

Early Marriage Influence on HIV/AIDS Prevalence in Turkana Central Sub-County

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Abstract

HIV/AIDS remains a major global public health challenge, with sub-Saharan Africa bearing the highest burden. Young people between the ages of 16 and 30 are among the most vulnerable, and despite extensive efforts by governments and non-governmental organizations, infection rates continue to rise. Factors such as poor adherence to antiretroviral therapy (ART) further complicate the situation. While poverty and education are widely recognized as key contributors to HIV vulnerability, growing evidence suggests that early marriage also plays a significant role, particularly in marginalized communities. This study explored the connection between early marriage and HIV/AIDS prevalence in Turkana Central Sub-County, Kenya. Using a descriptive research design, data were collected from 404 households, selected from a target population of 13,467 individuals. The Kothari formula was used to determine the sample size with a 5% margin of error. A structured questionnaire, tested for reliability using Cronbach's alpha and validated by experts, was used for data collection. SPSS was employed to analyze the data and identify key relationships between variables. Findings showed that early marriage remains deeply ingrained in Turkana's culture, although attitudes are shifting among more educated and socially exposed individuals. The study established a strong link between early marriage and increased HIV/AIDS vulnerability, largely due to lower education levels, economic dependence, and limited access to sexual health information and protective measures. Additionally, polygamous unions and transactional sex were found to further heighten the risk of HIV transmission. Women and young girls were particularly affected, as economic struggles often left them with little power to negotiate safer sexual practices. To address these challenges, the study recommends enhanced community awareness campaigns on the risks of early marriage, alongside expanded public health education programs spearheaded by the Ministry of Health and local authorities.

Economic empowerment initiatives are also crucial, providing alternative sources of income and reducing reliance on high-risk coping strategies. These measures are essential to breaking the cycle of vulnerability and lowering HIV/AIDS prevalence in marginalized communities. The study's findings provide important perspectives that can guide policymakers, public health experts, and development organizations in designing practical, evidence-based strategies to combat HIV/AIDS and tackle the underlying socioeconomic challenges that contribute to its spread.

Keywords

Early Marriage, HIV/AIDS Prevalence, Socioeconomic Factors, Public Health, Turkana County

1. Introduction

HIV/AIDS remains one of the most urgent public health challenges worldwide, with sub-Saharan Africa bearing the heaviest burden. Since the epidemic began, approximately 76 million people have been infected, and 33 million lives have been lost to AIDS-related illnesses [1]. Despite significant progress in treatment and prevention, around 38 million people were still living with HIV in 2019, with 1.7 million new infections and 690,000 AIDS-related deaths recorded during the same period. The situation is particularly severe in sub-Saharan Africa, which accounts for 67.4% of all people living with HIV globally, as well as 57% of new infections and 64% of AIDS-related deaths [2].

In Kenya, HIV/AIDS remains a serious health crisis, with an estimated 1.6 million people living with HIV infection, underscoring the continued urgency for sustained prevention and treatment efforts. While the country has made notable strides in reducing new infections and expanding access to antiretroviral therapy (ART), certain regions, particularly arid and semi-arid areas like Turkana County, continue to face major challenges. These areas struggle with high poverty levels, low literacy rates, and deeply rooted cultural practices that increase vulnerability to HIV. Research highlights economic hardship, gender inequality, and limited healthcare access as key contributors to the spread of HIV in marginalized communities [3]. One critical yet often overlooked factor is early marriage, which continues to put young women at greater risk of infection.

Each year, an estimated 12 million girls—or 32,000 per day—are married before the age of 18. While boys are also affected, girls bear the greatest impact, with 650 million women and 150 million men worldwide having been married as children [4]. In sub-Saharan Africa, where HIV rates are among the highest globally, child marriage is also widespread. Countries such as Mozambique (48%), Malawi (42%), Uganda (40%), Zimbabwe (32%), Zambia (31%), Tanzania (31%), and Kenya (23%) report alarmingly high prevalence rates. Studies show that early marriage significantly increases the risk of HIV infection, primarily due to limited education, fi-

nancial dependence, and exposure to risky sexual behaviors [5].

In Kenya, early marriage is a significant factor contributing to increased HIV transmission among young girls. Research indicates that adolescent brides are at a heightened risk of HIV infection due to their increased exposure to older, more sexually experienced partners, who may have a history of multiple sexual partners, thereby increasing the likelihood of HIV transmission [6]. Additionally, child brides often have limited agency in negotiating condom use within their marriages, further heightening their vulnerability to HIV and other sexually transmitted infections (STIs) [7]. Studies show that adolescent girls in early marriages are more likely to engage in unprotected sex compared to their unmarried peers, which exacerbates their risk of HIV infection [8]. In sub-Saharan Africa, young women account for a disproportionate number of new HIV infections, with structural inequalities such as early marriage playing a critical role in sustaining these trends [9]. Addressing child marriage and empowering young girls with education and reproductive health resources are essential strategies in mitigating HIV risks among this vulnerable group.

Beyond direct sexual exposure, early marriage deepens economic and social inequalities that make young girls even more susceptible to HIV. Studies show that economic hardship is one of the biggest drivers of early marriage, as families struggling financially often marry off their daughters to secure bride price payments or reduce household expenses [10]. In Turkana County, where livelihood opportunities are scarce, early marriage is often seen as a survival strategy, perpetuating poverty, gender subordination, and HIV vulnerability [11]. Polygamous unions and transactional sex further increase the risks, as young brides in multiple-partner households face higher exposure to HIV transmission [11].

Although many studies have explored the socioeconomic factors contributing to HIV/AIDS, little research has specifically examined the role of early marriage in increasing HIV vulnerability in marginalized communities like Turkana County. This study aims to fill this gap by investigating how early marriage contributes to HIV/AIDS prevalence, highlighting the structural and cultural factors that put young married girls at higher risk of infection.

By addressing these issues, this research will provide evidence-based recommendations to guide public health interventions, policy decisions, and community awareness programs aimed at reducing early marriage rates and strengthening HIV prevention efforts. Tackling the socioeconomic and cultural drivers of HIV/AIDS is crucial to slowing its spread and achieving the Sustainable Development Goal (SDG) 3.3, which seeks to end the AIDS epidemic by 2030 [2].

2. Conceptual Framework

A conceptual framework serves as a structured analytical tool that organizes ideas, clarifies relationships between key variables, and systematically represents theoretical concepts. It visually illustrates different variables and their assumed interactions in a study, providing a clear understanding of the phenomenon under investigation. As defined by Shields and Rangarajan, it represents “the way ideas are

organized to achieve a research project's purpose" [12].

Poverty and socioeconomic struggles often push people toward risky behaviors, a concept deeply rooted in strain theory from criminology. [13] argued that when individuals face barriers preventing them from achieving socially accepted goals—such as financial stability or career success—they experience frustration and may turn to alternative, sometimes high-risk, behaviors to cope. These behaviors can include crime, substance abuse, or early marriage in marginalized communities where options are limited. Strain theory provides a crucial lens for understanding how economic hardship and structural inequality shape human behavior, particularly in communities with few legitimate opportunities for social mobility.

The study examines the relationship between early marriage (independent variable) and HIV/AIDS prevalence (dependent variable) while incorporating mediating and moderating variables to capture the complex interplay of factors influencing this relationship. The conceptual framework is structured as follows:

2.1. Conceptual Framework Components

1) Independent Variables: These are the key determinants affecting the prevalence of HIV/AIDS:

- a) Socio-Demographic Factors
- b) Age
- c) Gender
- d) Education level
- e) Traditional beliefs related to HIV/AIDS
- f) Social influences on sexual behavior
- g) Socio-Cultural Factors
- h) Early marriage and HIV/AIDS risk
- i) Prostitution and its link to HIV/AIDS
- j) Polygamy and HIV/AIDS transmission
- k) Cultural perceptions and beliefs about HIV/AIDS

2) Mediating Variables: These variables explain how early marriage influences HIV/AIDS prevalence:

- a) Reduced educational attainment—Limits awareness of HIV prevention.
- b) Economic dependence—Increases reliance on risky income-generating activities.
- c) Increased exposure to high-risk behaviors—Higher likelihood of multiple sexual partners.
- d) Limited access to healthcare and information—Reduces use of preventive measures like condoms or ART.

3) Dependent Variable: The primary outcome influenced by the independent variables:

- a) HIV/AIDS prevalence and infection rates.

4) Moderating Variables: These factors affect the strength and direction of relationships between independent and dependent variables:

- a) Cultural norms and gender roles—Influence marriage age and partner selection.
- b) Availability of HIV prevention programs—Determines access to education and treatment.
- c) Socioeconomic status—Wealthier individuals may have better access to healthcare but also greater mobility, influencing risk exposure.
- d) Government policies on child marriage and reproductive health—Legal restrictions and advocacy efforts impact early marriage rates and associated risks.

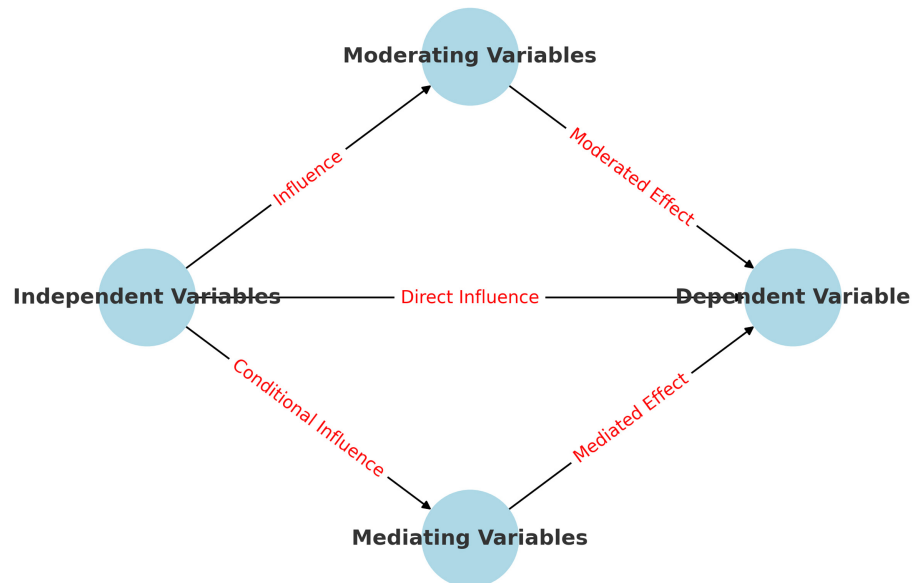


Figure 1. Conceptual framework diagram.

Figure 1 above illustrates the relationships between independent variables, dependent variables, mediating variables, and moderating variables in a research context.

Interaction in the Diagram

1) Direct Influence (Causal Relationship):

- a) The independent variables have a direct effect on the dependent variable, represented by the horizontal arrow in the middle.
- b) This represents a traditional causal relationship.

2) Mediation Effect:

- a) The independent variables also influence mediating variables, which in turn affect the dependent variable.
- b) This explains an indirect pathway where the effect of the independent variable is transmitted through the mediator.

3) Moderation Effect:

- a) Moderating variables influence the strength or direction of the relationship between independent and dependent variables.
- b) The moderating effect does not create a new pathway but alters how strongly

the independent variable affects the dependent variable.

4) Combined Influence:

a) The diagram shows that both mediation and moderation effects can exist together, where the influence of independent variables on the dependent variable may be both direct and indirect (via mediation) and conditional (via moderation).

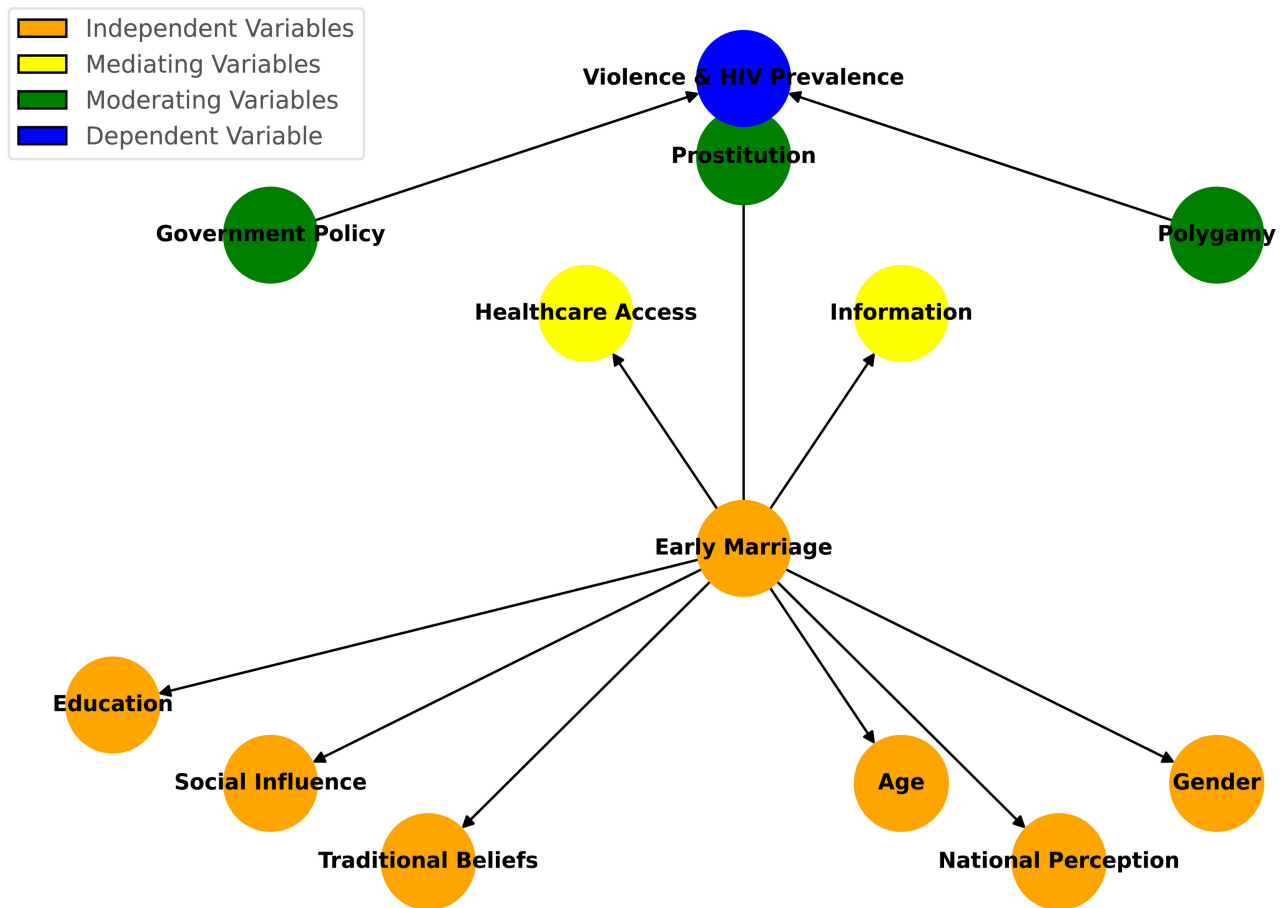


Figure 2. Conceptual framework.

Figure 2 above shows the Key interactions in the conceptual diagram.

1) Independent Variables (Orange Nodes):

These are the factors that directly contribute to early marriage, including education, gender, age, social influence, national perception, and rational beliefs.

a) They shape the likelihood of early marriage based on societal norms, personal background, and cultural expectations.

2) Mediating Variables (Yellow Nodes):

These act as bridges, explaining how early marriage leads to certain outcomes. In this case, healthcare access and information play a crucial role.

a) Early marriage may limit access to healthcare and information, which in turn affects long-term well-being.

b) This indirect pathway shows how early marriage contributes to broader so-

cial and personal consequences.

3) Moderating Variables (Green Nodes):

These factors influence the strength or direction of the relationship between early marriage and its outcomes. The diagram includes government policies, prostitution, and polygamy as key moderators.

- Depending on the context, these factors can either intensify or lessen the impact of early marriage on the final outcome.

4) Dependent Variable (Blue Node “Violence & its consequences”):

The final outcome, likely violence and its consequences, is shaped by both direct and indirect influences of early marriage.

- Early marriage can contribute to violent experiences directly, or through mediating and moderating effects.
- The interaction of all these variables determines the extent and nature of these consequences.

2.2. Summary

- Early marriage is at the center of this framework, influenced by demographic and societal factors.
- Mediating variables (healthcare access, information) explain how early marriage translates into negative outcomes.
- Moderating factors (government policies, prostitution, polygamy) determine the intensity of these effects.
- The final consequence (violence & related issues) is shaped by this complex web of interactions.

Ultimately, this framework reveals how personal choices, societal norms, and government policies come together to shape the realities of early marriage. It highlights the ripple effects, both direct and indirect that influence individuals’ lives, determining their access to opportunities, well-being, and overall life outcomes.

3. Methodology

3.1. Sampling Technique

This study employed a stratified purposive sampling approach to ensure broad representation across various wards and sub-locations within the study area. Participants were selected based on predefined criteria, with a focus on individuals seeking medical care.

A total of 404 respondents were purposively sampled, ensuring the data captured diverse experiences and perspectives relevant to the study objectives.

3.2. Research Design

A descriptive research design was adopted, integrating both qualitative and quantitative methods to enhance analytical depth through triangulation. This mixed-method approach provided a holistic understanding of the research problem by combining statistical insights with contextual interpretations [14].

- Quantitative data was collected through structured questionnaires, offering measurable insights into relationships between key variables.
- Qualitative data was gathered via semi-structured interviews, allowing for in-depth exploration and interpretation of the statistical findings.

This combination facilitated a comprehensive analysis of the factors influencing early marriage and its broader social and economic implications.

3.2.1. Study Area

The research was conducted in Turkana County, Kenya, focusing on five key areas: Kerio Delta, Kangatotha, Kalokol, Lodwar Township, and Kanamkemer. These locations were selected to ensure a diverse socio-economic and cultural representation.

Turkana County is characterized by:

- High poverty levels, which influence marriage patterns and economic dependencies.
- Nomadic lifestyles, affecting access to healthcare and education.
- Deep-rooted socio-cultural practices, shaping marriage customs and healthcare decisions.

3.2.2. Sampling Methods and Sample Size

A stratified random sampling technique was employed to ensure proportional representation of different demographic groups across the study areas. This method was chosen to enhance precision and generalizability, capturing variations based on:

- Geographical location (ward level).
- Gender differences.
- Age groups.

This stratification ensured that the sample was inclusive, representing the diverse socio-economic and cultural backgrounds of the study population.

3.2.3. Population Distribution by Ward (see Table 1)

Table 1 above presents the population distribution across the five wards in Turkana Central County, based on the 2009 Census [15]. Lodwar Township has the highest population (35,506 people), while Kanamkemer has the smallest geographical area (287.40 sq. km). The Kerio Delta ward, despite having a relatively high population (34,212 people), covers the largest land area (1934.80 sq. km), indicating a low population density compared to other wards. This distribution is important for the study as it helps in determining sample representation from each ward. The stratified sampling approach used ensures proportional representation based on population size and geographic coverage, making the findings more generalizable to the entire Turkana Central County.

3.2.4. Sample Size Determination (see Table 2)

The sample size was determined using Cochran's formula for an estimated 10% HIV/AIDS prevalence in Turkana County at a 95% confidence level and a 5%

Table 1. Turkana central county assembly wards.

Ward	Population (2009 Census)	Area (Sq. Km)	Sub-Locations
Kerio Delta	34,212	1934.80	Kangirisae, Nakoret, Lorengelup, Nakurio, Kerio, Kakimat, Kangagetei, Nadoto
Kangatotha	22,695	1005.00	Ille, Naoros, Lomopus, Lochor Ekeny, Namukuse
Kalokol	19,477	1134.90	Namadak, Kalokol, Kapua
Lodwar Township	35,506	544.40	Lodwar Town, Nakwamekwi, Napetet
Kanamkemer	22,784	287.40	Kanamkemer, Nawoitrong
Total	134,674		

margin of error:

$$n = (Z^2 \times P(1 - P))/C^2$$

where:

- n = Sample size
- Z = Z-score (1.96 for 95% confidence level)
- P = Estimated HIV/AIDS prevalence (10% or 0.10)
- C = Margin of error (0.05)

Substituting the values:

$$n = (1.96)^2 \times 0.10 \times (1 - 0.10)/(0.05)^2$$

$$n = (3.8416 \times 0.10 \times 0.90)/0.0025$$

$$n = 0.3457/0.0025$$

$$n = 384.16$$

Thus, the minimum required sample size is approximately 384 respondents. This ensures that the data collected is statistically representative of the population in Turkana County.

Given that 10% of the total population in the study area is approximately 13,467 individuals, the sample size represents around 3% of this population. To ensure fair representation, the 3% sampling ratio was applied to each sub-location proportionally [16].

Table 2 above provides a breakdown of the target population and the final sample size derived using Cochran's formula. The sampling approach ensures proportional representation across the wards, allowing for accurate data collection without over- or under-representing any area. Lodwar Township, having the highest population, contributes the largest sample size (107 respondents), whereas Kalokol and Kangatotha have lower sample sizes (58 and 68 respondents, respectively).

This structured sampling ensures that the study results accurately reflect the demographic variations across Turkana Central County, enhancing the statistical

Table 2. Target population and sample population.

Ward	Sub-Locations	Population	10% Population Sample	Final Sample (3%)
Kerio Delta	8	34,212	3421	103
Kangatotha	5	22,695	2270	68
Kalokol	3	19,477	1948	58
Lodwar Township	3	35,506	3551	107
Kanamkemer	2	22,784	2278	69
Total	21	134,674	13,467	384

reliability and validity of the findings.

3.3. Data Collection Instruments

Two main instruments were used for data collection:

- 1) Questionnaire—A structured questionnaire was used to collect quantitative data. The questionnaire included sections on demographics, socio-economic factors, marriage perceptions, and healthcare access.
- 2) Interviews—Semi-structured interviews were conducted with community leaders, healthcare workers, and policymakers to gain qualitative insights into cultural practices, policy impact, and challenges related to early marriage [17].

Validity and Reliability Testing

To enhance the credibility and accuracy of the research instruments:

- 1) Content validity was ensured by having experts in social sciences and public health review the questionnaire for relevance and clarity [18].
- 2) Construct validity was tested using factor analysis to confirm that items measured the intended variables [19].
- 3) Reliability testing was conducted using Cronbach's Alpha, with a minimum acceptable threshold of 0.7 for internal consistency [20].
- 4) A pilot study was conducted on 10% of the sample (approximately 38 respondents) to identify ambiguities and improve clarity of questions before full data collection [21].

3.4. Data Analysis

A combination of descriptive and inferential statistical techniques was used to analyze the collected data:

- 1) Descriptive Statistics—Used to summarize means, standard deviations, and frequency distributions [22].
- 2) Regression Analysis—Employed to examine the strength and direction of relationships between variables, while controlling for confounding factors. This provided deeper analytical insights [23].
- 3) Chi-square Tests—Used to determine the association between categorical variables, such as gender and marriage age [24].

4) Thematic Analysis—Applied to qualitative interview responses, identifying common themes and narratives [25].

3.5. Ethical Considerations

Ethical approval was obtained from relevant institutional review boards. Participation was voluntary, and respondents provided informed consent. Confidentiality and anonymity were strictly maintained throughout data collection and analysis [26] [27].

4. Results & Discussion

4.1. Response Rate

Out of the 404 distributed questionnaires, 386 were properly filled and returned, yielding an impressive 95.5% response rate. This high response rate was largely due to the use of self-administered questionnaires, which enhanced participation. According to Babbie (1990), a response rate of 50% is considered adequate, 60% good, and 70% very good—making our response rate exceptionally strong for analysis. **Table 3** summarizes the response distribution.

Table 3. Response rate.

Questionnaires Issued	Returned	Response Rate	No Response
404	386	95.5%	4.5%

4.1.1. Relationship between Early Marriage for Economic Benefits and HIV/AIDS Prevalence

One of the primary objectives of this study was to examine the relationship between early marriage for economic benefits and the prevalence of HIV/AIDS in Turkana County. The findings provide critical insights into how early marriage influences socio-economic vulnerabilities and exposure to HIV/AIDS.

4.1.2. Age at Marriage

Respondents were asked about their age at the time of marriage. The results revealed that:

- 111 (28.8%) got married before the age of 18,
- 91 (23.6%) were married between the ages of 18 - 24,
- 9 (2.3%) married between 25 - 30 years, and
- 8 (2.1%) got married between 31 - 35 years.

Figure 3 above shows that more than half of the respondents (52.4%) got married before the age of 24, with a significant number marrying before 18. This highlights the widespread occurrence of early marriage in the community. Such trends could be influenced by cultural traditions, economic hardships, or social expectations. Marrying young may limit access to education and economic opportunities, while also increasing vulnerability to health risks like HIV/AIDS. These findings emphasize the need for deeper discussions on how early marriage affects individuals' futures and the overall well-being of the community.

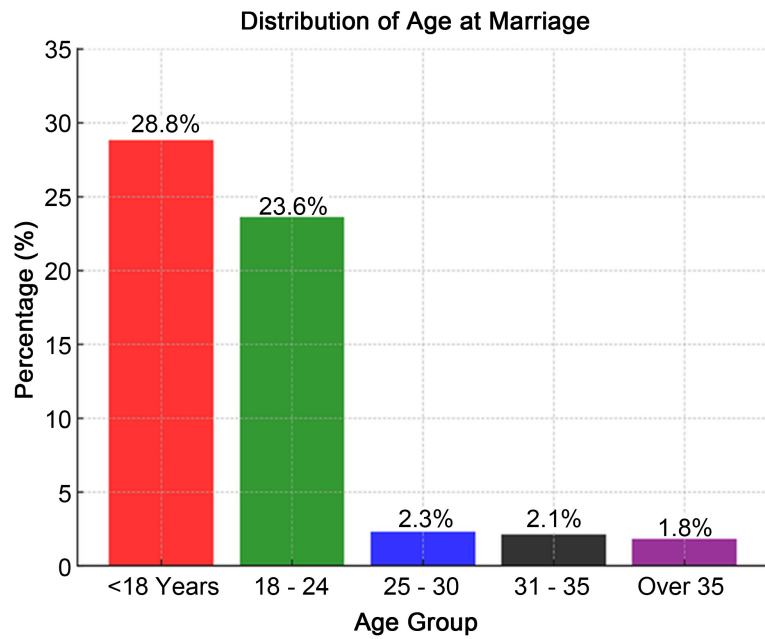


Figure 3. Age when married.

When asked whether they believe early marriage contributes to HIV/AIDS prevalence, 45.1% of respondents agreed, while 54.9% disagreed as shown in **Figure 4** above. This indicates a nearly even split in perceptions, suggesting that while many recognize a potential link, others may not see early marriage as a primary risk factor.

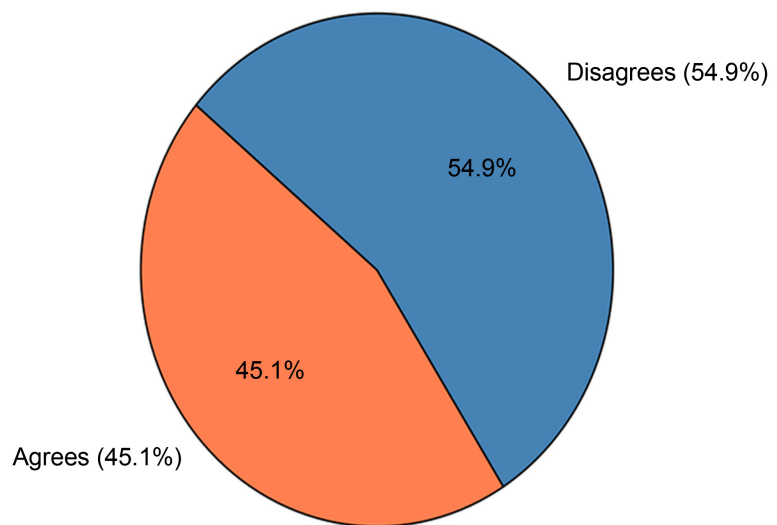


Figure 4. Early marriage as a cause of HIV/AIDS.

The belief that early marriage contributes to HIV/AIDS could be linked to factors such as limited education on sexual health, reduced negotiation power in relationships, and economic vulnerabilities that may force young spouses into risky behaviors. On the other hand, those who disagreed might believe that other fac-

tors—such as cultural practices, polygamy, or lack of healthcare access—play a more significant role in HIV transmission.

This finding highlights the need for further community education and awareness programs to explore the real risks and misconceptions surrounding early marriage and HIV/AIDS.

4.1.3. Early Marriage and HIV/AIDS

How Early Marriage Increases HIV/AIDS Risk

Early marriage is a widespread issue in Turkana, and its link to HIV/AIDS is undeniable. Many young people, especially girls, find themselves in marriages before they fully understand the risks of HIV. This study explored how early marriage affects people's lives and makes them more vulnerable to the disease.

1) Struggling to Find Work

- a) 64% of respondents said early marriage makes it harder to get a job.
- b) Many young brides and grooms leave school to take on adult responsibilities, limiting their chances of finding employment later.
- c) As one participant put it, *“I dropped out at 16 to get married. Now, no one will hire me because I have no skills.”*

2) Lack of HIV Awareness and Education

- a) 67.9% of respondents agreed that early marriage leads to lower education levels and less awareness about HIV/AIDS.
- b) When people don't stay in school, they miss out on essential lessons about safe sex, HIV prevention, and healthy relationships.
- c) One respondent shared, *“I didn't know about HIV until my friend got sick. I never got the chance to learn about it in school.”*

3) Limited Power to Say “No”

- a) 64.8% said early marriage reduces the ability to negotiate for safe sex.
- b) In many cases, young brides are expected to obey their husbands, even if they fear infection.
- c) One woman explained, *“I wanted my husband to use protection, but he refused. I had no choice.”*

4) Financial Struggles and Prostitution

- a) 63.2% said early marriage leads to low income, making young people more vulnerable to risky behaviors like transactional sex.
- b) Some young women end up in prostitution just to survive, increasing their chances of contracting HIV.
- c) A participant admitted, *“After my husband left, I had no money. I did what I had to do to feed my children.”*

5) Divorce, Remarriage, and Multiple Partners

- a) 63.5% said early marriages often end in divorce, increasing exposure to multiple sexual partners.
- b) Divorcees often remarry without knowing their partner's HIV status, raising the risk of infection.
- c) One man reflected, *“I married young, got divorced, and remarried twice. I*

never thought about HIV testing.”

6) HIV/AIDS and Child Mortality

- a) 58.5% of respondents linked early marriage to child mortality from HIV/AIDS.
- b) Many young parents lack knowledge about mother-to-child transmission, leading to preventable infections.

4.1.4. Discussion: Why This Matters

These findings paint a worrying picture—early marriage limits opportunities, increases vulnerability, and exposes young people to significant HIV risks [4] warned that adolescents in early marriages face a higher risk of infection due to lack of education, financial dependence, and limited decision-making power. This study confirms that reality in Turkana County.

Young people who marry early often drop out of school, leaving them uninformed about HIV prevention. They also struggle financially, making them more dependent on partners who may control their sexual choices. When marriages fail, which is common, divorce and remarriage create new risks, as people engage in new relationships without proper health precautions [28].

To break this cycle, there is a need for:

- 1) Stronger education programs—Keeping adolescents in school can increase HIV awareness and prevention knowledge.
- 2) Economic empowerment for young women—Providing skills training and employment opportunities can reduce financial dependence on partners.
- 3) More awareness campaigns—Increasing community education on HIV prevention in areas where early marriage is common [29].

If young people stay in school, become financially independent, and make informed choices, they stand a better chance of protecting themselves from HIV/AIDS.

4.1.5. Discussion: Survey Findings and Implications

The survey findings presented in **Table 4** highlight the community’s perceptions of how early marriage influences various socio-economic and health factors related to HIV/AIDS in Turkana County.

A majority of respondents (64%) believe that early marriage reduces employment opportunities, reinforcing the idea that young brides often drop out of school and lack the skills necessary for formal employment. Similarly, 67.9% agree that early marriage limits exposure to education, leaving individuals with insufficient knowledge about HIV prevention and transmission. This lack of awareness increases vulnerability to unsafe sexual practices and HIV infection [7].

Moreover, 64.8% of participants recognize that early marriage reduces a woman’s ability to negotiate safer sex, highlighting the power imbalance in marital relationships, where young brides often have little say in matters of contraception and condom use [8]. Economic constraints also emerge as a significant concern, with 63.2% of respondents linking early marriage to low income—a factor that,

Table 4. Summarizing the survey findings on the perceived impacts of early marriage on various socio-economic and health factors related to HIV/AIDS in Turkana County.

Statement	Strongly Disagree (SD)	Disagree (D)	Neutral (N)	Agree (A)	Strongly Agree (SA)	Mean (M)	Standard Deviation (STD)
Early marriage reduces chances of being employed	0 (0%)	91 (23.6%)	0 (0%)	247 (64%)	48 (12.4%)	3.653	0.974
Early marriage reduces level of exposure/ education and thus lack awareness on HIV	0 (0%)	78 (20.2%)	0 (0%)	262 (67.9%)	46 (11.9%)	3.715	0.921
Early marriage reduces chances of bargaining for sex	0 (0%)	82 (21.2%)	0 (0%)	250 (64.8%)	54 (14%)	3.715	0.954
Early marriage leads to low income and thus vulnerability to prostitution	0 (0%)	101 (26.2%)	0 (0%)	244 (63.2%)	41 (10.6%)	3.585	0.991
Early marriages lead to divorce and remarrying, increasing chances of infection	0 (0%)	85 (22%)	0 (0%)	245 (63.5%)	56 (14.5%)	3.705	0.970
Early marriage is a cause of child mortality from HIV/AIDS	0 (0%)	121 (31.3%)	0 (0%)	226 (58.5%)	39 (10.1%)	3.474	1.040

Key: SD—Strongly disagree, STD—Standard deviation; D—Disagree, N—Neither agree, A—Agree, SA—Strongly agree, M—Mean; Note: Percentages represent the proportion of respondents selecting each option.

in many cases, drives women into transactional sex to sustain themselves, further increasing HIV/AIDS risks [29].

Marital instability is another key issue, as 63.5% of respondents associate early marriage with divorce and remarriage, which can lead to multiple sexual partnerships, further heightening the risk of HIV transmission [7]. Additionally, 58.5% believe that early marriage contributes to child mortality from HIV/AIDS, indicating the intergenerational impact of early marriage on child health and survival [10].

These findings underscore the urgent need for community interventions aimed at:

- Keeping girls in school—Educational attainment can improve HIV awareness and prevention strategies [7].
- Promoting economic empowerment—Providing skills training and employment opportunities can reduce financial dependence on partners [8].
- Enhancing HIV/AIDS awareness—Community education campaigns can address misconceptions and improve prevention behaviors [2].

4.1.6. Impact of Early Marriage on HIV/AIDS Vulnerability

Findings from this study reveal that early marriage significantly affects individuals' socio-economic status and increases their vulnerability to HIV/AIDS. Early marriage reduces the likelihood of employment and educational attainment, limiting awareness of HIV/AIDS and its prevention. Additionally, young brides often have minimal power to negotiate safe sex practices, increasing their risk of infection [10].

Financial instability resulting from early marriage can also push individuals—especially women—into prostitution, further elevating their exposure to HIV [8]. Furthermore, early marriage often leads to divorce and remarriage, increasing the number of sexual partners and, consequently, the chances of HIV transmission [7]. Alarming, child mortality due to HIV/AIDS is also higher among young parents who lack awareness and resources to prevent mother-to-child transmission [2].

When respondents were asked about their age at first marriage, 111 (28.8%) reported marrying before the age of 18, while 91 (23.6%) married between 18 and 24 years. This means that a majority—202 individuals (52.4%)—married at a young age, confirming the high prevalence of early marriage. These findings align with [7] who argued that early marriage exposes adolescents to a heightened risk of HIV infection and emphasized the need for targeted interventions to support this vulnerable group.

4.1.7. Comparison with Other Studies

This study confirms previous research findings. [12] conducted a study in Garissa, Kenya, highlighting the role of socio-economic and cultural factors in HIV transmission among youth. The study recommended empowering young people and promoting youth-friendly HIV/AIDS treatment strategies.

Similarly, research by [6] in Africa and Latin America revealed that married individuals aged 15 to 24 were more likely to contract HIV than their unmarried, sexually active peers. This heightened risk was attributed to limited sexual autonomy, increased unprotected intercourse, and, in some cases, the death of spouses from HIV, leading to multiple subsequent partners.

However, many past studies generalized these risks across all young married individuals without adequately disaggregating data by age groups. This study provides a more nuanced perspective by distinguishing between adolescents and young adults, revealing crucial differences in HIV risk exposure.

Despite these compelling findings, when respondents were asked whether they believed early marriage causes HIV/AIDS, 174 (45.1%) agreed, while 212 (54.9%) disagreed. This division highlights a significant gap in public awareness. A study in Sudan by Khamis [7] found that 52% of rural residents still lacked sufficient knowledge about HIV transmission and prevention.

5. Conclusion & Recommendations

These findings emphasize that while education and economic stability are critical

factors in reducing HIV vulnerability, addressing cultural norms and gender disparities is equally important. Targeted interventions that empower young women, improve access to healthcare, and strengthen community awareness can significantly reduce the prevalence of early marriage and HIV/AIDS in Turkana County [2] [8] [9].

5.1. Conclusion

Early marriage remains a deeply rooted tradition in the Turkana community, passed down through generations. While education and exposure have led some community members to abandon the practice, it persists among many who still perceive young girls as a source of dowry and income [6] [10].

This study provides compelling evidence that early marriage significantly contributes to the spread of HIV/AIDS. To mitigate these effects, urgent policy interventions are needed to:

- Prevent child marriage through legislation and enforcement.
- Strengthen HIV/AIDS education in schools and community programs.
- Empower young people—particularly widowed or divorced individuals—with knowledge and resources to protect themselves.

5.2. Recommendations

Based on these insights, the following recommendations are proposed:

- 1) Strengthening Community Awareness and Education Programs
 - Implement targeted awareness campaigns on early marriage and HIV/AIDS [10].
 - Integrate sexual and reproductive health education into school curricula and community outreach programs [12].
- 2) Enhancing Economic Opportunities for Young People
 - Develop and promote economic empowerment programs to reduce financial dependence that drives early marriages [29].
- 3) Expanding Access to Sexual and Reproductive Health Services
 - Increase the availability and accessibility of HIV testing and counseling [2].
 - Strengthen family planning programs [6].

Conflicts of Interest

The authors declare no conflicts of interest regarding the publication of this paper.

References

- [1] The Joint United Nations Programme on HIV/AIDS (2020) HIV Prevention 2020 Road Map: Accelerating HIV Prevention to Reduce New Infections by 75%.
- [2] The Joint United Nations Programme on HIV/AIDS (2020) Global HIV & AIDS Statistics: Fact Sheet.
- [3] National AIDS and STI Control Programme (NASCO) (2020). Kenya Population-based HIV Impact Assessment (KENPHIA) 2018: Final Report. Ministry of Health,

- Kenya.
https://phia.icap.columbia.edu/wp-content/uploads/2020/04/KENPHIA_2020_Final_Report_04.01.20.pdf
- [4] National AIDS Control Council (NACC) (2014) Kenya HIV County Profiles. Ministry of Health, Government of Kenya.
 - [5] UNICEF (2019) UNICEF Annual Report 2018. United Nations Children's Fund
 - [6] Clark, S., Bruce, J. and Dude, A. (2006) Protecting Young Women from HIV/AIDS: The Case against Child and Adolescent Marriage. *International Family Planning Perspectives*, **32**, 79-88. <https://doi.org/10.1363/3207906>
 - [7] Clark, S. (2004) Early Marriage and HIV Risks in Sub-Saharan Africa. *Studies in Family Planning*, **35**, 149-160. <https://doi.org/10.1111/j.1728-4465.2004.00019.x>
 - [8] Girls Not Brides (2018) Child Marriage and HIV: Thematic Brief. <https://www.girlsnotbrides.org/documents/1441/Child-marriage-and-HIV-18th-July-clean-1.pdf>
 - [9] Dzinamarira, T., et al. (2022) HIV and Adolescent Girls and Young Women in Sub-Saharan Africa. *International Journal of Maternal and Child Health and AIDS*, **11** e2022001.
 - [10] Adedokun, G.N., Tochukwu, H.E. and Adedeji, O.O. (2012) Early Childhood Marriage and Early Pregnancy as a Risk to Safe Motherhood. Report on the Regional Conference on Traditional Practices Affecting the Health of Women and Children in Africa, 19-20 November, ICA.
 - [11] The Joint United Nations Programme on HIV/AIDS (2020) HIV Prevention 2020 Road Map: Accelerating HIV Prevention to Reduce New Infections by 75%. <https://www.unaids.org>
 - [12] Shields, P.M. and Rangarajan, N. (2013) A Playbook for Research Methods: Integrating Conceptual Frameworks and Project Management. New Forums Press.
 - [13] Merton, R.K. (1938) Social Structure and Anomie. *American Sociological Review*, **3**, 672-682. <https://doi.org/10.2307/2084686>
 - [14] Cohen, L., Manion, L. and Morrison, K. (2000) Research Methods in Education. 5th Edition, Routledge. <https://doi.org/10.4324/9780203224342>
 - [15] Independent Electoral and Boundaries Commission (2017) Kenya General Elections Report. Nairobi.
 - [16] Cochran, W.G. (1977) Sampling techniques. 3rd Edition, Wiley.
 - [17] Creswell, K. and Poth, J. (2018) Research Design: Qualitative, Quantitative, and Mixed Methods Approaches, 5th Edition, SAGE Publications.
 - [18] Silverman, D. (2011) Interpreting Qualitative Data: Methods for Analyzing Talk, Text, and Interaction. 4th Edition, SAGE Publications.
 - [19] Cohen, L., Manion, L. and Morrison, K. (2017) Research Methods in Education. 8th Edition, Routledge.
 - [20] Cronbach, L.J. (1951) Coefficient Alpha and the Internal Structure of Tests. *Psychometrika*, **16**, 297-334.
 - [21] van Teijlingen, E. and Hundley, V. (2002) The Importance of Pilot Studies. *Nursing Standard*, **16**, 33-36. <https://doi.org/10.7748/ns2002.06.16.40.33.c3214>
 - [22] Creswell, J.W. and Guetterman, T.C. (2019) Educational Research: Planning, Conducting, and Evaluating Quantitative and Qualitative Research. 6th Edition, Pearson.
 - [23] Field, A. (2018) Discovering Statistics Using IBM SPSS Statistics. 5th Edition, SAGE Publications.

- [24] Agresti, A. (2018) *An Introduction to Categorical Data Analysis*. 3rd Edition, Wiley.
- [25] Creswell, J.W. and Poth, C.N. (2018) *Qualitative Inquiry and Research Design: Choosing among Five Approaches*. 4th Edition, SAGE Publications.
- [26] Braun, V. and Clarke, V. (2013) *Successful Qualitative Research: A Practical Guide for Beginners*. SAGE Publications.
- [27] National Commission for the Protection of Human Subjects of Biomedical and Behavioral Research (1979) *The Belmont Report: Ethical Principles and Guidelines for the Protection of Human Subjects of Research*.
<https://www.hhs.gov/ohrp/regulations-and-policy/belmont-report/index.html>
- [28] Ghosn, J., Taiwo, B., Seedat, S., Autran, B. and Katlama, C. (2018) HIV. *The Lancet*, **392**, 685-697. [https://doi.org/10.1016/S0140-6736\(18\)31311-4](https://doi.org/10.1016/S0140-6736(18)31311-4)
- [29] Hargreaves, J.R. and Boler, T. (2006) *Girl Power: The Impact of Girls' Education on HIV and Sexual Behaviour*. ActionAid International.