



Factors Associated with Sexual Behaviour among Adolescents in Chipata District, Zambia

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Authors' contributions

This work was carried out in collaboration among all authors. All authors read and approved the final manuscript.

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ABSTRACT

Of late, Zambia has been experiencing a situation where a lot of adolescents have fallen pregnant and has seen a rise in sexual activities among them. This has greatly been noticed in Chipata of the Eastern Zambia. It is for this this reason Chipata was chosen as a place for conducting this research. The purpose of this study was to determine factors associated with sexual behaviour among adolescents. The study used the quantitative research method using a cross-sectional study design. Participants in this study included 225 adolescents comprising 113 females and 112 males aged 15 -19 years. The study was conducted in Chipata. Participants were selected by using Convenient Sampling. A structured interview questionnaire was used to collect data from participants. The data collected was analyzed with the help of SPSS version 25. The findings showed overwhelming involvement of adolescents in sexual activity (93%). The study found that there where 16% girls compared to 14.7% boys that said they had sex before the age of 16. The study found that initiation into sexual activity was a major factor, with 33.3% of respondents giving it as a reason. This was followed by curiosity (27.7%), a need for goods and services (5.6%), intoxication (7.1%) and accidental indulgence after experimenting with touching (4.7%). The logistic regression analysis at 95% Confidence Interval showed that age predicted a strong likelihood of

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having one sexual partner. And respondents who were 19 years were negatively associated with likelihood of having one partner. It was recommended that future research with a bigger and more comprehensive participant base is recommended to assess the socio- economic and cultural factors affecting adolescents in their sexual behaviours.

Keywords: Sexual behavior; adolescents; alcohol; behavioural practices.

1. INTRODUCTION

Adolescence is regarded as a period of transition from childhood to adulthood [1]. It is a widely recognized stage of life which is acknowledged in various communities across the globe. There has been several debates regarding the age range of who an adolescent is based on particular cultures, contexts and nations. Sawyer [2] noted that while the United Nations Convention on the right of Children defined a Child as a person aged 0-18 years, they also categorised adolescence as a period between 10 and 19 years. However, Swarts [1] suggests that the age 10 to 24 years is more appropriate to the current trends of adolescent growth and the well-known knowledge about this phase of life. Most importantly is that several scholars generally agree that adolescence comes with its own challenges among the young people which includes the various forms of sexual behaviours. It is for this reason that this research aims at addressing the factors associated with the sexual behaviours among adolescents in Chipata district, which is in the Eastern Province of Zambia.

In Zambia, several research had shown that the majority of young people begin their sexual relations during adolescence. The ZDHS [3] reported that 54% of women aged between 15 and 24 years had sex before the age of 18 years, while only 26% of women between 15-24 years of age used a condom at their first sex. Similarly, 48% of men between 15-24 years had sex before age of 18 years, and only 25% of them used a condom at first sex. This often leads to risky sexual behavior resulting in early and unwanted pregnancies and childbirth, induced abortion as well as sexually transmitted diseases including HIV and AIDS [4,5]. This has resulted into an increased burden upon Zambia as a nation in its quest to find a lasting solution towards the HIV pandemic. The HIV and AIDS pandemic has been a devastating public health problem and has drastically hindered Zambia's economic development. HIV prevalence in adults aged 15-49 years was estimated at 12.3%, [6]. Therefore, early sexual initiation poses health risks for both

young men and women. Most young adults who enter sexual relationships for the first time do not use any form of contraception, an act which potentially leaves them vulnerable to unintended pregnancies and unplanned parenthood [7]. There is no doubt then that the onset of adolescence age from 10 to 19 years brings about several vulnerabilities leading to unwanted sex or marriage, risks of unwanted pregnancies, unsafe abortions, sexually transmitted infections and other risks which come with child birth [6,7]. Furthermore, Oyedian [8] observed that a significant percentage of 43.9 of in-school adolescents in Ibadan did not know that their first sexual encounter can result into pregnancy. Therefore, this is not only a challenge among adolescents in Zambia but also a struggle for most of the Sub-Saharan Nations. Further, a study on urban sexual behaviour survey found that men are considered higher status and women with low socio-economic status are limited in their ability to negotiate safe sexual relationships [9].

Literature on HIV and AIDS and sexual behavior in sub-Saharan Africa also confirm that most young people in Africa are sexually active and tend to initiate sex at a fairly young age ranging from 14.4 to 16.2 years for males and 15.1 to 16.6 for females. They tend to have multiple sexual partners whom they engage with in unprotected sex and their relationships do not often last long [10]. The study on sexual behavior in Lusaka indicated that only 27% of females (15-19 years) used a condom at last sex and that 40 % of sexually experienced males had never used a condom. This poses a problem for females as they have less control of their sexual behavior because of being economically disadvantaged compared to males and may fall prey to males who approach them for sexual transactions [9].

Despite encouraging increases in comprehensive knowledge and improved HIV-related attitudes and practices [11], the early sexual debut among adolescents holds the potential of exposing them to HIV infection as indicated above most especially where higher risk partners or multiple

partners are involved with less use of condoms. The lack of awareness and other social pressures and power imbalances can also conspire to put the health of adolescents at risk. Among adolescent girls, aged 15–19 years, in sub-Saharan Africa, a higher percentage of girls (13%) than boys (9%) had sex before the age of 15 years [12]. It seems like the economic status of any particular nation plays a major role when it comes to the adolescent's early engagement into sexual misconducts. Research has shown that in most low- and middle-income countries, early sexual introduction is common, for instance almost 30% of adolescent girls aged 15–19 years in Central African Republic and adolescent boys in Malawi and Lesotho reported having first sexual intercourse before they were 15 years old [13]. Similarly, more than 10% of girls and boys in Madagascar, Cameroon, Uganda, Kenya, Guyana, Sao Tome, Principe, Senegal, Rwanda, Tanzania, and Kiribati have had early sexual engagement [14].

In addition to HIV risk factor, early sexual activity is associated with early marriage and early childbearing across the world [15]. This often curtails education and other opportunities for adolescent girls to reach their full potential. Research has shown that in low- and middle-income countries, 90% of births to adolescents are within their early marriages. The most common adolescent births occur within marriage in Asian and North African countries, as well as sub-Saharan African, Latin American and Caribbean countries which accounts for 70 to 80 percent [16].

The World Health Organization (WHO) reports an estimated 16 million births in girls aged 15–19 years and 2 million births in girls younger than 15 years each year. Worldwide, 20% of adolescent girls have given birth and entered parenting by the age of 18 years, whereas in the least developed countries, as many as 1 in every 3 adolescent girls is a mother by the age of 18 years [13]. More than 1 in 4 women aged 20–24 years in sub-Saharan Africa has had given birth before 18 years of age. And in 3 countries with the highest prevalence of early childbearing—Guinea, Mali, and Niger—around 10% of women give birth before 15 years of age. However, a lower proportion of adolescent girls than boys reported having had multiple sexual partners across nearly all countries, which ranged from 9% in Congo and Gabon to 16% in Jamaica [16]. There seems to be less use of condoms in most of these countries falling short of the 2001 United

Nations Assembly Special Session (UNGASS) target of 95% condom use among those who reported to have had multiple sexual partners. However, a survey data in some countries showed substantial improvements in this indicator. Also, the years between 2000 and 2012, recorded an increase of 10 or more percentage in condom use among adolescents aged 15–19 years who reported multiple sexual partners [16,17]. This occurred in 9 of 22 low- and middle-income countries among adolescent girls and in 10 of 19 countries among adolescent boys [15].

Condoms are one of the most efficient means available to reduce sexual transmission of HIV, yet their use remains abysmally low in several countries with high HIV prevalence. Survey data from 2006 to 2012 show that condom use among adolescents aged 15–19 years who reported multiple sexual partners in the last 12 months before the survey was at least 60% or more in only 2 countries among adolescent girls and in 20 countries among adolescent boys. And recent survey data show that having multiple sexual partnerships among adolescent boys, 15–19 years, is common in both low and high HIV prevalence countries, up to 39% in Jamaica and 18% in Mozambique [17]. In most countries, adolescent girls were less likely than boys to use condoms in their most recent sexual experience among those who reported multiple sexual partners [18]. Condom use is also much less common among adolescents in poorer households and in rural areas [19].

However, condoms are most effective at reducing risk if they are used consistently over time, and this indicator was limited as a proximate measure of consistency of use [18]. Increasingly, survey researchers are using additional indicators to better assess the consistency of young people's reported condom use [20]. National surveys provided some evidence of a trend over time towards later age at first sex, first marriage and first birth, although changes were often limited to sub-groups of adolescents such as gender, urban/rural, education and wealth [21]. Condom use appeared to be increasing but overall levels of use remained low [22]. Less educated females were significantly more likely to report having had sex at an early age. In most countries, the proportion of 15- to 19-year-olds reporting sex before the age of 15 significantly decreased over time [23]. Among females, in most of countries (8/14), reports of sexual activity were significantly

more common for those with higher levels of education. This however, was not the case with Madagascar and Tanzania, the opposite trend was seen. Among never-married males, no consistent pattern was seen and sex in the past year was significantly associated with higher levels of education in only 3 out of 14 countries [24].

Countries reporting the highest levels of early marriage did not always report the highest levels of early childbearing and vice versa. Importantly, however, this analysis was unable to determine the sequence of these events. It was possible that the high rates of early sex and pregnancy in West Africa mainly happened after marriage, and this may represent a different type of risk than early sex and pregnancy out-of-wedlock there or elsewhere. Males aged 15–19 years were more likely than females to report more than one partner in the previous 12 months in all countries surveyed [25]. Nonetheless, one promising finding of this review was a decrease in reported multiple partners among males in four countries and among females in two countries. Risks associated with various types of partnerships have been the subject of intense debate in the field of HIV prevention [26]. The characteristics of partners and partnerships can be challenging to measure for many reasons, including social desirability bias, limited recall accuracy and difficulties semi-literate populations may have calculating large numbers or averages [11].

2. METHODOLOGY

The study used the quantitative research method with the application of a cross-sectional study design. Participants in this study included 225 adolescents comprising 113 females and 112 males aged 15 -19 years. The study was conducted in a rural district of Chipata in Eastern Zambia. This area was chosen for the study as Chipata of late has reported a lot of of teenage pregnancies making it the right place for a study involving sexual behavior among adolescents. Participants were selected by using Convenient Sampling. A structured interview questionnaire was used to collect data from participants. The questionnaires were written in English but also translated in vernacular whenever necessary during interviews. For data analysis Statistical Package for Social Sciences version 12 (SPSS v 25) was used for data analysis. To find out various factors affecting sexual behavior, cross tabulations were used to examine the relationship between the number of partners

which individual participants had sex with in view of their socio-economic variables. For statistical analysis, chi-square tests of independence were conducted at the bivariate level and the differences were determined at $P < 0.05$ and $P < 0.01$ significance levels. Secondly, factors influencing number of partners having sex were analyzed using logistic regression analysis. The result of the logistic regression models was converted into odds ratios, which represented the effect of a one-unit change in the explanatory variable on the indicator of having sexual behavior.

3. RESULTS

3.1 Sample Characteristics

The majority of the respondents were in the age of 15 (57.8 of males and 51.7% of females); for participants who fell in the 16-19 age bracket, 25.2% were male and 26.3% were female of the sample; those who were above 19 years were 16.8% male and 22% female of the entire sample. 52% of males and 48% of females had completed junior secondary school and 48% of males and 52% of females had completed senior secondary school level of education. The sample further indicates that majority of the respondents were from catholic (40% of males and 35% of females) and Pentecostal (40% of males and 33% of females) faiths. The SDA were 18.7% male and 25.4% female of the participants. Few respondents were part of the Aglican from the sample (0.9% for males and 6.8% for females). (Table 1)

3.2 Patterns of Sexual Behaviour

Overall, the results show that males (22.4%) were more likely to have one sexual partner as compared to their female counterparts (14.4%). Regarding educational level, 27.4% of those with junior secondary education and 8.9% of those with senior secondary education were found to have one sexual partner. Moreover, respondents who did not drink alcohol were more likely to have one partner as compared to those who drank alcohol (drink; 15.3%, do not drink; 27.3%). Respondents who had discussed HIV prevention with someone were more likely (29.2%) to have one partner in comparison with partners who had not discussed HIV with someone (15.3%). 81.8% of the respondents had two or more partners. The results show that females (85.6%) were more likely to report having two or more partners as compared to

their male counterparts (77.6%). Regarding educational level, those with senior secondary education (91.1%) were more likely than those with junior secondary education (72.6%) to have two or more partners. Respondents who drank alcohol (84.7%) were more likely to have two or more partners as compared to those who did not drink alcohol (72.7%) (Table 2)

3.3 Factors Affecting Sexual Behavior

The present study used linear logistic regression analysis to identify factors influencing sexual behaviour by considering socio-demographic factors which was set at 95% Confidence Interval. The results of the logistic regression show that education level, religion, drinking alcohol and having an HIV discussion with someone where strong predictors of having two or more partners among the respondents.

Education was a strong determinant of having one sexual partner among the respondents. Respondents in senior secondary school were 4.7 times more likely to have two or more partners as compared to their junior secondary school counterparts. Furthermore, respondents from catholic were negatively associated with the likelihood of having two or more partners. Drinking alcohol was among the strong predictors of having two or more partners among the respondents. Those who drank alcohol were 2.2 times more likely to report having two or more partners as compared to those who did not drink. Having discussed HIV with someone was among the significant factors that influenced respondents' likelihood of having two or more partners. Those who had discussed HIV with someone were 3.2 times more likely to report having two or more partners as compared to those who did not have an HIV discussion with someone. (Table 3)

Table 1. Sample distribution

	Male%	Female %
Age of the respondents		
15	57.8	51.7
16-19	25.2	26.3
19+	16.8	22.0
Educational level		
Junior Secondary	52.3	48.3
Senior Secondary	47.7	51.7
Religious denomination		
Catholic	40.2	34.7
Anglican	0.9	6.8
SDA	18.7	25.4
Pentecostal	40.2	33.1
Number of sexual partners have had in the last six months		
None	9.3	1.7
One	79.4	80.5
Two	8.4	15.3
Three or more	2.8	2.5
Age at first sex		
15	30.8	32.2
16-19	46.7	35.6
19+	7.5	11.0
Had drunk alcohol		
No	28.0	21.2
Yes	72.0	78.8
Had sexually transmitted diseases in the last three months		
No	99.1	95.8
Yes	0.9	4.2

Table 2. Percentage of number of sexual partners in the past six months

Characteristics	One partner	Two or more partners	N
Sex			
Male	22.4*	77.6*	107
Female	14.4	85.6	118
Age			
<16	17.9	82.1	123
16-19	20.7	79.3	58
19+	15.9	84.1	44
Educational level			
Junior Secondary	27.4**	72.6**	113
Senior Secondary	8.9	91.1	112
Religion			
Pentecostal	23.9	76.1	88
SDA	12.0	88.0	50
Catholic	16.1	83.9	88
Drinks alcohol			
No	27.3**	72.7*	55
Yes	15.3	84.7	170
Have discussed HIV prevention with someone			
No	15.3*	84.7	177
Yes	29.2	70.8	48
	18.2	81.8	225

*** Significant at $P < 0.01$; ** Significant at $P < 0.05$ * Significance at $P > 0.05$

Table 3. Logistic regression analysis data of socio-economic and demographic variables on youths who reported having had sex with two or more sexual partners

Variables	Beta (β)	Standard Error (SE)	Exp (β)	Significant level (P)
Sex				
Male				
Female	0.3116	0.3840	1.3656	0.4171
Age				
<16				
16-19	-0.4715	0.4535		
19+	0.3900	0.5690	0.6241	0.2985
Educational level				
Junior Secondary				
Senior Secondary	1.5487	0.4307	4.7055	0.0003
Religion				
Pentecostal				
SDA	-0.7392	0.5352	0.4775	0.1673
Catholic	-0.7897	0.4421	0.4540	0.0740
Drinks alcohol				
No				
Yes	0.7198	0.4424	2.2027	0.0230
Have discussed HIV prevention with someone				
No				
Yes	0.1536	0.4954	3.1997	0.0032

4. DISCUSSION

In determining whether adolescents were involved in sexual activities, the research findings showed overwhelming involvement of adolescents in sexual activity (93%). There was also a higher percentage of females involved in sexual activity than males, with a small marginal difference. This would be due to females been prone to have sex due to them reaching maturity early compared to their male counterpart. Additionally, most adolescents (40.9%) said they had sex between ages 16 and 19 which is also strongly indicated in the literatures of the ZDHS. The ZDHS [19] for example reported that 56% of women aged between 15 and 24 years had sex before the age of 18 years while 51% for men. Several studies in sub-Saharan Africa have also documented high and increasing pre-marital sexual activities among this very important group of people [4,21,25].

What is however, of greater concern, is the high proportion of respondents who had sex before the age of 16 similar to the findings by WHO [12]. This placed them at greater risk of contracting sexually related infections. They also risked psychological problems because should they be infected at such a young age they would lack adequate social and psychological mechanisms to deal with their infection. Additionally, sexual intercourse at the age of 15 is by law defilement in Zambia which attracts a prison sentence so this sad situation calls for urgent intervention [11].

Moreover, early sexual debut exposes the adolescents over time to higher chances of contracting HIV, especially where higher risk partners or multiple partners are involved, and condom use is less likely to be considered [6]. The lack of awareness and other social pressures and power imbalances can also conspire to put the health of adolescents at risk [16]. In the report by WHO [12] adolescent girls, aged 15–19 years, in sub-Saharan Africa, were more likely than boys to have sex before the age of 15 years. In West and Central Africa, 16% of girls had sex before the age of 15 years compared with 7% of boys, and in South Asia, 8% and 3% of girls and boys, respectively, had sex before the age of 15 years. This was similar to what was found in this study where 16% girls compared to 14.7% boys said they had sex before the age of 16. This is like this somewhat because of cultural practices that have emphasized women as sexual objects, this has

resulted in girls not striving to be the best in activities such as school that may keep them busy thereby making them to be idle most of the time. This idleness makes them to easily engage in sex as a way to be occupied.

Regarding the factors associated with adolescent indulgence in sexual activity, the study found that initiation into sexual activity was a major factor, with 33.3% of respondents giving it as a reason. This was followed by curiosity (27.7%), a need for goods and services (5.6%), intoxication (7.1%), and finally accidental indulgence after experimenting with touching (4.7%). This implies that the external social environment was a significant determinant of sexual behaviour leading to indulging in to sex. Also, the individual's economic status was also a determinant of one's sexual behaviour. In exchange for goods and services, girls especially would engage in sexual activity, most often without protecting themselves. Studies in sub-Saharan Africa with similar findings have been conducted in urban poor communities of Kenya and Ghana where it has been reported early ages at first sex, multiple sexual partnerships, teenage pregnancies, and youth resolving some of their unintended pregnancies with induced abortions. Among the reasons cited is curiosity, intoxication and experimenting with touching [27].

There were very few variations regarding the reasons why adolescents continued to indulge in sex after the first sexual experience. New ideas such as trying to keep a partner faithful, for enjoyment and failure to control sexual desires were brought out. While these were more internal, intervention would also require efforts to change mind-sets induced by culture in these societies. Other determinants found based on logistic regression were sex, education level, religion and having an HIV discussion with someone which were strong determinants of having one partner among the respondents. Logistic regression analysis showed that age predicted a strong likelihood of having one sexual partner. Respondents who were 19 years were negatively associated with likelihood of having one partner.

For religion, catholic faith was negatively associated with the likelihood of having one partner among the respondents, senior secondary school education was also negatively associated with strong likelihood of having one sexual partner among the respondents. This showed that faith and education level has no

association to the sexuality of adolescents. This can be due to faith and senior secondary school education creating a platform where these adolescents mingle hence, increasing the chances of getting along with many partners intimately.

Additionally, having discussed HIV with someone was among the significant factors that influenced respondents' likelihood of having one partner. Those who had discussed HIV with someone were 3.2 times more likely to report having one partner as compared to those who did not have such a discussion with someone. This is because knowledge of HIV does not act as a deterrent to having many partners as this informs them of ways they can prevent themselves from HIV thereby encouraging them that it's not a problem to have many partners as long as the use protection and other protective measures.

5. CONCLUSION

In summary, the research findings revealed overwhelming involvement of adolescents in sexual activity. There were more girls compared to boys that said they had sex before the age of 16. The factors associated with adolescent indulgence in sexual activity, were initiation into sexual activity was a major factor. This was followed by curiosity, a need for goods and services, intoxication and accidental indulgence after experimenting with touching. Also, logistic regression analysis revealed that age predicted a strong probability of having one sexual partner. And respondents who were 19 years were negatively associated with likelihood of having one partner.

6. RECOMMENDATIONS

This study recommends that a specific focus on adolescent sexual reproductive health is required. These efforts should among others concentrate on increasing the knowledge of adolescents and improving their attitudes and behaviours towards sexual behaviour. Such programmes may include increased information, communication and education on comprehensive correct knowledge, positive attitude and behaviour towards HIV and AIDS such as HIV testing and condom use whenever they have sex with their partners. These need to be targeted at specific groups as highlighted in the study findings starting from primary schools onwards to secondary education in order to instil within in

girls and boys from a young age the socially and culturally acceptable behaviours for increased HIV and AIDS prevention. Also, future research with a bigger and more comprehensive participant base is recommended to assess the socio-economic and cultural factors affecting adolescents in their sexual behaviours.

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CONSENT AND ETHICAL APPROVAL

The study was conducted while ensuring that the research ethics are strictly adhered to. The nature and purpose of the study was explained to the research participants before they agreed to take part of the study. Participants were assured of anonymity and confidentiality as no name was entered in the questionnaires; a unique numbering system was applied to represent each individual. It was also ensured that the participants felt a sense of privacy, this was made sure by not following the participants at awkward times for the study and they had the rights to withhold any information they so wished to withhold. They were also informed on their freedom to withdraw from the study at any time without facing any repercussions.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

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