school nurse to provide adequate information on the various ways to prevent teenage pregnancy.
- Government should assist in reducing false perception on teenage pregnancy by supporting various advertisement programs on radios, televisions and newspaper that promote correct information and discourage teenage pregnancy

REFERENCES

- Alabi, O.T. and Oni, I.O. (2017). Teenage pregnancy in Nigeria: Causes, effect and control. International Journal of Academic Research in Business and Social Sciences. 7(2):17-32.
- Bello, G.M. (2015). Subsequent adolescent pregnancy: Addressing' missed opportunities in the city of Buenos Aires. Georgetown University.
- Bolarinwa, O.A., Tessema, Z.T., Frimpong, J.B., Babalola, T.O., Ahinkorah, B.O. and Seidu, A.A. (2022). Spatial distribution and factors associated with adolescent pregnancy in Nigeria: a multi-level analysis. Archives of Public Health. 80(1):43.
- Darroch, J.E., Singh, S., Woog, V., Bankole, A. and Ashford, L.S. (2016).

- Research gaps in adolescent sexual and reproductive health.
- Li, H., Pu, Y., Li, Z., Jin, Z. and Jiang, Y. (2023). Socioeconomic inequality in teenage pregnancy in Papua New Guinea: a decomposition analysis. BMC Public Health. 3(1):2184

 https://doi.org/10.1186/s12889-023-17067
- Lumempouw, V.J., Kundre, R.M. and Bataha, Y. (2016). Relationship between Socio-Economic Factors of Pregnant Women with Regular Antenatal Care (ANC) Examination at Ranotana Weru Health Center, Wanea District, Manado City. e-Journal of Nursing (e-Kp). 4(2):1-7.
- Maly, C., McClendon, K.A., Baumgartner, J.N., Nakyanjo, N., Ddaaki, W.G., Serwadda, D. and Wagman, J.A. (2017). Perceptions of adolescent pregnancy among teenage girls in Rakai, Uganda. Global Qualitative Nursing Research. 4:2333393617720555.
- Mande, M.M., Ekeme, M., Ukah, C.E., Shei, C.M., Dang, S.Z. and Atanga, S.N. (2023). Prevalence, determinants, and consequences of teenage pregnancy on teenage girls in selected health areas of the Limbe Health District in Cameroon.
- Mezmur, H., Assefa, N. and Alemayehu, T. (2021). Teenage pregnancy and its associated factors in eastern Ethiopia: a community-based study. International Journal of Women's Health. 267-278.
- Murphy-Graham, E., Cohen, A.K. and Pacheco-Montoya, D. (2020). School dropout, child marriage, and early pregnancy among adolescent girls in rural Honduras. Comparative Education Review. 64 (4):703-724.

- Musa, S.S., Odey, G.O., Musa, M.K., Alhaj, S.M., Sunday, B.A., Muhammad, S.M. and Lucero-Prisno, D.E. (2021). Early marriage and teenage pregnancy: The unspoken consequences of COVID-19 pandemic in Nigeria. Public Health in Practice. 2:100152.
- Odejimi, O. and Young, D.B. (2014). A policy pathway to reducing teenage pregnancy in Africa. Journal of Human Growth and Development. 24(2):135-141.
- Sedgh, G., Finer, L.B., Bankole, A., Eilers, M.A. and Singh, S. (2015). Adolescent pregnancy, birth, and abortion rates across countries: levels and recent trends. Journal of Adolescent Health. 56(2):223-230.
- Shalsabila, D., Pamungkas, A.T.B., Yuniasih, D., Laariya, T.A., Mawardi, F., Suprabandari, S., and Rahmawati, N.F. (2023). Teenage Pregnancy and Its Outcome: A Scoping Review. Ahmad Dahlan Medical Journal. 4(2):263-275.
- Varma, T. (2017). Reproductive physiology Clinical Gynecology. Edward Arnold, London press.
- Vasconcelos, A., Bandeira, N., Sousa, S., Pereira, F. and Machado, M.D.C. (2022). Adolescent pregnancy in Sao Tome and Principe: a cross-sectional hospital-based study. BMC Pregnancy and Childbirth. 22(1), 332.
- WHO (2023) Adolescent pregnancy Key
 Facts https://Www.Who.Int/News-Room/Fact
 Sheets/Detail/Adolescent-Pregnancy
- World Bank (2022) The Social and Educational Consequences of Adolescent Childbearing February 24, World Bank