ORIGINAL RESEARCH ARTICLE

Personal factors influencing unplanned teenage pregnancy among high school learners at Collins Chabane Local Municipality, Limpopo Province

DOI: 10.29063/ajrh2026/v30i5.8

Ntiyiso V. Khosa[1,2,4,5,6], Augustine K. Tugli[2], Tobias J. Mokwena[2] and Seani A. Mulondo[3]*

School of Public Health, Faculty of Medicine and Health Sciences, Walter Sisulu University, Mthatha South Africa [1]; Department of Public Health, Faculty of Health Sciences, University of Venda South Africa [2]; Department of Advanced Nursing, School of Health Sciences, University of Venda Africa South [3]; WSU for Clinical Governance and Healthcare Administration, Faculty of Medicine and Health Sciences, Walter Sisulu University, East London 5200, South Africa[4]; Biostatistics and Analytics Training Services Unit, School of Medicine and Health Sciences, Walter Sisulu University, East London 5200, South Africa[5]; Division of Epidemiology and Biostatistics, School of Medicine and Health Sciences, Walter Sisulu University, East London 5200, South Africa[6]

***For Correspondence**: Email**:** *11625895@mvula.univen.ac.za*

Abstract

Teenage pregnancy is a significant psychosocial issue in both developed and developing countries, including South Africa, leading to poor academic performance and school dropout rates. The study aimed to determine personal factors that influence unplanned teenage pregnancy among high school learners in Collins Chabane Local Municipality in Limpopo Province. A quantitative approach was employed in the study. The researcher used a cross-sectional descriptive design. A simple random sampling technique was followed to select 340 female learners, and only one school was recruited to participate in the study. The respondents completed the self-administered questionnaires. Data analysis was conducted using the Statistical Package of Social Science version 25.0. Face validity and reliability were ensured. Ethical considerations such as anonymity, confidentiality, and voluntary participation were ensured. The study revealed that 57.7% of the respondents disagreed that lack of self-confidence about sexual activities could lead to unplanned pregnancies, and 59.7% did not fear losing partners when asked about the use of contraceptives or the non-use of contraceptives. The promotion of contraceptives among youth is crucial for reducing unplanned pregnancies. Education about contraception use, abstinence, and open communication can help adolescents to make informed decisions about their health. *(Afr J Reprod Health 2026; 30 [5]:74-83).*

Keywords: Adolescents, Learners, Personal Factors, Unplanned Pregnancy

Résumé

La grossesse chez les adolescentes constitue un problème psychosocial majeur, tant dans les pays développés que dans les pays en développement, y compris en Afrique du Sud. Elle entraîne une baisse des résultats scolaires et un taux d'abandon scolaire élevé. Cette étude visait à identifier les facteurs personnels influençant les grossesses non désirées chez les lycéennes de la municipalité locale de Collins Chabane, dans la province du Limpopo. Une approche quantitative a été employée. L'étude a adopté un modèle descriptif transversal. Un échantillonnage aléatoire simple a permis de sélectionner 340 lycéennes, issues d'un seul établissement scolaire. Les participantes ont rempli un questionnaire auto-administré. L'analyse des données a été réalisée à l'aide du logiciel SPSS (version 25.0). La validité apparente et la fiabilité des données ont été assurées. Les considérations éthiques, telles que l'anonymat, la confidentialité et le caractère volontaire de la participation, ont été respectées. L'étude a révélé que 57,7 % des répondants étaient en désaccord avec l'idée que le manque de confiance en soi concernant les activités sexuelles puisse entraîner des grossesses non désirées, et 59,7 % ne craignaient pas de perdre leur partenaire lorsqu'on les interrogeait sur l'utilisation ou la non-utilisation de contraceptifs. La promotion de la contraception auprès des jeunes est essentielle pour réduire les grossesses non désirées. L'éducation à la contraception, à l'abstinence et à une communication ouverte peut aider les adolescents à prendre des décisions éclairées concernant leur santé. *(Afr J Reprod Health 2026; 30 [5]: 74-83).*

Mots-clés: Adolescents, Apprenants, Facteurs personneZls, Grossesse non désirée

Introduction

Unplanned pregnancy is a world health concern. Unplanned pregnancy is a major medical, social, and public health problem globally. [1] Ranatunga and Jayaratne stated that every year, almost 80 million women and teenage females have unplanned pregnancies globally, and 21 million teenage

pregnancies are from low and middle-income countries. Personal factors are pivotal in decision-making and affect health and development.[3] There is inadequate knowledge among teenage girls regarding sex and family planning, and a lack of skills to translate knowledge into practice, since sex education is deficient in many developing countries.[4] Furthermore, inadequate sexual knowledge and risk perceptions cause a barrier to contraceptive usage among teenagers. Moreover, there is a lack of skills and authority to opt for safe sex, ambivalence towards sexual intercourse, and negative social norms about premarital sexual activity and pregnancy.[5] Another study revealed several psychosocial experiences confronted by female students after they acquired unplanned pregnancies. [6] As a result of personal factors, the undesirable use of contraceptives is influenced by failure, inconsistent and incorrect use of contraception, lack of access to contraceptives, or engaging in sexual activity without using any form of contraception.[7] Furthermore, Personal factors can result in different educational consequences for the students, such as school dropout, economic hardships, social abandonment, and neglect [6].

In Sub-Saharan Africa, adolescent girls continue to experience an unreasonably high burden of sexual and reproductive ill health.[8] Studies indicate that there is a higher rate of HIV/AIDS in Sub-Saharan Africa, particularly among teenage girls. [9, 10] Teenage pregnancies with inimical health and social consequences are urgent complications faced by Low and middle-income countries. Wangamati emphasizes that teenagers are likely to have complications about pregnancy, including illegal abortion, and are more likely to become young mothers.

The South African government spheres and numerous stakeholders collaborated to educate teenagers through awareness and prevention programs, prioritizing the use of condoms and abstinence.[12] However, the number of teenagers becoming pregnant and infected with STIs and HIV/AIDS is still elevated. [12] In the literature, there is evidence that South Africa has the highest rate of teenage pregnancy compared to other African countries and internationally. [13] Most of the young girls who become pregnant not only leave school, but some have to face and live with the challenges of finding employment. Since they are unemployed, they have to confront poverty. The majority of teenagers end up in transactional sex, whereby gifts and money are exchanged, and thus, make themselves vulnerable to STIs and HIV/AIDS at a young age.[9, 10] The South African Department of Health's annual report indicated that unplanned pregnancy was 26% of all pregnancies in 2016.

A study conducted in KwaZulu-Natal, SA, found that 23% of pregnancies conceived between 13–16-year-old ended in legal abortions, and 14.9% between 17–19-year-old ended in illegal abortions.[12] However,[32] implies that the predictors of unsafe sexual intercourse during the early years of youth were individual, socio-demographic, familial, family patterns of early sexual experience, and the lack of school or career goals, as well as interpersonal characteristics. The SA Government and different stakeholders have worked tirelessly in attempting to educate individuals through awareness campaigns and prevention programmes, highlighting the accessibility of condoms and abstinence.

A study conducted in the Collins Chabane Local Municipality by [37] found that 61% of the respondents did not have adequate knowledge about healthy sexual practices, and 56.3% of the respondents became pregnant because of peer pressure. In Vhembe District, the DOH revealed that 36 pupils between the ages of 10 and 19 are pregnant and 31 pupils have been infected with HIV.[17] The SA government has worked tirelessly to establish a variety of interventions to combat the rate of STIs, HIV/AIDS, and unplanned pregnancy among youth. Despite these interventions, the phenomenon persists.Adolescents aged between 16 and 24 years accounted for the rapidly growing unplanned pregnancy rates. The principal investigator observed that over 60 school learners were pregnant in the first quarter of 2020. These resulted in teenagers dropping out of school and taking care of their babies. Those who did not find someone to look after their babies were likely to leave school forever or drop out.[14] Mavhandu-Mudzusi and Mhango reported that about 3650 legal abortions were performed in the Vhembe district health facilities of South Africa during the 2022 financial year. Consequently, some experienced complications, such as surgical removal of the uterus, and others died, while 2100 delivered babies. Teenage pregnancy also leads to stigmatisation and isolation

from their friends, poor performance at school, and the abuse of substances.Therefore, the purpose of the study was to determine personal factors influencing unplanned pregnancy among high school learners in Collins Chabane Local Municipality, Limpopo Province, South Africa.

Methods

Study design

This was quantitative research that employed a cross-sectional design to ascertain the personal factors associated with unplanned teenage pregnancies among high school learners. The design and approach were chosen for this research since they allow computing and comparison of quantities of variables while, at the same time, enabling a single-instance data collection process[16].

Study setting

The study was conducted at a selected Malamulele West Circuit high school in Collins Chabane Local Municipality of South Africa. Collins Chabane Local Municipality has 48 high schools and 101 primary schools. These schools are situated in Mudabula village, which has 679 (340 Females and 339 Males) learners registered for the 2018 academic year. Most of the community members travel long distances (more than five kilometres) to access the clinic or the contraceptive services.

Population and sampling

The population for this study was female learners enrolled in the Malamulele West circuit. The schools were purposively selected because these schools registered a high rate of teenage pregnancy at the SA-SAMS in 2016. [17] A sample size of 340 was recruited from grades 8 to 12 to participate in the study. A simple random sampling was employed to select eligible participants. [18] Learners were selected because they are the victims of unplanned pregnancy, vulnerable to STIs and HIV, which results in school dropout and stigma in the community. Participants were between the ages of 13 and 25 years.

Data collection instrument

A self-administered questionnaire was developed based on the study objectives and literature for data collection. The instruments were developed in English and translated into Xitsonga by linguists in the Department of English. Questionnaires were available in English and Tsonga to accommodate learners from grades 8-9 who might experience difficulties in reading English. The instrument was presented to the supervisors, departmental seminars, and the university's higher degrees committee to ensure face validity. [19]The researcher modified the instrument based on the feedback received from supervisors and the university's higher degree committee. The Pre-test was used to measure the instrument's reliability. [20]Pre-testing of the data collection instrument was conducted in schools that share similar characteristics in Collins Chabane Municipality.

Data collection method

Structured questionnaires were used to collect the data. After signing the informed consent, the researcher distributed a self-administered questionnaire to 362 learners. For learners under the age of 18 years, consent was requested from their parents or guardians. Learners whose parents consented on their behalf completed the assent forms before participating in the study. Learners who did not sign the assent form were excluded from the study regardless of parental consent signed by their parents. 340 learners completed the assent form, while 22 assent forms were not signed. Completion of questionnaires took approximately 45 minutes. All questionnaires were completed in the researcher's presence.

Data analysis

The data were analyzed using the Statistical Package for Social Sciences (SPSS), version 29.0. The data were presented on tables. The chi-square test was used to compare categorical variables, and the level of statistical significance was set at p=0.05.

Ethical consideration

The ethical certificate was obtained from the University of Venda (Project number: SHS/18/PH/04/2304). The permission to collect data was obtained from the Limpopo Province Department of Education (REF NO: 2/2/2), Malamulele West Circuit (REF NO: 11625895), Photani High School, and Hlalukweni High School.

Participants' identifications remain anonymous and confidential throughout the study

Results

In total, 362 female learners participated in the study.

Demographic information

In this section, only the highest outcome with the percentage was reported in the paper**.** Data was collected from 362 female learners in a selected high school. A total of 340 questionnaires were returned and analysed. Most of the respondents in the age bracket of 16-20 years were 219 (64.4%), 100 (29.4%) of the respondents were in grade 11, and 131 (38.5%) of the respondents were living with their mother. Furthermore, 93 (27.4%) of the respondents had one child, and 307 (90.2%) of the respondents were Christian. Only the highest percentage was reported. A summary of the responses is shown in Table 1**.**

Personal factors influencing unplanned pregnancy among high school learners.

In this section, only the highest outcome with the percentage was reported in the paper. The findings present various personal factors influencing unplanned pregnancy among learners. The five-point Likert scale was used to reflect the responses of the respondents as Strongly Agree (SA), Agree (A), Not Sure, disagree (D), and Strongly Disagree (SD). The study found that 57.7% of the respondents disagreed that a lack of self-confidence in decisions about sexual activities leads to unplanned pregnancy, while 59.7% of the respondents disagreed that they fear losing their partners when they ask them to use contraceptives. Furthermore, it was found that 42.3% of the respondents agreed that early menarche increased the risk of pregnancy. It was found that 51.5% of respondents disagreed that they wanted to become independent.

The study found that 43.6% of the respondents agreed that power imbalances in sexual relationships between males and females. However, it was found that 52.0% of the respondents feared

Table 1: Below shows demographic information

Variables	Categories	Overall*n[%]*
Age distribution	16-20	219 (64.4)
	10_15	66 (19.4)
	21-25	53 (15.6)
	26 and above	2 (0.6)
Learners per grade	Grade 11	100 (29.4)
	Grade 12	81 (23.8)
	Grade 10	62 (18.2)
	Grade 9	50 (14.7)
	Grade 8	47 (13.8)
People living with respondents	Mother	131 (38.5)
	Both Parents	120 (35.3)
	Grandmother	40 (11.8)
	Brother	20 (5.9)
	Other	16 (4.7)
	Sister	10 (11.8)
	Father	3 (0.9)
Respondents with children	No	236 (69.4)
	Yes	104 (30.6)
Number of children	One child	93 (27.4)
	Two children	10 (2.9)
	Other	1 (0.3)
Religion of respondents	Christianity	307 (90.2)
	Traditional	29 (8.5)
	Other	4 (1.2)

That visiting clinics would lead to an unplanned pregnancy. The findings indicated that 48.2% of the respondents disagreed that they fell pregnant because of the desire to make their boyfriends responsible or because they feared losing them. It was found that 51.2% of the respondents disagreed that they ignored the use of contraceptives. However, 65.0% of the respondents disagreed that they were ashamed to ask their boyfriend to use a condom. It was further found that 58.3% of the respondents disagreed that they felt embarrassed about not having a child while all their friends have children. A summary of the responses is shown in Table 2.

Association between variables

The strength of association and the statistically tested relationship at 5% probability were performed using the chi-square test on the variable selected. Only results where there was a significant level of $p<0.05$ were reported and presented.

Table 2: shows the personal factors influencing unplanned pregnancy among high school learners (n=340).

Variables	Agree	Strongly Agree	Not Sure	Disagree	Strongly Disagree	Total
Lack of self-confidence in decision-making about sexual activity leads to unplanned pregnancy	67 (19.7%)	41 (12.1%)	36 (10.6%)	53 (15.6%)	143 (42.1%)	340
I fear losing my partner if I ask him/her to use contraceptives	67 (19.7%)	39 (11.5%)	31 (9.1%)	70 (20.6%)	133 (39.1)	340
Early menarche increases the risk of pregnancy	95 (27.9%)	49 (14.4%)	70 (20.6%)	66 (19.4%)	60 (17.6%)	340
Power imbalances in sexual relationships between male and female adolescents can lead to unplanned pregnancy	92 (27.1%)	56 (16.5%)	76 (22.4%)	37 (10.9%)	79 (23.2%)	340
Fear of visiting clinics can lead to an unplanned pregnancy	114 (33.5%)	63 (18.5%)	41 (12.1%)	59 (17.4%)	63 (18.5%)	340
I fail to use contraceptives consistently	99 (29.1%)	54 (15.9%)	23 (6.8%)	67 (19.7%)	97 (28.5%)	340
I am embarrassed to ask my boyfriend to use condoms	51 (15.0%)	41 (12.1%)	27 (7.9%)	104 (30.6%)	117 (34.4%)	340
I am embarrassed that I do not have children while my friends have children	77 (22.6%)	30 (8.8%)	35 (10.3%)	75 (22.1%)	123 (36.2%)	340

Table 3: shows the association between the use of any contraceptives and fear of visiting the clinic, leading to an unplanned pregnancy (n=340)

Have you ever used any contraceptives?	Fear of visiting the clinic leads to an unplanned pregnancy					Test statistics	
	Agree	Strongly agree	Not sure	Strongly Disagree	Disagree	Total	P-value Pearson chi-square
							PCT=10.459
Yes	90 (81.08%)	63(75.90%)	33(70.21%)	8(40%)	32(49.23%)	226	Df=4
No	21 (18.92%)	20(24.10%)	14(29.79%)	12(60%)	33(50.77%)	114	*P*=0.033
Total	**111**	**83**	**47**	**20**	**65**	**340**	

Table 3 shows the descriptive pattern below. A cross-tabulation was performed on a pair of variables (i.e., Association between Have you ever used any type of contraceptives and Fear of visiting the clinic leads to unplanned pregnancy). From the table, the Pearson Chi-square test of independence indicated that there was no statistically significant difference between Have you ever used any type of contraceptives and Fear of visiting the clinic leads to unplanned pregnancy, χ^2 (4), (n=340) =1.365, p=0.033. It therefore indicates that there is no statistical association between respondents' responses of having ever used any type of contraceptives before and the Fear of visiting the clinic that leads to unplanned pregnancy. This implies that the null hypothesis was accepted, which stated that there is no statistical difference between Have you ever used any type of contraceptives and Fear of visiting the clinic leads to an unplanned pregnancy.

Therefore, this implies that the alternative hypothesis was rejected, which stated that there is a statistical difference between Have you ever used any type of contraceptives and Fear of visiting the clinic leads to an unplanned pregnancy.

Discussion

Lack of self-confidence in decision-making about sexual activity leads to an unplanned pregnancy

The findings indicate that a lack of self-confidence in decisions about sexual activities was not significantly associated with unplanned pregnancy. Similar findings in the United States stated that lack of self-confidence was not significantly associated with unplanned pregnancy or sexual activity.[21,22] The contrary findings from another study imply that teenagers who had engaged in sexual activities and had more liberal attitudes toward premarital sex had greater self-confidence than those who engaged in sex and had more conservative attitudes [23].

I fear losing my partner if I ask him/her to use contraceptives

The findings indicate that the fear of losing their boyfriends when they ask them to use contraceptives was not significantly associated with unplanned pregnancy. Based on the contrary findings, adolescent mothers and pregnant teenagers became pregnant because of the pressure from their boyfriends, and it was difficult for teenagers to say no to sexual intercourse.[23] Despite the findings emphasizing that many female teenagers lacked power in their relationships. Females are afraid to negotiate using condoms during sexual activity because they fear that their boyfriends will leave them [24].

Early menarche increases the risk of pregnancy

The findings indicate that early menarche increases the risk of pregnancy and is associated with unplanned pregnancy. It is alluded that the onset of menarche in most countries has largely decreased and seems to have stabilised at an average of 13 years, with 0.5 years' variations between countries. [25] The contrary findings asserted that the age of menarche is decreasing in both urban and rural black females. [26] However, studies show that sexual activities at an adolescent age were related to less use of contraceptive methods and an increase in sexually transmitted diseases and unplanned pregnancy [5].

Power imbalances in sexual relationships between male and female adolescents can lead to unplanned pregnancy

The findings indicate that power imbalances in sexual relationships between males and females were significantly associated with unplanned pregnancy. In addition, studies reported that the social construction of gender has been an important focus of related studies.[5] Furthermore, similar findings concurred that teenagers who have greater sexual relationship power will get their way in terms of condom use, and teenage men seem to have greater sexual relationship power than teenage girls. [27] Furthermore, decision-making power is not as important as sexual relationship power in determining condom use among teenagers because the degree of decision-making power is supported by the degree of sexual relationship power.[28] However, it was reported that teenagers who are involved in an asymmetrical sexual relationship have greater difficulty in taking control over decision-making in condom use negotiations[29,30].

Fear of visiting clinics can lead to an unplanned pregnancy

In the study, fear of visiting the clinic was significantly associated with unplanned pregnancy. Although a comparable finding stated that 79.2% of the teenagers were reluctant to visit clinics for contraceptives.[31] The study findings were conducted by[31] concurred that teenagers are concerned about not going to a family planning clinic because they may come across their relatives, who might notify their parents that they were at the clinic.

I fail to use contraceptives consistently

In the study, ignoring the use of contraceptives was not significantly associated with unplanned pregnancy. Similar findings emphasise that most of the female teenagers do not use any contraceptives, and they can easily be infected with HIV and AIDS and other related diseases.[32, 33] In Kenya, the contrary is asserted that ignorance also leads to myths, such as the belief that the use of contraceptives may cause infertility and will make them gain weight [34, 35].

I am embarrassed to ask boyfriends to use condoms

The findings indicate that feeling ashamed to ask boyfriends to use condoms was not significantly associated with unplanned pregnancy. In the study conducted by. [36]It was found that teenage girls find themselves in a difficult position because they feel that they must please their boyfriends to maintain the relationship, which may imply having unprotected sex if requested to do so. Although, on the contrary, findings reported that peers who have unprotected sex can strongly influence teenage behavior [37].

I am embarrassed that I do not have children, while my friends do have children

The findings indicate that feelings of embarrassment about not having a child while all their friends had children were not significantly associated with friends who had children and were not significantly associated with an unplanned pregnancy. The significant challenges appear to be with peer groups; teenage mothers are stigmatized and discriminated against by peers who do not have children. [38] It was argued that teenage girls may become pregnant because of peer pressure.[39] However, the contrary stipulates that peers, on the other hand, do not support mothers at school. [40] At the same time, young mothers lack support from peers because of the stigma attached to teen motherhood and the discrimination against them [41, 42].

There is a negative and no association between whether learners had ever used any contraceptives before and fear of visiting the clinic that leads to unplanned pregnancy, $r = 1.365$ at $P<0.033$. This implies that the youth had not used any contraceptive before and was afraid of visiting the clinic, which resulted in unplanned pregnancies and infection with sexually transmitted diseases.[43] This implies that learners were fearful of visiting the clinics for contraceptives. Youth need to be permitted to access and use contraceptives whenever they engage in sexual intercourse.[44] Distribution of condoms should be made available in all rural areas, such as taverns and spaza shops.[45] As a result, the spread of sexually transmitted diseases and unintended teen pregnancies will be curbed. Addressing the underlying causes of this fear can help improve clinic visitation rates and reduce unplanned pregnancies among this demographic.[46] Youth should learn to make informed decisions about sexual activities and protect themselves during sexual intercourse. A study conducted in South Africa emphasises awareness campaigns to educate youth about contraceptives. Furthermore, a survey conducted in Limpopo suggested that youth zones should be implemented in all healthcare facilities, and designated nurses should be employed.[47] This will encourage youth to visit health facilities for contraceptives.[44] Youths do not want to wait in a long queue in the clinics during contraceptive consultations.

Limitations and future studies

The study focused on one selected circuit and two selected high schools. Therefore, the results cannot be generalized to the whole circuit. Therefore, the findings may not apply to other regions in Collins Chabane Local Municipality, South Africa, or beyond due to different demographics, schools' infrastructure, or cultural factors. Research could be expanded to compare socio-economic factors influencing teenage unplanned pregnancy in different regions or municipalities, both within South Africa and in other countries, to see how

location affects awareness and education outcomes. Future studies can implement and evaluate educational interventions to increase factors influencing teenage unplanned pregnancy among learners and assess their effectiveness over time. Conducting qualitative studies might provide deeper insights into the reasons behind gaps in factors influencing unplanned pregnancy by exploring cultural beliefs, healthcare access issues, and personal experiences with the disease

Conclusion

The study found that personal factors associated with unplanned pregnancy included power imbalances in sexual relationships between male and female teenagers, early menarche, increased risk of pregnancy, and fear of visiting a clinic, which can lead to unplanned pregnancies. Promoting contraceptives among youth is crucial in reducing the occurrence of unplanned pregnancies. Recommendations should focus on education about contraception use, abstinence, and open communication between partners, which can help adolescents make informed decisions about their sexual health and prevent unintended outcomes.

Acknowledgment

We would like to thank the University of Venda for granting us an ethical clearance certificate. We would like to thank the Provincial Department of Basic Education, Vhembe district circuits, and school learners for allowing the study to be conducted in their institutions.

Funding

I would like to thank the National Research Fund (NRF) and the University of Venda Research Publication Fund (RPC) for financial assistance in this study.

Conflict of interest

The authors declared that they had no competing interests.

Data availability

Data are available upon request. However, the MOU between authors and journals should be made available, and all principles of ethics regarding the data should be considered in all aspects of research.

Author's contributions

KNV was a student who had conceptualized the manuscript, MTJ analyzed the data, and identified the appropriate methodology. AKT and SAM were supervisors; together, they reviewed and reached a consensus to approve the manuscript for publication.

References

1. Bearak JM, Popinchalk A, Beavin C, Ganatra B, Moller AB, Tunçalp Ö, Alkema L. Country-specific estimates of unintended pregnancy and abortion incidence: a global comparative analysis of levels in 2015–2019. BMJ Global Health. 2022;7(3):e007151.
2. Ranatunga ID, Jayaratne K. Proportion of unplanned pregnancies, their determinants and health outcomes of women delivering at a teaching hospital in Sri Lanka. BMC pregnancy and childbirth. 2020;20:1-15.
3. Fathalla MF. Safe abortion: The public health rationale. Best Practice & Research Clinical Obstetrics & Gynaecology. 2020;63:2-12.
4. Seidu AA, Ameyaw EK, Ahinkorah BO, Baatiema L, Dery S, Ankomah A, Ganle JK. Sexual and reproductive health education and its association with ever use of contraception: a cross-sectional study among women in urban slums, Accra. Reproductive Health. 2022;19(1):7.
5. Derefinko KJ, Ashby S, Hayes T, Kaplan C, Bursac Z, García FI, Madjlesi A, Tonkin L, Bowden M, Popescu F, and Waters T. Sexually transmitted infections and contraceptive use in adolescents. American Journal of Preventive Medicine. 2020;58(4):536-46.
6. Akuiyibo S, Anyanti J, Idogho O, Piot S, Amoo B, Nwankwo N, Anosike N. Impact of peer education on sexual health knowledge among adolescents and young persons in two North Western states of Nigeria. Reproductive health. 2021;18:1-8.
7. Kemigisha E, Bruce K, Ivanova O, Leye E, Coene G, Ruzaaza GN, Ninsiima AB, Mlahagwa W, Nyakato VN, Michielsen K. Evaluation of a school-based comprehensive sexuality education program among very young adolescents in rural Uganda. BMC Public Health. 2019;19:1-11.
8. Mbizvo MT, Kasonda K, Muntalima NC, Rosen JG, Inambwae S, Namukonda ES, Mungoni R, Okpara N, Phiri C, Chelwa N, and Kangale C. Comprehensive sexuality education linked to sexual and reproductive health services reduces early and unintended pregnancies among in-school adolescent girls in Zambia. BMC Public Health. 2023;23(1):348.
9. Gichane MW, Wamoyi J, Atkins K, Balvanz P, Maman S, Majani E, Pettifor A. The influence of cash transfers on engagement in transactional sex and partner choice among adolescent girls and young women in

Northwest Tanzania. Culture, Health & Sexuality. 2022;24(1):1-15.
10. Freedman J, Rakotoarindrasata M, de Dieu Randrianasolorivo J. Analysing the economies of transactional sex amongst young people: Case study of Madagascar. World Development. 2021;138:105289.
11. Wangamati CK. Comprehensive sexuality education in sub-Saharan Africa: adaptation and implementation challenges in universal access for children and adolescents. Sexual and Reproductive Health Matters. 2020;28(2):1851346.
12. Mostert K, Sethole KM, Khumisi O, Peu D, Thambura J, Ngunyulu RN, Mulaudzi MF. Sexual knowledge and practice of adolescent learners in a rural South African school. African health sciences. 2020;20(1):28-38.
13. Worku MG, Tessema ZT, Teshale AB, Tesema GA, Yeshaw Y. Prevalence and associated factors of adolescent pregnancy (15–19 years) in East Africa: a multilevel analysis. BMC Pregnancy and Childbirth. 2021;21:1-8.
14. Camper Jr BM. A case study analysis among former urban gifted high school dropouts: Walden University, 2019.
15. Mavhandu-Mudzusi AH, and Mhongo BG. Adolescents' Sexual Education: Parental Involvement in a Rural Area in KwaZulu-Natal, South Africa. Africa Journal of Nursing and Midwifery. 2021;23(1):15 pages.
16. Duckett LJ. Quantitative research excellence: Study design and reliable and valid measurement of variables. Journal of Human Lactation. 2021;37(3):456-63.
17.Vinny KN, Gladys MA, Lufuno M. Unhealthy sexual practices among youth in Vhembe District, Limpopo province: A cross-sectional study. African Journal of Reproductive Health. 2024;28(6):85-94.
18. Campbell S, Greenwood M, Prior S, Shearer T, Walkem K, Young S, Bywaters D, and Walker K. Purposive sampling: complex or simple? Research case examples. Journal of Research in Nursing. 2020;25(8):652-61.
19. Mason J, Classen S, Wersal J, and Sisiopiku VP. Establishing face and content validity of a survey to assess users' perceptions of automated vehicles. Transportation research record. 2020;2674(9):538-47.
20. Uzun Z, Öğretmen T. Test equating with the Rasch model to compare pre-test and post-test measurements. Journal of Measurement and Evaluation in Education and Psychology. 2021;12(4):336-47.
21. Tian J. The Impact of Sex Education on the Status of Women in the United States. Journal of Education, Humanities and Social Sciences. 2023;8:607-12.
22. Jiskrova GK, Vazsonyi AT. Multi-contextual influences on adolescent pregnancy and sexually transmitted infections in the United States. Social Science & Medicine. 2019;224:28-36.
23. Hosseini F, Alidousti Shahraki K, Azizzadeh Forouzi M, Ahmadi A, Dehesh T. The effect of cognitive behavioral counseling on sexual knowledge, motivation to avoid risky sexual relationships, and sexual depression in female university students. Trends in psychiatry and psychotherapy. 2020;42:122-8.
24. Brody C, Reno R, Chhoun P, Kaplan K, Tuot S, Yi S. Female entertainment workers and condom use negotiation in the post-100% condom use era, Cambodia. Archives of sexual behavior. 2020:1-10.
25. Turner N, Götmark F. Human fertility and religions in sub-Saharan Africa: A comprehensive review of publications and data, 2010-2020. African Journal of Reproductive Health. 2023;27(1):119-71.
26. Šaffa G, Kubicka AM, Hromada M, and Kramer KL. Is the timing of menarche correlated with mortality and fertility rates? PloS one. 2019;14(4):e0215462.
27. nAjayi AI, Odunga SA, Oduor C, Ouedraogo R, Ushie BA, and Wado YD. " I was tricked": understanding reasons for unintended pregnancy among sexually active adolescent girls. Reproductive Health. 2021;18:1-11.
28. Ahinkorah BO, Hagan Jr JE, Seidu AA, Sambah F, Adoboi F, Schack T, and Budu E. Female adolescents' reproductive health decision-making capacity and contraceptive use in sub-Saharan Africa: What does the future hold? PloS one. 2020;15(7):e0235601.
29. Duby Z, Jonas K, McClinton Appollis T, Maruping K, Dietrich J, and Mathews C. "Condoms are boring": navigating relationship dynamics, gendered power, and motivations for condomless sex amongst adolescents and young people in South Africa. International Journal of Sexual Health. 2021;33(1):40-57.
30. Dombola GM, Manda WC Chipeta E. Factors influencing contraceptive decision making and use among young adolescents in urban Lilongwe, Malawi: a qualitative study. Reproductive health. 2021;18:1-11.
31. Moges Y, Worku SA, Niguse A, Kelkay B. Factors associated with the unplanned pregnancy at Suhul General Hospital, Northern Ethiopia, 2018. Journal of Pregnancy. 2020;2020(1):2926097.
32. Govender D, Naidoo S, and Taylor M. "My partner was not fond of using condoms and I was not on contraception": understanding adolescent mothers' perspectives of sexual risk behaviour in KwaZulu-Natal, South Africa. BMC Public Health. 2020;20:1-17.
33. Mbachu CO, Agu IC, Obayi C, Eze I, Ezumah N, Onwujekwe O. Beliefs and misconceptions about contraception and condom use among adolescents in south-east Nigeria. Reproductive Health. 2021;18:1-8.
34. Owoko SO. Factors Influencing Contraceptive Use among Adolescent Girls Aged 14-19 Years in Homa Bay County, Kenya: JKUAT-COHES; 2023.
35. Kwami RD. Perception of Contraceptives Use and its Impact on the Sexual Behaviours of Adolescents in Senior High Schools in the Krachi-East District: University of Cape Coast; 2020.
36. Odongo LA. SOCIO-ECONOMIC AND CULTURAL DETERMINANTS OF THE SLOW DECLINE IN FERTILITY IN MIGORI COUNTY, KENYA: KENYATTA UNIVERSITY; 2023.
37. Khosa NV. Factors influencing unplanned pregnancy among learners in a selected high school in Collins Chabane Municipality, Limpopo Province, South Africa, 2019.
38. Tinago CB, Frongillo EA, Warren AM, Chitiyo V, Cifarelli AK, Fyalkowski S, Pauline Vl. Development and assessment of the feasibility of a community-based

peer support intervention to mitigate social isolation and stigma of adolescent motherhood in Harare, Zimbabwe. Pilot and Feasibility Studies. 2021;7(1):110.

39. Ochen AM, Chi PC, Lawoko S. Predictors of teenage pregnancy among girls aged 13–19 years in Uganda: a community-based case-control study. BMC pregnancy and childbirth. 2019;19:1-14.
40. Wamoyi J, Heise L, Meiksin R, Kyegombe N, Nyato D, and Buller AM. Is transactional sex exploitative? A social norms perspective, with implications for interventions with adolescent girls and young women in Tanzania. PloS one. 2019;14(4):e0214366.
41. Vinny KN, Gladys MA, Lufuno M. Healthy Sexual Practices among Adolescents Living in Africa: A Systematic Review. Gender and Behaviour. 2023;21(2):21895-905.
42. Ruzibiza Y. 'They are a shame to the community…' stigma, school attendance, solitude, and resilience among pregnant teenagers and teenage mothers in Mahama refugee camp, Rwanda. Global public health. 2021;16(5):763-74.
43. Moolla A, Constance M, Ngcobo N, Mngadi S, Govathson C, Long L, and Pascoe SJ "I want one nurse who is friendly to talk to me properly like a friend": Learner preferences for HIV and contraceptive service provision in Gauteng, South Africa. Research Square. 2023.
44. Ouma L, Bozkurt B, Chanley J, Power C, Kakonge R, Adeyemi OC, Kudekallu RJ, and Leahy Madsen E. A cross-country qualitative study on contraceptive method mix: contraceptive decision-making among youth. Reproductive Health. 2021;18(1):105.
45. Ntombela NP, Kharsany AB, Soogun A, Yende-Zuma N, Kohler H-P, and McKinnon LR. Prevalence and risk factors for HIV infection among heterosexual men recruited from socializing venues in rural KwaZulu-Natal, South Africa. AIDS and Behavior. 2021:1-10.
46. Niemeyer Hultstrand J, Omer Abuelgasim K, Tydén T, Jonsson M, Maseko N, and Målqvist M. The perpetuating cycle of unplanned pregnancy: underlying causes and implications in Eswatini. Culture, health & sexuality. 2021;23(12):1656-71.
47. Gelaw T, Ketema TG, Beyene K, Gurara MK, Ukke GG. Fear of childbirth among pregnant women attending antenatal care in Arba Minch town, southern Ethiopia: a cross-sectional study. BMC Pregnancy and Childbirth. 2020;20:1-7..