

# Effect of Ethnicity on Risky Sexual Behaviour among Young People in Zambia: A secondary Analysis of the 2018 Demographic and Health Survey

Zodwa Z. Vilakati<sup>1,2</sup>, Maswati S. Simelane<sup>1</sup>

<sup>1</sup>Department of Statistics and Demography, University of Eswatini

<sup>2</sup>Department of Population Studies, University of Zambia, Lusaka, Zambia

**\*Corresponding Author:** Zodwa Z. Vilakati, Department of Population Studies, University of Zambia, Lusaka, Zambia

**Abstract:** Evidence suggests that young people in Sub Saharan Africa engage in risky sexual behaviours. This paper seeks to investigate the ethnic variations and effect of ethnicity on risky sexual behaviours among young people in Zambia. Data was sourced from the 2018 Zambia Demographic and Health Survey (ZDHS). Bivariate and Multivariate analysis were undertaken to investigate the effects of ethnicity on risky sexual behaviours (early sexual debut, multiple partners, condom use). Overall, the prevalence of risky sexual behaviour in 2018 was 32.4%. The model showed no statistical association between ethnicity and risky sexual behaviours. However, higher odds of risky sexual behaviour were observed among young people from some major ethnic groups namely Kaonde (AOR=1.56, 95% CI:0.67, 3.63), Lunda (AOR=1.44, 95% CI:0.61, 3.39), Luvale (AOR=1.20, 95% CI:0.55, 2.62) and Tonga (AOR=1.21, 95% CI:0.56, 2.59). Among the control variables age, gender, education level, current work status, household wealth and region of residence were associated with risky sexual behaviour. The study findings revealed that among young people ethnicity does not matter in explaining risky sexual behaviour in Zambia, rather a number of the control variables were found to be significantly associated with risky sexual behaviour. Therefore, interventions should take into consideration the control factors found to be important in this study.

**Keywords:** Risky sexual behaviour, adolescents, ethnicity, Zambia

## 1. INTRODUCTION

The period of adolescence is one whereby different aspects of development and transformation happen. In addition, this stage is regarded as one where a lot of experimentation happen, some of which may lead to risky sexual behaviours which in turn result in negative health outcomes. Risky sexual behaviours in adolescence result in immediate negative outcomes such as Sexually Transmitted Infections (STIs), teenage pregnancy, unsafe abortions, and maternal deaths. The negative outcomes tend to have a bearing on the future of adolescents. It is for this reason that an understanding of sexual behaviour both in early and late adolescence has become important and in recent years a significant number of research studies have focused on this area.

The increase in the number of adolescents engaging in risky sexual behaviours has been accompanied by a corresponding increase in adolescents infected with sexually transmitted infections including HIV/AIDS as well as increases in unintended pregnancies and unsafe abortions. There is evidence to suggest that adolescent sexual involvement and pregnancy are related to other behaviours that may constitute a 'syndrome' of risk behaviours[1]. These risk behaviours that are associated with the early onset of sexual intercourse include smoking, alcohol use, drug use, school suspension, theft and violence[1,2,3,4].

Several studies have documented the association between ethnicity and indicators of risky sexual behaviour among adolescents[5,6,7]. Worth noting is the fact that the effects of race and ethnic differences which are explained in subgroups attitudes and norms are interwoven with other factors that have been found to influence risky sexual behaviour such as peer influence and neighbourhood quality[6].

The level of influence of adolescent sexual risk taking varies according to the different influencing factors. A cross-sectional study among adolescent girls in Petauke District revealed that 64% of sexually active girls had engaged in unsafe sexual activity[8]. Another cross-sectional survey of undergraduate students at the University of Zambia found that 7% of males and 18% of females had more than two sexual partners in the year preceding the survey[9]. It was also found in another study that a significant proportion of females (56%) had sex before the age of 18 with only a small proportion having used a condom at first sexual encounter[10].

In Sub Saharan Africa (SAA) ethnicity is considered to be one of the significant factors influencing risky sexual behaviour. In countries where such studies have been conducted, it was found that ethnic origin and ethnic concentration in communities can influence young people in decisions pertaining to engaging in risky sexual behaviours[5,6]. Even though a number of studies have been conducted on sexual behaviour among young people in Zambia, none have specifically focused on the relative influence of ethnicity on risky sexual behaviour. This study, therefore, aims to contribute to the limited existing literature in this subject not only in Zambia but in the SSA region. In addition, the results will aid in the formulation of sexual and reproductive health interventions that are community level-specific as it is evident that the major ethnic tribes are concentrated in specific provinces.

### **1.1. Country Context**

Zambia is one of the countries in SSA with diverse ethnicity denoted by a total of 72 ethnic groups. The majority of the population of about 15 million belongs to the 9 major ethnic groups namely; the Nyanja-Chewa, Bemba, Tonga, Lozi, Tumbuka, Lunda, Luvale, Kaonde and Nkoya. In addition, the country has in recent years experienced an influx of people from Asia some of whom have permanently settled in the country. The largest ethnic group is the Bemba which originally hails from the Northern and Luapula Provinces in Zambia. The Bemba are regarded as one of the most politically influential communities in modern-day Zambia because of their population and their role in the British Colonial system. The ethnic Bemba constitute 20% of the population but the Bemba language is spoken by 25% of the Zambian population. The second leading group is the Nyanja comprising about 12% of the population. It is asserted that Nyanja is not an originally ethnic group but the language is spoken among a number of groups from the Eastern Province and in the Lusaka province in particular [11]. Regarding the composition of the other major ethnic groups, Tonga accounts for 12% and are mostly found in the Southern province while the Lozi comprise about 5.6% and is found in the Western Province. The Lunda ethnic group originates from the Luapula province while the Luvale dominates the North Western Province[11].

Various forms of rituals and customs are practised in Zambia. Most of the rituals are conducted amongst girls than boys. The coming of age ritual is maintained virtually amongst all Zambian ethnic groups in the case of young girl children while for boy children the circumcision ritual referred to as Mukanda, is conducted to mark the transition from childhood to adulthood. This ritual is commonly practised among the Luvale ethnic group [12]. For young girls, these rituals and ceremonies take place around the age of menarche (12 or 13). These ceremonies are also conducted for older girls to prepare for marriage and teach them sexual techniques aimed at pleasing their partners. A previous research study reported that 43% of adolescents from the Nyanja, Bemba, Tonga and Lozi ethnic tribes had attended such a ceremony before the age of 15[12]. The rituals are conducted in both rural and urban communities across all the major ethnic tribes. In some instances, the girls are sent back to the villages to adhere strictly to the traditions.

Among girls and boys aged 15-24, the HIV prevalence rate is estimated to be 5.6% and 1.8% respectively[13]. Despite efforts made by the government and other organizations focusing on the sexual health of young people, evidence does suggest that young people engage in risky sexual behaviour[8,9,10]. The diversity in ethnicity of the Zambian population results in a mix of values, cultural norms and traditions that influence many aspects of the population yet they are difficult to measure. Henceforth ethnicity is considered as a proxy for the various cultural norms and values.

## **2. METHODS**

### **2.1. Study Design and Data Source**

This study adopted a cross-sectional secondary analysis of the 2018 Zambia Demographic and Health Survey (ZDHS). The DHS is a nationally representative survey that collects information on

respondents' socio-economic and demographic characteristics, sexual health and behaviour, HIV prevention knowledge and attitudes and HIV status testing.

## **2.2. Sampling Design and Study Sample**

The ZDHS employed a two-stage stratified sampling technique whereby the first stage involved the selection of Enumeration Areas (EAs) applying a probability proportional to size sampling technique. The 2018 ZDHS was based on the Zambia Population and Housing Census of 2010. The list of EAs that was used as the sampling frame for the 2018 ZDHS provides information on households and population counts (ZDHS 2018). Secondly, an average number of 133 households were found in each EA of which a fixed number of 25 households were selected in each EA.

The young people aged 15-24 were selected for the analysis. Only those that reported having ever engaged in sexual activity were included in the analysis. The DHS survey comprised a sample of 4771 young people aged 15-24 who reported to have ever had sexual intercourse. However, after data cleaning, only 3409 were included in the analysis with complete data on risky sexual behaviour and other characteristics of the variables used in the study.

## **2.3. Study Variables**

*Response (outcome) variable:* The outcome of interest for this study is risky sexual behaviour. It was measured by combining three risky sexual behaviour indicators namely; age at sexual debut, total lifetime number of sexual partners and condom use at first sexual intercourse [14,15,16,17]. The outcome was coded 1 if the young people practised the risky sexual behaviour from any of the three sexual behaviour indicators and 0 if did not practice risky sexual behaviour.

*Main Exposure variable:* The main exposure variable for this study is ethnicity. For this study, the primary language that was recorded during the DHS was used to classify the respondents into various ethnic groups. This serves as a proxy measure for ethnicity [5,18,19].

*Control variables:* Based on literature[6,10,20,21] several variables were used as control variables in the analysis. The control variables included: Age categorised as 15-19 and 20-24; Religion categorised as Catholic, Protestant, Muslim, Other; Place of residence: Rural and Urban; Current work status: currently working and not working; Household wealth index categorised as Lowest, Second, Middle, Fourth, and Highest. This index is estimated by assigning a score to a household based on ownership of goods and housing characteristics.

## **2.4. Statistical Analysis**

STATA 13 was used to carry out the statistical analysis. First descriptive analysis was undertaken to provide background information about the young people. Bivariate analysis was then employed to ascertain the relationship between risky sexual behaviours and ethnicity. Pearson Chi-square test of independence was used to determine the association. Lastly, a multivariable analysis was conducted to assess the effect of ethnicity on risky sexual behaviour. This involved the application of the logistic regression models while adjusting for confounding variables. The model results were reported as adjusted odds ratios (AOR) at a 95% confidence interval (95% CI).

## **3. RESULTS**

### **3.1. Sample Characteristics**

Weighted descriptive statistics for the sexually active sample are shown in Table 1. Of the total sample (4771) of the young people, a majority (54.35%) were males. About eight in ten of the young people were Protestant whilst only 0.21% were Muslim and six in ten had higher education level vs. 2.41% young people with no education level. A quarter of the young people were from the richest households while only 13.6% were from the poorest households.

A majority (60%) of the respondents resided in rural areas. In terms of ethnicity, a significant distribution of young people was observed, with a substantial proportion (36.28%) being Bemba while only 6.83% were from other tribes. The sample was almost equally distributed by age and region of residence. For example, there were 50.79% young people aged 15-19 vs. 49.30% aged 20-24. Table 1 below shows the sample distribution.

**Table1.** *Sample distribution of respondents, ZDHS, 2018*

Variable	Frequency	Percent
	N	%
<b>Age</b>		
15-19	2,419	50.7
20-24	2,352	49.3
<b>Gender</b>		
Female	2,178	45.65
Male	2,593	54.35
<b>Education level</b>		
None	136	2.85
Primary	1,624	34.04
Secondary	2,839	59.51
Higher	172	3.61
<b>Religion</b>		
Catholic	869	18.21
Protestant	3,858	80.86
Muslim	10	0.21
Other	34	0.71
<b>Household wealth index</b>		
Poorest	519	13.6
Poorer	653	16.9
Middle	750	21.0
Rich	684	22.2
Richest	803	26.3
<b>Ethnicity</b>		
English	115	2.41
Bemba	1,731	36.28
Kaonde	170	3.56
Lozi	460	9.64
Lunda	203	4.25
Luvale	208	4.36
Nyanja	859	18.0
Tonga	699	14.65
Other	326	6.83
<b>Place of residence</b>		
Urban	1,905	39.93
Rural	2866	60.07
<b>Region/Province</b>		
Central	474	9.94
Copperbelt	492	10.31
Eastern	553	11.59
Luapula	516	10.82
Lusaka	518	10.86
Muchinga	306	6.41
Northern	349	7.32
North Western	504	10.56
Southern	529	11.09
Western	530	11.11

**Source:** *Authors' analysis of 2018 Zambia DHS*

### **3.2. Prevalence of Risky Sexual Behaviour**

Overall, the prevalence of risky sexual behaviour was 32.4% in 2018. This is shown in Figure 1 below.

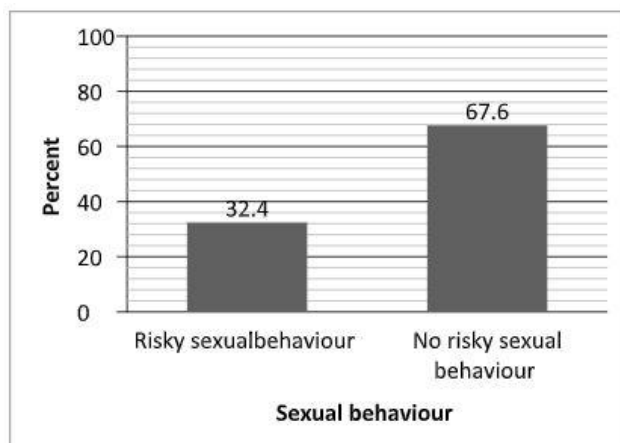


Figure 1. Prevalence of risky sexual behaviour among young people in 2018 in Zambia

Source: Authors' calculation based on analysis of the 2018 Zambia DHS

### 3.3. Bivariate Analysis

Table 2 shows the results of the relationship between ethnicity and risky sexual behaviours. Overall the distribution of risky sexual behaviours by ethnic group shows a significant difference. A significantly high proportion of young people who were Bemba (31.8%), Nyanja (21.3%) and Tonga (16.9%) engaged in sexual intercourse before the age of 18 years,  $p=0.002$ . In addition to these three ethnic groups, Lozi, Kaonde, Lunda and Luvale had a significant number of adolescents who engaged in early sexual debut compared to those who were above 18 years. About three in ten young people from the Bemba ethnic group had two or more sexual partners, 21.5% from Nyanja and 16.9% from Tonga and Lozi (9.6%), while the other ethnic groups had a significantly lower proportion of young people having two or more sexual partners. For example, only 1.9% of the native English speaking group practised multiple sexual partnerships,  $p=0.001$ . Even though there was no significant difference among the ethnic groups concerning condom use at first sex ( $p=0.069$ ), young people from Bemba (33.2%), Nyanja (20.9%), Tonga (15.7%) and Lozi (9.3%) did not use a condom at first sex while only 2.1% of the sexually active native English speaking group did not use a condom at first sexual intercourse.

Table 2. The relationship between ethnicity and the risky sexual behaviours

Ethnicity	Age at first sex			Number of sexual partners			Condom used at first sexual intercourse		
	Less than 18 years	18 years and above	P-value	One	two or more	P-value	Yes	No	P-value
English	51 (1.9)	19 (2.2)	0.002	31 (2.1)	39 (1.9)	0.001	24 (1.8)	46 (2.1)	0.069
Bemba	841 (31.8)	334 (38.7)		556 (37.6)	619 (30.6)		432 (34.3)	743 (33.2)	
Kaonde	119 (3.9)	21 (3.0)		37 (2.5)	103 (4.6)		33 (2.8)	107 (4.2)	
Lozi	289 (9.7)	50 (6.0)		118 (7.7)	221 (9.6)		109 (7.9)	230 (9.3)	
Lunda	147 (3.7)	20 (1.9)		43 (2.1)	124 (4.1)		41 (2.1)	126 (3.9)	
Luvale	144 (4.3)	22 (2.1)		44 (2.5)	122 (4.6)		42 (2.7)	124 (4.4)	
Nyanja	457 (21.3)	169 (24.3)		278 (22.9)	348 (21.5)		260 (24.1)	366 (20.9)	
Tonga	388 (16.9)	115 (15.7)		216 (16.9)	287 (16.4)		187 (18.1)	316 (15.7)	
Other	170 (6.5)	53 (6.0)		91 (5.8)	132 (6.8)		77 (6.3)	146 (6.4)	

Source: Authors' analysis of 2018 Zambia DHS

### 3.4. Multivariate Analysis

#### Association of Ethnicity with Risky Sexual Behaviour Controlling for Other Factors

Table 3 shows the unadjusted and adjusted effects of ethnicity on risky sexual behaviour among young people. In the crude models, there was no significant association between ethnicity and risky sexual behaviour. Among the confounding variables age, gender, education, current working status, household wealth index, and region of residence were associated with risky sexual behaviour.

Even after controlling for the confounding variables ethnicity was not significantly associated with risky sexual behaviour. Among the control variables, higher odds of risky sexual behaviour were observed among young people aged 20-24 (AOR: 1.46; 95% CI: 1.20, 1.78) compared to those aged 15-19. Similarly, males were 76% more likely to practice risky sexual behaviour (AOR: 1.76; 95% CI: 1.46, 2.13) compared to their female counterparts. Compared to young people who had higher education, higher odds of risky sexual behaviour were observed among those who had no education (AOR: 6.16; 95%CI: 3.05, 12.45), primary (AOR: 8.12; 95% CI: 4.18, 15.77) or secondary (AOR: 3.92; 95% CI: 3.92,7.54). Young people who were currently not working were 20% less likely to practice risky sexual behaviour (AOR:0.80; 95%CI: 0.64, 0.99) compared to those that were currently working during the time of the survey. The practice of risky sexual behaviour was more common among young people from the poorest (AOR: 1.78; 95%CI: 1.20, 2.63), and poor (AOR: 1.45, 1.02, 2.07) households compared to those from the richest households. Higher odds of risky sexual behaviour were observed among young people from Luapula (AOR: 1.69;95%CI:1.03,2.79); North West (AOR:2.31;95%CI: 1.39,3.85) and Western regions (AOR:2.14;95%CI:1.29,3.55).

**Table3.** *Effects of ethnicity and other factors associated with risky sexual behaviour*

Variable	OR(95%CI)	P-value	AOR(95%CI)	P-value
<b>Ethnicity</b>				
English	1.00		1.00	
Bemba	1.05 (0.54,2.05)	0.869	0.85 (0.42,1.71)	0.649
Kaonde	2.44 (1.10,5.38)	0.028	1.56 (0.67,3.63)	0.307
Lozi	1.62 (0.81,3.23)	0.169	0.81 (0.37,1.76)	0.597
Lunda	2.91 (1.32,6.43)	0.008	1.44 (0.61,3.39)	0.408
Luvale	2.55 (1.27,5.10)	0.008	1.20 (0.55,2.62)	0.648
Nyanja	1.15 (0.58,2.29)	0.68	0.96 (0.47,1.97)	0.909
Tonga	1.32 (0.66,2.63)	0.438	1.21 (0.56,2.59)	0.625
Other	1.46 (0.68,3.13)	0.328	1.11 (0.50,2.45)	0.800
<b>Age</b>				
18-19	1.00		1.00	
20-24'	0.99(0.82,1.19)	0.878	1.46(1.20,1.78)	<0.001
<b>Gender</b>				
Male	1.32,1.91)	<0.001	1.76 (1.46, 2.13)	<0.001
Female	1.00		1.00	
<b>Education level</b>				
No education	7.69(3.93,15.08)	<0.001	6.16(3.05,12.45)	<0.001
Primary	8.65(4.52,16.55)	<0.001	8.12(4.18,15.77)	<0.001
Secondary	4.09(2.13,7.83)	<0.001	3.92(2.04,7.54)	<0.001
Higher	1.00		1.00	
<b>Religion</b>				
Christian	1.00		1.00	
Protestant	1.03 (0.84,1.26)	0.775	0.91 (0.73,1.14)	0.401
Muslim	1.27 (0.13,12.90)	0.837	1.22 (0.09,15.69)	0.880
Other	1.56 (0.65,3.74)	0.323	1.41 (0.53,3.73)	0.493
<b>Currently working</b>				
Yes	1.00		1.00	
No	1.85 (0.70,1.03)	0.102	0.80 (0.64,0.99)	0.044
<b>Wealth Index</b>				
Poorest	3.20 (2.34,4.38)	<0.001	1.78 (1.20,2.63)	0.004
Poorer	2.31 (1.72,3.09)	<0.001	1.45 (1.02,2.07)	0.039
Middle	1.89 (1.42,2.52)	<0.001	1.35 (1.00,1.82)	0.048
Richer	1.25 (0.92,1.71)	<0.001	1.09 (0.78,1.50)	0.620
Richest	1.00		1.00	1.00
<b>Place of residence</b>				
Rural	1.86 (1.51,2.30)	<0.001	0.95 (0.73,1.22)	0.670
Urban	1.00		1.00	

Region/Province				
Central	1.00		1.00	
Copperbelt	0.73 (0.46,1.18)	0.204	1.06 (0.64,1.75)	0.828
Eastern	1.25 (0.80,1.94)	0.325	0.98 (0.56,1.73)	0.958
Luapula	1.56 (0.98 (2.48)	0.063	1.69 (1.03,2.79)	0.039
Lusaka	0.75 (0.50,1.13)	0.164	1.03 (0.66,1.59)	0.908
Muchinga	0.82 (0.50,1.35)	0.437	0.91 (0.51,1.60)	0.734
Northern	1.07 (0.65,1.76)	0.802	1.11 (0.64,1.93)	0.711
North Western	2.68 (1.81,3.97)	<0.001	2.31 (1.39,3.85)	0.001
Southern	1.09 (0.69,1.74)	0.708	1.03 (0.61,1.76)	0.900
Western	2.12 (1.41,3.19)	<0.001	2.14 (1.29,3.55)	0.003

Model fit: 05919

Notes: OR- Odds Ratios, CI- Confidence Interval

Source: Authors' analysis of 2018 Zambia DHS

#### 4. DISCUSSION

The objective of this paper was to investigate the relative influence of ethnicity on risky sexual behaviour amongst young people using the 2018 Zambia Demographic and Health Survey. This study found a prevalence of 32.4% of young people who engaged in risky sexual behaviour. These findings are consistent with studies conducted within the country [10,22]. Findings from other studies conducted in other African countries also confirm the assertion that young people engage in sexual activity at a relatively young age [23,24,25]. It is evident that despite the interventions put in place to prevent early sexual initiation and associated outcomes, adolescents continue to engage in early sexual activity. A possible explanation behind this could be the cultural traditions and customs that celebrate the transition to adulthood at a relatively young age, more especially for girl children. This could be perceived by some adolescents as a ticket to engaging in sexual activity.

The findings also revealed that more than half of the sexually active youth had two or more partners. The findings from our study are comparable with other studies conducted elsewhere [22,26,27,28]. A majority of the young people who engaged in multiple sexual partnerships compared to those who had one sexual partner came from the Lozi, Luvale, Lunda, and Kaonde ethnic groups. Condom use at first sexual encounter was found to be remarkably low at 35.3%. Even though our study focused on condom use at sexual debut, the findings are consistent with those of other studies that investigated condom use at last sex [12,22,29,30].

Only three of the major ethnic groups (Bemba, Nyanja and Tonga) had a large number of young people who used condoms compared to those who did not. A possible reason behind this could be the fact that at a young age the focus is on experimentation and therefore risks associated with sexual activity could be the last thing to worry about among adolescents. Another possible reason could be the fear to negotiate for safe sex particularly among young girls in patriarchal societies where males dominate in decision making. This emphasizes the need for preventive measures to be scaled up to match with the sex education programmes. This should be done to ensure that safe sex education also translates to safe sexual practices among adolescents and young adults.

The results from our bivariate analysis revealed notable ethnic variations in risky sexual behaviour. The results are in line with those of studies conducted elsewhere in the continent using DHS survey data. For example, a study in Nigeria found significant variations in sexual behaviour within ethnic groups [6]. Evidence from another study conducted in Zimbabwe also revealed ethnic and gender-specific variations in sexual behaviour [5]. Even though some studies conducted in the African continent [5,6,7] have found a significant effect of ethnicity on risky sexual behaviour, our analysis did not find a significant effect of ethnicity on the sexual behaviour of young people in Zambia. It should be noted that no studies to date have documented the effect of ethnicity on risky sexual behaviour in Zambia. Perceptions about sexual beliefs and practices are greatly influenced by socio-cultural norms and traditions especially in societies where there is a high level of heterogeneity among ethnic groups [7]. Thus it is no surprise that some studies established the association of ethnicity with risky sexual behaviour.

Despite the lack of confirmation about the possible effect of ethnicity on risky behaviour among Zambian adolescents, socio-economic predictors of risky sexual behaviour were identified. Education level, wealth status and region were significantly associated with the likelihood to engage in risky sexual behaviour. These findings are comparable with results from other studies [5,8,23,29]. Young people with higher education were less likely to engage in risky sexual behaviour. Schooling is considered to be a protective factor against risky behaviours hence the more years spent in school, the more likely the probability of abstinence and less risky behaviours. Respondents from wealthy households had a lower likelihood of engaging in risky sexual behaviour compared to those from poor households. A possible explanation could be that in communities where the majority of the population lives in rural areas characterised by low-socioeconomic status, poverty levels tend to be high. As a result young people particularly girls, are vulnerable and become targets of sexual exploitation. These unfortunate circumstances force girls to resort to casual sex in exchange for money to afford basic necessities.

Young people from the North West and Western regions/provinces were more likely to engage in risky sexual activity. These regions are dominated by the Lozi, Luvale and Lunda ethnic groups. It is worth mentioning that these are the same ethnicities that were found to have a significant number of young people engaging in risky sexual practices in the form of multiple sexual partnerships and early sexual debuts. These provinces are characterised by a predominantly rural population and uphold the cultural and traditional values, norms and practices. It is asserted that the environment within which people live will influence the behaviours that are prevalent in that particular area. Worth noting is that the culture in Zambia discourages parent-child communication on sexual matters[12]. It is deemed inappropriate and undermines traditional values. The need for targeted safer sex practices and behavioural change interventions therefore cannot be overemphasized. These should be specific to the communities concerned.

## **5. CONCLUSION**

Our study has demonstrated that risky sexual behaviour is a significant public health problem in Zambia. However this study findings indicated that among young people ethnicity does not matter in explaining risky sexual behaviour in Zambia, rather a number of the control variables were found to be significantly associated with risky sexual behaviour such as age, gender, education level, currently working, household wealth index and region of residence. We encourage further research to be conducted to authenticate our findings since we used cross-sectional data that may suffer from temporal limitation on causality.

## **6. STUDY LIMITATIONS**

There are certain limitations on our study that need to be pointed out. Firstly, due to the cross-sectional nature of the survey design, we cannot make conclusions about causal relationships from the findings of the study. Secondly, it would have been beneficial to analyze by gender stratification to allow for in-depth analysis of variations by gender. Lastly, self-reported sexual behaviours may result in over-reporting or under-reporting which may result in a bias in results.

## **ACKNOWLEDGEMENTS**

The authors would like to thank Measure DHS for permission to use the 2018 Zambia Demographic and Health Survey dataset.

## **DECLARATION OF INTERESTS**

The authors have no financial or personal relationships that might bias this work. This work was done under the Population Studies Doctoral Programme in the Department of Population Studies, University of Zambia.

## **AVAILABILITY OF DATA AND MATERIAL**

The dataset is available upon request from Measure DHS.



## REFERENCES

- [1] Moore J, Harrison JS, Kay KL, Deren S, Doll LS. Factors associated with Hispanic women's HIV-related communication and condom use with male partners. *AIDS Care* 1995;7(4):415–428.
- [2] Donovan JE, Jessor R. Structure of problem behaviour in adolescence and young adulthood. *J Consult ClinPsychol* 1985;53(6):890.
- [3] Hayes CD. *Risking the future: Adolescent sexuality, pregnancy, and childbearing*. 1987;
- [4] Fullerton D. Promoting positive adolescent sexual health and preventing teenage pregnancy: A review of recent effectiveness research. -3862 2004;
- [5] Sambisa W, Curtis SL, Stokes CS. Ethnic differences in sexual behaviour among unmarried adolescents and young adults in Zimbabwe. *J BiosocSci* 2010;42(1):1.
- [6] Odimegwu C, Somefun OD. Ethnicity, gender and risky sexual behaviour among Nigerian youth: an alternative explanation. *Reprod Health* 2017;14(1):1–15.
- [7] Akwara PA, Madise NJ, Hinde A. Perception of risk of HIV/AIDS and sexual behaviour in Kenya. *J BiosocSci* 2003;35(3):385.
- [8] Menda MD. Assessment of sexual behaviour and knowledge of HIV amongst adolescent schoolgirls in a rural district in Zambia. 2006;
- [9] Menon JA, Mwaba SO, Thankian K, Lwatula C. Risky sexual behaviour among university students. *Int STD Res Rev* 2016;1–7.
- [10] Kusanthan T, Mapoma C. Gender Differentials in Primary Sexual Abstinence among the Youth in Zambia. *Arch Curr Res Int* 2018;1–10.
- [11] Taylor SD. *Culture and customs of Zambia*. Greenwood Publishing Group, 2006;
- [12] Butts SA, Parmley LE, Alcaide ML, et al. Let us fight and support one another: adolescent girls and young women on contributors and solutions to HIV risk in Zambia. *Int J Womens Health* 2017;9:727.
- [13] Zambia Statistics Agency, Ministry of Health (MOH) Zambia, and ICF. *Zambia Demographic and Health Survey 2018*. Lusaka, Zambia, and Rockville, Maryland, USA: Zambia Statistics Agency, Ministry of Health, and ICF 2019;
- [14] Ajaero CK, Onuh JC, Amoo EO, Adewoyin Y. Contextual Correlates of Risky Sexual Behavior Among Migrant and Non-Migrant Men in Nigeria. *SAGE Open* 2020;10(2):2158244020919532.
- [15] González RP, Kadengye DT, Mayega RW. The knowledge-risk-behaviour continuum among young Ugandans: what it tells us about SRH/HIV integration. *BMC Public Health* 2019;19(1):1–10.
- [16] Ziraba A, Orindi B, Muuo S, et al. Understanding HIV risks among adolescent girls and young women in informal settlements of Nairobi, Kenya: Lessons for DREAMS. *PLoS One* 2018;13(5):e0197479.
- [17] Letamo G, Mokgathe LL. Predictors of risky sexual behaviour among young people in the era of HIV/AIDS: evidence from the 2008 Botswana AIDS Impact Survey III. *Afr J Reprod Health* 2013;17(3):169–181.
- [18] Mesenburg MA, Restrepo-Mendez MC, Amigo H, et al. Ethnic group inequalities in coverage with reproductive, maternal and child health interventions: cross-sectional analyses of national surveys in 16 Latin American and Caribbean countries. *Lancet Glob Health* 2018;6(8):e902–e913.
- [19] Salamonson Y, Andrew S. Academic performance in nursing students: Influence of part-time employment, age and ethnicity. *J Adv Nurs* 2006;55(3):342–349.
- [20] Fetene N, Mekonnen W. The prevalence of risky sexual behaviors among youth center reproductive health clinics users and non-users in Addis Ababa, Ethiopia: a comparative cross-sectional study. *PLoS One* 2018;13(6):e0198657.
- [21] Wakasa BF, Oljira L, Demena M, Regassa LD, Daga WB. Risky sexual behaviour and associated factors among sexually experienced secondary school students in Guduru, Ethiopia. *Prev Med Rep* 2021;23:101398.
- [22] Ndubani P, Höjer B. Sexual behaviour and sexually transmitted diseases among young men in Zambia. *Health Policy Plan* 2001;16(1):107–112.
- [23] Madise N, Zulu E, Ciera J. Is poverty a driver for risky sexual behaviour? Evidence from national surveys of adolescents in four African countries. *Afr J Reprod Health* 2007;11(3):83–98.
- [24] Adongo, B.W. Assessing factors influencing early sexual initiation among adolescents (13 to 19 years) in Ghana: A qualitative study. *International Journal of Caring Sciences* 2018; 11(1), 53-60.

- [25] Srahbzu M, Tirfeneh E. Risky Sexual Behavior and Associated Factors among Adolescents Aged 15-19 Years at Governmental High Schools in Aksum Town, Tigray, Ethiopia, 2019: An Institution-Based, Cross-Sectional Study. *BioMed Res Int* 2020;2020.
- [26] Dahal GP, Hennink M, Hinde A. Risky sexual behaviour among young men in Nepal. 2005;
- [27] Sandøy IF, Michelo C, Siziya S, Fylkesnes K. Associations between sexual behaviour change in young people and decline in HIV prevalence in Zambia. *BMC Public Health* 2007;7(1):1–16.
- [28] Wirsiy FS, Nsagha DS, Njajou OT, Besong JB. Prevalence and Associated Risk Factors of HIV among Pregnant Adolescents and Adolescent Mothers in the Kumbo West Health District of Cameroon. *J Infect Dis Epidemiol* 2019;5(10).
- [29] Hallman K. Gendered socioeconomic conditions and HIV risk behaviours among young people in South Africa. *Afr J AIDS Res* 2005;4(1):37–50.
- [30] Kayeyi N. Trends in HIV Prevalence and Sexual Behaviour among Young People in Zambia: geographical and socioeconomic differentials. 2013;

### **AUTHORS' BIOGRAPHY**



**Zodwa Z. Vilakati**, is a Demography/Population Studies lecturer at the University of Swaziland (Eswatini). She obtained her post graduate degree from the prestigious London School of Economics and Political Science (LSE). She is passionate about issues pertaining to Sexual Reproductive Health (SRH), particularly adolescent health. This interest was cultivated during her engagement in Non-Governmental Organisations that focus on SRH and HIV/AIDS programmes in Eswatini. This passion is also evident in way of the research she is currently undertaking in fulfilment of the requirements for her Ph.D study at the University of Zambia that focuses on adolescent risky sexual behaviours in Zambia. Her research interests include (but not limited to) sexual reproductive health, gender, fertility and mortality.



**Dr Maswati S. Simelane**, is a Lecturer and Head of Statistics and Demography Department at the University of Eswatini. His specialization is in Demography and Population Studies. He has over 10 years of experience in research in both quantitative and qualitative methodologies rooted in Demography and Population Studies, Epidemiology, Public Health, and Biostatistics. He has worked for several research organizations to develop research protocols, standard operating procedures, study implementation, data management procedures, data cleaning, analysis, and interpretation of results. He has contributed immensely in consultancy work for several organizations, under the HIV, TB, Lung cancer, and socio-behavioral studies for the past 10 years. Dr Simelane also serves in several committees both at the University and National. He has authored several research papers published in various international journals.

**Citation:** *Zodwa Z. Vilakati & Maswati S. Simelane. "Effect of Ethnicity on Risky Sexual Behaviour among Young People in Zambia: A secondary Analysis of the 2018 Demographic and Health Survey" International Journal of Humanities Social Sciences and Education (IJHSSE), vol 8, no. 12, 2021, pp. 23-32. doi: <https://doi.org/10.20431/2349-0381.0812003>.*

**Copyright:** © 2021 Authors. This is an open-access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.