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Research Article

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Magnitude and Determinants of Teenage Pregnancy Among Adolescents in Chikankata District, Zambia

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ABSTRACT

Introduction: Teenage pregnancy is a significant global public health problem, affecting millions of girls aged 10 to 19, particularly in Sub-Saharan Africa, which accounts for 35% of unplanned pregnancies. It is characterized by high rates of unintended pregnancies, school dropout, forced and unstable marriages, low birth weight, preterm birth, unsafe abortions, anemia, toxemia, and other associated health risks. This study aimed to determine the magnitude and determinants of teenage pregnancy among adolescents aged 10–19 years in Chikankata District of Southern Province of Zambia.

Methods: Ethical approval for the study was obtained from Texila American University Research Ethics Committee Reference Number 2025/TAU-LTD-ZA/12723. Written informed consent was obtained from the guardians of adolescents aged 10–17 years, and written assent was obtained from the adolescents themselves as well. Written informed consent was also obtained from adolescents aged 18–19 years. All participants were informed that participation in the study was voluntary and that they were free to withdraw from it at any time without coercion.

Results: The study found that most of the respondents (62.2%) reported never having been pregnant. In contrast, one-third of participants (33.1%) indicated that they had experienced pregnancy. Age ($p = 0.001$), marital status ($p < 0.001$), religion ($p = 0.004$), level of education ($p = 0.002$), and number of children ($p < 0.001$) were statistically significantly associated with teenage pregnancy among adolescents in Chikankata District, Zambia. The study also revealed that, most of respondents had attained secondary school education (70.3%), with very few progressing to the tertiary level (0.8%). It was also found that most of the respondents were single (98.4%), suggesting that pregnancies occurred outside marriage. It was found that three-quarters of respondents (74.0%) lived with both parents, while smaller proportions stayed with one parent (12.8%) or guardians (13.3%), which may influence the level of supervision and support received. Cohabitation began at ages 18–19 (93.2%), but a notable 6.0% of respondents started living with a partner at 14–17 years, reflecting early exposure to adult roles. Communication on sexual and reproductive health was weak, with only 27.6% reporting frequent discussions with parents/guardians, while half (50.5%) indicated such discussions occurred rarely, pointing to limited parental guidance. Most families described themselves as average in financial status (72.7%), though 18.5% considered themselves poor. A large majority (74.0%) of respondents admitted that poverty or financial need had influenced their sexual decisions. The study also revealed that, a considerable proportion of respondents (40.6%) correctly understood that contraceptives are used to prevent pregnancy, while 30.7% had only a vague awareness, and 18.5% admitted to having no knowledge. Access to reproductive health services was via health facilities (76.6%), with fewer adolescents relying on private pharmacies (16.7%) or school clinics (3.1%). In terms of contraceptive use, only 26.8% reported consistent use, whereas 41.7% used them occasionally, and 19.5% did not use them at all. Almost all adolescents (98.4%) felt comfortable discussing reproductive health with providers. Moreover, the majority (95.6%) of restudy participants agreed that teenage girls should access contraceptives without parental consent. Study further revealed that 54.2% of respondents received comprehensive reproductive health education in schools and 32.0% of respondents acknowledged limited exposure. Attitudes towards contraceptives were positive (60.2%) while 18% of respondents still held negative views. Finally, health facility utilization varied, with 45.3% visiting regularly and 28.1% occasionally, but a significant minority (22.7%) rarely sought services.

Conclusion: In conclusion, teenage pregnancy remains a notable public health challenge in Chikankata District despite most adolescents reporting no prior pregnancy. The study shows that pregnancies largely occurred outside marriage and were influenced by poverty, weak parent–adolescent communication, limited reproductive health knowledge, and inconsistent contraceptive use. Although access to health facilities and positive attitudes toward contraceptives were relatively high, gaps in comprehensive sexuality education and service utilization persist. These findings highlight the need to strengthen parental involvement, improve adolescent reproductive health education, and enhance access to and utilization of youth-friendly reproductive health services to reduce teenage pregnancy among adolescents in the district.

Keywords: Magnitude, Determinants, Teenage Pregnancy, Adolescents, Chikankata District, Zambia

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Introduction

Adolescent pregnancy is a major public health problem with serious medical, educational, social, psychological and vocational implications for both the mother and her baby. A teenager is a person aged between 10 and 19. The other name for a teenager is an adolescent. Teenage pregnancy is defined as any pregnancy that ends before the age of 20. Teenage pregnancy is one of the major public health problems which most of the developed and developing countries face today. It is also very prevalent in Sub-Saharan region as well [1].

Overwhelming evidence indicates that, teenager time is a point when several people who are aged between 13 and 19 begin to mirror on their gender identity and this is one of the most baffling periods for teenagers and of course their relatives. Other than that, staunch evidence shows that, about 21 million girls aged between 15 and 19 conceive each year especially in the third world countries like Zambia, Malawi and Seychelles. And that 12 million of these girls usually give birth to a good many numbers of babies. The majority 6.5% (777, 000) of these births occur among adolescents who are less than 15 years old especially in Africa [2].

Evidence also shows that, the global fertility rate among the adolescents has actually gone down by 11.6% for the past 20 years. For instance, the fertility rate in the eastern part of Asia is 7.1% while that of Central African countries stands at 13% [3].

A study conducted in Zambia found that, the prevalence of adolescent pregnancy in Zambia ranged between 29% and 48%. National data further found that by 2018, approximately 29.1% of adolescents had already given birth. At the individual level, factors such as early or child marriage, exposure to media, knowledge of sexual and reproductive health (SRH) and contraception, contraceptive use, and engagement in risky sexual behaviours were significantly associated with adolescent pregnancy. Key socio-economic determinants included peer influence, level of education, household wealth, and household head power dynamics, alongside broader socio-cultural, gender, and sexual norms and other contextual factors. At the policy level, adolescent pregnancy was linked to inadequate and limited access to SRH information and services, as well as the absence of a supportive legal and policy environment for adolescents [4].

Materials and Methods

Ethical approval for the study was obtained from the Texila American University Biomedical Research Ethics Committee (TAUBRECs) under Reference Number 2025/TAU-LTD-ZA/12723. Additional authorization to conduct the study was secured from the Chikankata District Education Board Secretary (DEBS), the Chikankata District Health Office, as well as the Choma Provincial Health Office and Choma Provincial Education Office respectively. A cross-sectional study design was employed to determine the magnitude and determinants of teenage pregnancy among adolescents aged 10–19 years in Chikankata District, Zambia. Given that the study involved minors, strict ethical safeguards were observed. Written informed consent was obtained from parents or legal guardians for all adolescents aged 10–17 years, thereby legally authorizing their participation in the study. In addition, written assent was obtained from adolescents aged 10–17 years, which they were required to sign before participating in the study and before being issued with the structured questionnaire. Adolescents aged 18–19 years, who were legally able to provide consent on their own behalf, were required to sign a written informed consent form prior to the commencement of data collection. All participants and guardians were clearly informed about the objectives and purpose of the study, either individually or in small group sessions in order to promote cooperation. They were assured that participation was entirely voluntary, that the study posed no physical or psychological harm, and that there were no direct personal benefits associated with participation. Participants were also informed of their right to withdraw from the study at any time without any consequences. Confidentiality and anonymity were strictly maintained. No personally identifiable information, including names, passport numbers, National Registration Card numbers, residential addresses, or phone numbers, was collected. All completed questionnaires and research materials were securely stored, with access restricted to the researcher only. Where necessary, if a participant felt disturbed, they were referred to a school counsellor, youth-friendly corner, or health worker for counselling and support.

Moreover, primary data were collected using a structured questionnaire consisting of closed-ended questions. Primary data were collected between 1st September 2025 and 30th October 2025 in Chikankata District. The questionnaire was reviewed by the researcher's supervisor to ensure content validity and alignment with the study objectives. The researcher also received training in ethical engagement with adolescents, including child protection principles and age-appropriate communication. A pilot study was conducted among a small group of adolescents in selected areas within Chikankata District to assess the clarity, reliability, and consistency of the data collection instrument. Feedback from the pilot study was used to refine ambiguous questions. To minimize selection bias, participants involved in the pilot study were excluded from the main study. The internal consistency reliability of questionnaire items related to key constructs was assessed using Cronbach's alpha. The total sample size for this study was 384 respondents. A simple random sampling method was employed to select participants, as it ensured that every eligible adolescent had an equal chance of being included in the study. Completed questionnaires were reviewed daily for completeness and accuracy prior to data entry. Data analysis was conducted using the Statistical Package for Social Sciences (SPSS) version 28. Descriptive statistics were used to summarize the data and present results in frequencies, percentages, tables, and pie charts. Bivariate and multivariate logistic regression analyses were performed to understand and identify the magnitude and determinants of teenage pregnancy among adolescents with statistical significance set at $p < 0.05$.

Table 1 reveals that the majority of respondents were adolescents aged 14–17 years (38.8%), with most being single (97.7%), suggesting a population at a critical stage of development where reproductive health decisions are shaped. Most participants were Christians (88.8%) and enrolled in secondary school (76.8%), indicating relatively high exposure to formal education, which could influence awareness of reproductive health issues. Importantly, while three-quarters (75.5%) had no children,

nearly one-quarter (24.5%) reported having one or more children, underscoring the persistence of teenage pregnancy despite the high proportion of unmarried and in-school adolescents.

Results

Table 1: Demographic Data

VARIABLES	RESPONSES	FREQUENCY	PERCENTAGE
AGE	10 - 13	132	34.4%
	14 - 17	149	38.8%
	18 - 19	103	26.8%
MARITAL STATUS	Single	375	97.7%
	Married	6	1.6%
	Divorced	3	0.8%
RELIGION	Christian	341	88.8%
	Muslim	43	11.2%
LEVEL OF EDUCATION	Primary	89	23.2%
	Secondary	295	76.8%
NUMBER OF CHILDREN	Zero	290	75.5%
	One	77	20.1
	Two	17	4.4%

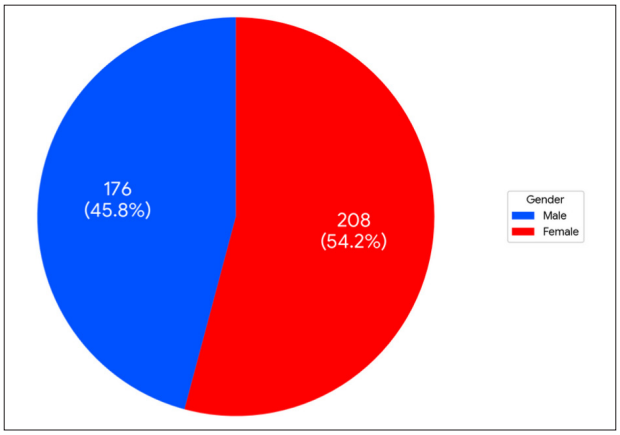

Figure 1: shows that 208 participants (54.2%) identified as female, while 176 (45.8%) identified as male. This near-equal representation enhances the credibility of gender-based analyses and ensures that the findings reflect both male and female perspectives within the study population.

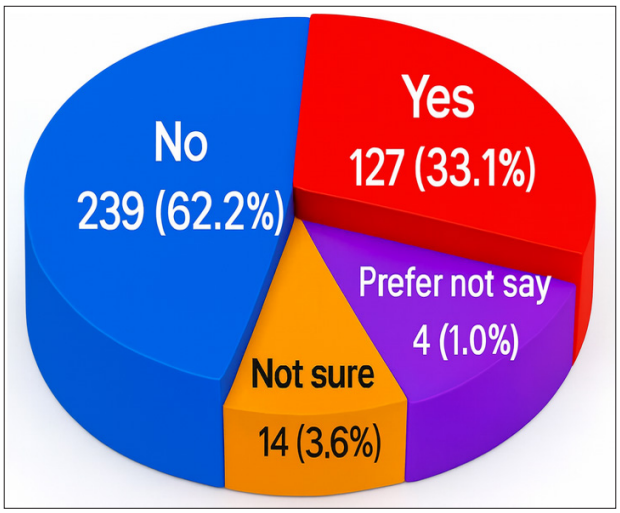

Figure 2: Prevalence of Teenage Pregnancy Among Adolescents

Figure 2 shows that the majority of respondents (n = 239; 62.2%) reported never having been pregnant. In contrast, approximately one-third of the participants (n = 127; 33.1%) indicated that they had experienced pregnancy. Only a small proportion of respondents either chose not to disclose their pregnancy status (n = 4; 1.0%) or reported being uncertain (n = 14; 3.6%).

Table 2: Socio-Demographic and Economic Factors Associated with Teenage Pregnancy

QUESTIONS ON SOCIO-DEMOGRAPHIC FACTORS	RESPONSES	FREQUENCY	PERCENTAGE
What is your current level of education?	No formal education	18	4.7%
	Primary school	93	24.2%
	Secondary school	270	70.3%
	Tertiary education	3	0.8%
What is your marital status?	Single	378	98.4%
	Married	2	0.5%
	Separated	4	1.0%
Who do you live with?	Both parents	284	74.0%
	One parent	49	12.8%
	Relatives/Guardians	51	13.3%
At what age did you start cohabiting or living with a partner?	10 - 13	0	0.0%
	14 - 17	23	6.0%
	18-19	358	93.2%
	I don't cohabit	3	0.8%
Do your parents or guardians discuss sexual and reproductive health issues with you?	Yes frequently	106	27.6%
	Occasionally	71	18.5%
	Rarely	194	50.5%
	Never	13	3.4%
QUESTIONS ON ECONOMIC FACTORS	**RESPONSES**	**FREQUENCY**	**PERCENTAGE**
What is the main source of income in your household?	Farming	117	30.5%
	Formal employment	203	52.9%
	Informal business	8	2.1%
	No stable income	56	14.6%
How would you describe your family's financial status?	Very poor	9	2.4%
	Poor	71	18.5%
	Average	279	72.7%
	Well off	25	6.5%
Has poverty or financial need ever influenced your sexual decisions?	Yes	284	74.0%
	No	65	16.9%
	Not sure	14	3.9%
	Prefer not to say	21	5.5%

The findings in Table 2 reveal that, most of respondents had attained secondary school education (70.3%), with very few progressing to the tertiary level (0.8%), indicating that limited educational advancement may heighten vulnerability to teenage pregnancy. The overwhelming majority were single (98.4%), suggesting that pregnancies predominantly occurred outside marriage. In terms of living arrangements, three-quarters of respondents (74.0%) lived with both parents, while smaller proportions stayed with one parent (12.8%) or guardians (13.3%), which may influence the level of supervision and support received. Cohabitation largely began at ages 18–19 (93.2%), but a notable 6.0% started living with a partner at 14–17 years, reflecting early exposure to adult roles. Communication on sexual and reproductive health was weak, with only 27.6% reporting frequent discussions with parents/guardians, while half (50.5%) indicated such discussions occurred rarely, pointing to limited parental guidance. Economically, more than half of the respondents' households relied on formal employment (52.9%), followed by farming (30.5%), though 14.6% had no stable income, reflecting economic instability. Most families described themselves as average in financial status (72.7%), though 18.5% considered themselves poor. Notably, a large majority (74.0%) admitted that poverty or financial need had influenced their sexual decisions, highlighting the critical role of economic vulnerability in shaping risky behaviours that contribute to teenage pregnancy.

Table 3: Role of Knowledge, Attitudes, and Access to Reproductive Health Services In Influencing Teenage Pregnancy Among Adolescents

QUESTIONS	RESPONSES	FREQUENCY	PERCENTAGE
Do you know what contraceptives are used for?	Yes, to prevent pregnancy	156	40.6%
	No	71	18.5%
	I have heard of them, but not sure	118	30.7%
	Only for married people	39	10.2%
Where do you (adolescents) in your area access sexual reproductive health services?	Health facility	294	76.6%
	School clinic	12	3.1%
	Private pharmacies	64	16.7%
	I do not know	14	3.7%
Have you ever used any form of contraception?	Yes, consistently	103	26.8%
	Yes, sometimes	160	41.7%
	No	75	19.5%
	I don't know what contraception is	46	10.4%
Do you feel comfortable discussing reproductive health issues with health providers?	Yes	378	98.4%
	Sometimes	3	0.8%
	No	1	0.3%
	Never tried	2	0.5%
Do you believe teenage girls should access contraceptives without parental consent?	Strongly agree	170	44.3%
	Agree	197	51.3%
	Disagree	16	4.2%
	Strongly disagree	4	1.0%
Have you ever received sexual and reproductive health education in school?	Yes, comprehensive	208	54.2%
	Yes, but not enough	123	32.0%
	No	34	8.9%
	Not applicable	19	4.9%
What is your attitude toward contraceptive use?	Positive and supportive	231	60.2%
	Neutral	71	18.5%
	Negative	69	18.0%
	Don't know	13	3.4%
How often do you visit health facilities for reproductive health services?	Regularly (monthly or more)	174	45.3%
	Occasionally (once or twice a year)	108	28.1%
	Rarely	87	22.7%
	Never	15	3.9%

The findings from Table 3 reveal that, a considerable proportion of respondents (40.6%) correctly understood that contraceptives are used to prevent pregnancy, while 30.7% had only a vague awareness, and 18.5% admitted to having no knowledge. This indicates gaps in accurate knowledge about contraceptives, which could affect informed decision-making. Access to reproductive health services was primarily through health facilities (76.6%), with fewer adolescents relying on private pharmacies (16.7%) or school clinics (3.1%). In terms of contraceptive use, only 26.8% reported consistent use, whereas 41.7% used them occasionally, and 19.5% did not use them at all, highlighting inconsistent uptake despite reported access. Encouragingly, almost all adolescents (98.4%) felt comfortable discussing reproductive health with providers, suggesting a favorable service environment. Moreover, the majority (95.6%) agreed that teenage girls should access contraceptives without parental consent, reflecting a progressive attitude towards adolescent reproductive autonomy. Education also played a role, with 54.2% reporting comprehensive reproductive health education in schools and a further 32.0% acknowledging limited exposure. Attitudes towards contraceptives were predominantly positive (60.2%), although about 18% still held negative views. Finally, health facility utilization varied, with 45.3% visiting regularly and 28.1% occasionally, but a significant minority (22.7%) rarely sought services.

Table 4: Association Between Demographic Factors and The Prevalence of Teenage Pregnancy Among Adolescents

DEMOGRAPHIC VARIABLES	$\chi 2$ value	df	p-value
Age	20.250	3	0.001**
Marital status	20.160	6	0.000**
Religion	21.419	1	0.004**
Level of education	24.131	5	0.002**
Number of children	22.501	4	0.000**

($P < 0.05$).

Table 4 below shows that age ($p = 0.001$), marital status ($p = 0.000$), Religion ($p = 0.004$), Level of education ($p = 0.002$), and Number of children ($p = 0.000$) were found to be significantly associated with the prevalence of teenage pregnancy among adolescents in Chikankata District of Zambia. These findings imply that teenage pregnancy is influenced by a combination of socio-demographic and socio-cultural factors.

Discussion

Demographic Data

Table 1 reveals that the majority of respondents were adolescents aged 14–17 years (38.8%), with most being single (97.7%), suggesting a population at a critical stage of development where reproductive health decisions are shaped. Most participants were Christians (88.8%) and enrolled in secondary school (76.8%), indicating relatively high exposure to formal education, which could influence awareness of reproductive health issues. Importantly, while three-quarters (75.5%) had no children, nearly one-quarter (24.5%) reported having one or more children, underscoring the persistence of teenage pregnancy despite the high proportion of unmarried and in-school adolescents. Not only that, Figure 1 also shows that 208 participants (54.2%) identified as female, while 176 (45.8%) identified as male. This near-equal representation enhances the credibility of gender-based analyses and ensures that the findings reflect both male and female perspectives within the study population.

Prevalence of Teenage Pregnancy Among Adolescents In Chikankata District of Zambia

The results from this study shows that the majority of respondents (n = 239; 62.2%) reported never having been pregnant. In contrast, approximately one-third of the participants (n = 127; 33.1%) indicated that they had experienced pregnancy. Only a small proportion of respondents either chose not to disclose their pregnancy status (n = 4; 1.0%) or reported being uncertain (n = 14; 3.6%). The results from the current study indicate that 33.1% of adolescents had experienced pregnancy, demonstrating a relatively high prevalence that confirms teenage pregnancy as a significant public health concern in the study area. Age ($p = 0.001$), marital status ($p < 0.001$), religion ($p = 0.004$), level of education ($p = 0.002$), and number of children ($p < 0.001$) were statistically significantly associated with teenage pregnancy among adolescents in Chikankata District, Zambia. These findings are in line with a study conducted in Ethiopia, which reported a teenage pregnancy prevalence of 28.6% in Wogedi, suggesting that similar magnitudes of adolescent pregnancy exist across different Sub-Saharan African contexts. Although the prevalence in the current study is slightly higher, the similarity may be attributed to shared socio-demographic and reproductive health challenges such as limited contraceptive use, early sexual debut, and rural–urban disparities that characterize many low-resource settings like Zambia and Ethiopia [5].

In contrast, the prevalence reported in the current study is higher than the pooled estimates documented in a systematic review and meta-analysis across Africa and Sub-Saharan Africa, which reported prevalence levels of 18.8% and 19.3%, respectively. This difference suggests that the study area may be experiencing a comparatively heavier burden of teenage pregnancy, potentially due to contextual factors such as weaker adolescent reproductive health services, socio-cultural norms that tolerate early childbearing, or lower levels of school retention among girls. These variations highlight the heterogeneity of teenage pregnancy prevalence across regions and emphasize the influence of broader socio-structural determinants [6].

Conversely, the current findings are akin to results from multilevel high-fertility Sub-Saharan African countries, where an overall teenage pregnancy prevalence of 24.88% was reported. Although the prevalence in the current study is higher, both studies reinforce the notion that teenage pregnancy is particularly pronounced in high-fertility contexts, where early marriage, low educational attainment, economic vulnerability, and unmet need for family planning are common. This similarity underscores the role of contextual and country-level factors in shaping adolescent reproductive outcomes [7].

Furthermore, the results from the current study are similar to evidence from other African settings that document high levels of adolescent sexual activity and adverse reproductive outcomes. For example, a study conducted among adolescents reported substantial sexual activity, unintended pregnancies, and widespread unsafe abortion practices, illustrating the continued vulnerability of adolescents to negative sexual and reproductive health outcomes. While the specific prevalence rates differ, the shared pattern of risk-taking behaviors and limited access to safe reproductive health services aligns closely with the current findings and further confirms the persistent nature of teenage pregnancy across diverse African contexts [8].

Socio-Demographic and Economic Factors Associated with Teenage Pregnancy in Chikankata District of Zambia

The findings from this study revealed that, most of respondents had attained secondary school education (70.3%), with very few progressing to the tertiary level (0.8%), indicating that limited educational advancement may heighten vulnerability to teenage pregnancy. The overwhelming majority were single (98.4%), suggesting that pregnancies predominantly occurred outside marriage. In terms of living arrangements, three-quarters of respondents (74.0%) lived with both parents, while smaller proportions stayed with one parent (12.8%) or guardians (13.3%), which may influence the level of supervision and support received. Cohabitation largely began at ages 18–19 (93.2%), but a notable 6.0% started living with a partner at 14–17 years, reflecting early exposure to adult roles. Communication on sexual and reproductive health was weak, with only 27.6% reporting frequent discussions with parents/guardians, while half (50.5%) indicated such discussions occurred rarely, pointing to limited parental guidance. Economically, more than half of the

respondents' households relied on formal employment (52.9%), followed by farming (30.5%), though 14.6% had no stable income, reflecting economic instability. Most families described themselves as average in financial status (72.7%), though 18.5% considered themselves poor. Notably, a large majority (74.0%) admitted that poverty or financial need had influenced their sexual decisions, highlighting the critical role of economic vulnerability in shaping risky behaviours that contribute to teenage pregnancy.

In addition, the findings of the current study demonstrate that socio-demographic and economic factors play a significant role in shaping teenage pregnancy in Chikankata District, Zambia. Educational attainment emerged as a key factor, with 70.3% of respondents having attained secondary education and only 0.8% progressing to tertiary level. This pattern suggests that limited educational progression may heighten vulnerability to teenage pregnancy. These findings are consistent with evidence from Ethiopia, where adolescents with low levels of education were significantly more likely to experience teenage pregnancy. One study reported that adolescents with no or low education had markedly increased odds of teenage pregnancy, particularly among those aged 18–19 years (AOR = 16.75; 95% CI: 6.45–43.47). Similarly, a secondary analysis of Rwanda Demographic and Health Survey data showed that adolescents with no education or only primary education were significantly more likely to experience teenage pregnancy compared to those with secondary or higher education. However, unlike the Rwandan and Ethiopian studies where lack of education was the strongest predictor, the current study recorded a high prevalence even among adolescents who had attained secondary education, suggesting that school attendance alone without effective sexual and reproductive health education may be insufficient to prevent teenage pregnancy among the adolescents in Chikankata district of Zambia [9].

Moreover, marital status patterns also reveal both similarities and contextual differences across regions. In the current study, 98.4% of respondents were single, indicating that teenage pregnancy largely occurred outside marriage. This finding aligns with results from the Niger Delta region of Nigeria, where teenage pregnancy was predominantly observed among unmarried adolescents, many of whom had discontinued schooling and experienced socioeconomic hardship. In contrast, findings from Ethiopia revealed that being married was a strong predictor of teenage pregnancy (AOR = 15.91; 95% CI: 7.43–34.04), reflecting cultural norms that promote early marriage. This contrast suggests that while early marriage is a dominant pathway to teenage pregnancy in some settings, premarital sexual activity driven by economic vulnerability and limited contraception access may be more influential in the Zambian and Nigerian contexts [10].

In addition, living arrangements and parental involvement showed complex relationships with teenage pregnancy. Although 74.0% of respondents in the current study lived with both parents, only 27.6% reported frequent discussions on sexual and reproductive health, while 50.5% indicated that such discussions occurred rarely. This finding is consistent with the Ethiopian study, which reported that adolescents who did not communicate with their parents about reproductive health issues had significantly higher odds of teenage pregnancy (AOR = 6.52; 95% CI: 3.12–13.64). Similarly, it was identified poor parent–child communication and lack of supervision as major parental factors contributing to teenage pregnancy in Akwa Ibom State, Nigeria. These findings suggest that parental presence alone does not offer adequate protection; rather, effective communication and guidance are critical determinants of adolescent sexual behaviour [11].

Other than that, economic factors were strongly associated with teenage pregnancy in the current study. Although 52.9% of households relied on formal employment and 72.7% of respondents described their families as having an average financial status, a substantial proportion (74.0%) reported that poverty or financial need influenced their sexual decisions. This finding mirrors results from Ethiopia, where adolescents from households earning below approximately $25 per month were almost 24 times more likely to experience teenage pregnancy (AOR = 23.96; 95% CI: 4.89–117.29), while those earning $25–50 also had elevated risk (AOR = 4.91; 95% CI: 1.64–14.66). Comparable associations were reported in Rwanda, where adolescents from poor and middle wealth index households had higher odds of teenage pregnancy compared to those from wealthier households. Although the current study did not quantify economic risk using odds ratios, the high proportion of respondents acknowledging financial pressure underscores the pervasive role of poverty as a driver of risky sexual behavior across different African contexts [12]

Age-related patterns also warrant attention. In the current study, cohabitation most commonly began at ages 18–19 years (93.2%), though 6.0% of respondents reported starting cohabitation as early as 14–17 years. This finding aligns with the Ethiopian study, which identified adolescents aged 18–19 as being at significantly higher risk of pregnancy (AOR = 16.75; 95% CI: 6.45–43.47) (Ayele et al., 2018). However, studies from other settings highlight additional behavioral pathways. For instance, it was found that substance use, sexual abuse, and early independence were the most prominent contributors to teenage pregnancy, suggesting that in some contexts, social and behavioral factors may outweigh traditional socio-demographic predictors [13].

Role of Knowledge, Attitudes, and Access In Reproductive Health Services in Influencing Teenage Pregnancy Among Adolescents

The findings from this study reveal that, a considerable proportion of respondents (40.6%) correctly understood that contraceptives are used to prevent pregnancy, while 30.7% had only a vague awareness, and 18.5% admitted to having no knowledge. This indicates gaps in accurate knowledge about contraceptives, which could affect informed decision-making. Access to reproductive health services was primarily through health facilities (76.6%), with fewer adolescents relying on private pharmacies (16.7%) or school clinics (3.1%). In terms of contraceptive use, only 26.8% reported consistent use, whereas 41.7% used them occasionally, and 19.5% did not use them at all, highlighting inconsistent uptake despite reported access. Encouragingly, almost all adolescents (98.4%) felt comfortable discussing reproductive health with providers, suggesting a

favorable service environment. Moreover, the majority (95.6%) agreed that teenage girls should access contraceptives without parental consent, reflecting a progressive attitude towards adolescent reproductive autonomy. Education also played a role, with 54.2% reporting comprehensive reproductive health education in schools and a further 32.0% acknowledging limited exposure. Attitudes towards contraceptives were predominantly positive (60.2%), although about 18% still held negative views. Finally, health facility utilization varied, with 45.3% visiting regularly and 28.1% occasionally, but a significant minority (22.7%) rarely sought services.

The current study demonstrates that knowledge, attitudes, and access to reproductive health (RH) services play a crucial role in influencing teenage pregnancy among adolescents in Sub-Saharan Africa. In this study, 40.6% of respondents correctly understood that contraceptives prevent pregnancy, while 30.7% had vague awareness and 18.5% had no knowledge, highlighting significant gaps in understanding. In comparison, evidence from Sub-Saharan Africa indicates that approximately 35% of pregnancies among adolescents aged 15–19 years are unplanned, unwanted, or untimed, reflecting similar gaps in knowledge and unstable adolescent relationships [14]

Similarly, reported that poor understanding of contraceptives and reproductive health, coupled with misconceptions about fertility and sexual activity, increased teenagers' vulnerability to unintended pregnancies. In Tanzania's rural Lindi region, lack of individual agency and limited knowledge of contraception were associated with unplanned pregnancies among adolescent girls. These findings collectively highlight that inadequate knowledge directly affects adolescents' ability to make informed sexual and reproductive decisions, increasing pregnancy risk [15,16].

Attitudes toward reproductive health and contraception also significantly influence teenage pregnancy. In the current study, 60.2% of respondents held positive attitudes toward contraceptives, and 95.6% agreed that teenage girls should access contraceptives without parental consent, reflecting progressive views on adolescent reproductive autonomy. However, 18% retained negative attitudes, which may hinder consistent contraceptive use. These patterns are consistent with findings from South Africa, where adolescents' negative perceptions about contraception, combined with cultural norms and peer pressure, were associated with higher pregnancy prevalence; for instance, girls with two or more sexual partners had higher odds of pregnancy (OR: 1.25; 95% CI: 1.039–1.503), and girls who used alcohol before sex had increased odds (OR: 1.373; 95% CI: 1.004–1.878). In Tanzania, adolescent girls' attitudes toward early pregnancy were shaped by poverty, social expectations, and desire for financial security, leading some to intentionally plan pregnancies. Thus, while positive attitudes can encourage protective behaviors, negative or culturally constrained attitudes increase teenage pregnancy risk [16,17].

Access to reproductive health services is another critical determinant. In the current study, 76.6% of adolescents accessed services through health facilities, 16.7% through private pharmacies, and 3.1% through school clinics. Despite this, service utilization was inconsistent: 45.3% visited regularly, 28.1% occasionally, and 22.7% rarely sought services. This illustrates that availability does not always translate into consistent use. Comparable findings in Sub-Saharan Africa indicate that limited access to youth-friendly services, geographic barriers, and stigma impede utilization. In rural Tanzania, adolescents faced limited contraceptive access, which contributed to unplanned pregnancies (Te et al., 2021). In South Africa, condoms were the contraceptive method most known, yet inconsistent use persisted, with pregnancy prevalence among sexually active girls increasing from 17.3% in 2002 to 23.6% in 2008, highlighting gaps between access and effective use. The current study suggests that favorable service environments—98.4% of respondents felt comfortable discussing RH with providers—can facilitate utilization, but structural and behavioral factors continue to limit consistent service use [17].

Education also influenced knowledge, attitudes, and access. In the current study, 54.2% of adolescents reported comprehensive reproductive health education in schools, with 32% acknowledging limited exposure. This supports evidence that formal education improves knowledge and shapes positive attitudes toward contraception, reducing pregnancy risk Nonetheless, the persistence of gaps in knowledge, inconsistent contraceptive use, and underutilization of services highlights the need for multifaceted interventions that address all three domains simultaneously [14].

In summary, the current study confirms that knowledge, attitudes, and access are interrelated determinants of teenage pregnancy. Adequate knowledge empowers adolescents to make informed decisions, positive attitudes facilitate contraceptive uptake, and accessible, adolescent-friendly services provide the means to act on knowledge and attitudes. Comparison with other studies across Sub-Saharan Africa demonstrates similar patterns: inadequate knowledge, negative or restrictive attitudes, and barriers to access consistently increase teenage pregnancy risk. The findings underscore the need for integrated interventions that combine comprehensive reproductive health education, programs to shift attitudes, and strategies to improve consistent access and utilization of youth-friendly services to effectively reduce teenage pregnancy [15-17].

Recommendations

The researcher recommends that the Chikankata District Health Office (CDHO) and the Chikankata District Education Board Secretary (DEBS), in collaboration with the Ministry of Health and the Ministry of Education in Zambia, as well as the World Health Organization (WHO) and the United Nations Educational, Scientific and Cultural Organization (UNESCO), should strengthen parental and community engagement through comprehensive health education and social mobilization strategies. These strategies should involve parents, community leaders, schools, the media, and religious institutions to address social norms, community attitudes, and cultural beliefs that contribute to teenage pregnancy.

The investigator also recommends that the Chikankata District Health Office should continue to strengthen broad sexuality health education in schools and community settings to improve adolescents' knowledge of sexual and reproductive health, reduce misinformation and infodemics, promote responsible decision-making, and reduce the risk of unintended teenage pregnancies.

The investigator further suggests that Chikankata District Health Office, in collaboration with relevant stakeholders, support adolescent economic empowerment initiatives, such as health entrepreneurship skills training and income-generating activities, to reduce economic vulnerability that may contribute to early and unintended pregnancies.

The author further suggests that the District Health Office should continue to enhance youth-friendly reproductive health services by ensuring confidentiality, accessibility, stigma-free and adolescent-sensitive health service delivery, thereby encouraging young people to seek timely and appropriate reproductive health care.

The author further recommends that the Chikankata District Health Office intensify awareness campaigns on contraceptive use, focusing on correct and consistent use, to improve uptake and prevent teenage pregnancies and school dropouts among adolescents in the district.

Conclusion

All in all, the study reveals that the adolescent population in Chikankata District is largely composed of unmarried, school-going youths at a critical stage for shaping reproductive health decisions. Despite high enrollment in secondary schools and widespread exposure to formal education, teenage pregnancy persists, with a notable proportion of adolescents having experienced pregnancy. Most respondents live with both parents, yet communication on sexual and reproductive health remains limited, suggesting gaps in parental guidance. Economic vulnerability also plays a significant role, with many adolescents reporting that financial need influenced their sexual decisions. Knowledge and use of contraceptives are inconsistent, despite general awareness and positive attitudes towards their use, and access to reproductive health services is predominantly through health facilities. Importantly, adolescents feel comfortable seeking care and support for reproductive health, and there is broad recognition of their right to access contraceptives without parental consent. The researcher further suggests that initiatives be implemented to support adolescent economic empowerment through skills training, health entrepreneurship, and income-generating activities, alongside the continued provision of accessible, confidential, and youth-friendly reproductive health services, including contraceptives, to ensure consistent use and timely care. The researcher further suggests that the Chikankata District Health Office, in collaboration with schools and community stakeholders, strengthen comprehensive sexual and reproductive health education for adolescents while promoting regular parent–child communication.

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