Is Household wealth associated with consistent condom use among young women (15-35) in Zimbabwe?

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ABSTRACT

Zimbabwe is the highest consumer of condoms in Africa, however people still report not using condoms if they are in multiple partnerships or living with HIV/AIDS. Evidence is lacking on the influence of household wealth on consistent condom use among young women in Zimbabwe. Logistic regression models were used to analyze a sample of 5214 women (15-35) who reported the use of condom during sexual intercourse with the most recent partner 12 months before the survey. Twenty two percent of the female respondents reported to be consistent condom users. It emerged from the study that household wealth is a significant predictor of consistency of condom use. In addition to condom distribution in Zimbabwe, correct and consistent condom use should be encouraged. Some of the SDGs entail eradicating poverty and ensuring healthy lives for all, therefore there should be programs aimed at empowering young women to improve their living standards.

INTRODUCTION

Condom use is a very important measure of protection against HIV/AIDS and other sexually transmitted infections. While no measure is 100 percent effective correct and consistent use of condoms can widely reduce the risk of HIV transmission (USAID, 2019). Globally condom use prevalence is low among women as compared to males. Condom use varies widely among different sub-sectors of the population and in different contexts. According to Worldbank(2019) Jamaica has the highest condom use rate 66% while Niger has the lowest use of about 0.6%. Unprotected sexual intercourse is the most common route of HIV infections for young people. It may be due to lack of correct knowledge about HIV and how to prevent it. Therefore, condom use among young people and adolescents remains relatively low. For instance, Demographic and Health Surveys conducted among sub-Sahara African countries between 2010 and 2015 indicated that, less than 60% of young women (15-24 years) with multiple partners used a condom during their last sexual act, similar results for young men in 15 out of 23 countries (Avert, 2019).

Several studies have found condom use to be associated with age, marital status, education, being exposed to media and wealth. For instance a study on predicting condom use in young women in Brazil (Miranda, Figueiredo, McFarland, Schmidt, & Page, 2011), found that marital status, being previously diagnosed with an STI and being a commercial sex worker were significantly associated with condom use at last sex. A study on the analysis of predictors of consistent condom use among adolescent girls in Ivory Coast by (Metahan, 2019), found matrimonial status, educational level and household wealth to be significantly associated with condom use. According to the Demographic and Health survey comparative report 6, household wealth is basically ownership of items such as television, car, radio, refrigerator, electricity and others (Rutstein & Johnson, 2019).

Coming from a poor household is one of the key factors that influence the exposure of both men and women to the risk of contracting HIV/AIDS because they engage in risky sexual behaviours like having unprotected sexual intercourse, engaging in multiple concurrent relationships. For instance, a study on the dimensions of poverty and inconsistent condom use among youth in Kenya by (Davidoff-Gore, Luke, & Wawire, 2011) found that young men and women living in households with lower levels of wealth were more likely to inconsistently use and never use a condom compared to those in wealthiest households.

In Zimbabwe the small house practice is very common, with economic hardships in the country women tend to view rich men as a mechanism to subsidize their income. Zimbabwe is the highest consumer of condoms in the world, with 100 million male and 5.2 female condoms distributed in 2013 (Mahon, Azgad, Edmans, & Moss, 2019). Despite that people tend to report not using condoms if they are in multiple partnerships or if they are living with HIV/AIDS. In addition, inconsistent condom use has also been reported. A study on the declining prevalence of HIV in Eastern Zimbabwe found out that there is increased condom use among women with casual partners than with regular partners (Gregson, et al., 2006). Gender roles and power dynamics make it difficult for women to discuss about issues of sex or HIV and to refuse sex without a condom. Men argue that since they pay bride pride price, they should get maximum satisfaction from sexual intercourse, as a result women do not have the power to make decisions on condom use with their partners because they are economically dependent on their partners. With that, women are forced to the risk of contracting HIV/AIDS in order to avoid the economic hardships.

Although a number of studies on condom use among young women have been conducted, there is little information on the association between household wealth and consistent condom use among young women in Zimbabwe. For instance (Meekers & Richter, 2005) conducted a study on factors associated with use of female condom in Zimbabwe, while other studies focus on condom use among university students, sex workers and HIV positive individuals. Despite evidence of high of condom distribution in Zimbabwe, consistent condom use is very low among young women in Zimbabwe. Thus, high condom distribution

aimed at increasing the use will not be effective in combating HIV transmission or preventing pregnancy if they are not used consistently and correctly. This study comes at a time where, Zimbabwe is among the highest HIV prevalence countries in Sub-Saharan Africa at 13.3%, and most young women indulge in sexual relationships with older men ('sugar daddy') which contribute to the likelihood of contracting HIV since these men hold the power in the relationship and determine whether to use condom. The main objective of the study is to examine the association between household wealth and consistency of condom use among young women aged 15-35 years in Zimbabwe. Income earned through job opportunities is expected to increase an individual's negotiating power within relationships, since many women view men as a mechanism to subsidize their income, money and material transfers received from a partner could place more power over sexual decision making in the partners hands. Therefore, women end up resorting to unprotected sexual intercourse. However, HIV infections continue to rise which hinders the possibility of an HIV free generation. The 2016 Sustainable Development Goals 1,3,4,5 and 8 entail; no poverty, good health and well-being, quality education, gender equality, decent work and economic growth (United Nations, 2019), therefore nations should work together to achieve all these goals. This study will help investigate if household wealth is a driver to consistent condom use among young women in Zimbabwe and come up with suggestions aimed at empowering young women and sensitizing people about the importance and benefit of consistent use of condoms during sexual intercourse.

METHODOLOGY

The report is based on the data from the 2010-11 Zimbabwe Demographic Health Survey. It covered 5214 young women aged 15-35 years who reported to have ever had sexual intercourse in the last 12 months prior the survey.

MEASUREMENT OF VARIABLES

DEPENDENT VARIABLE

- *Consistency of condom use*: it is a composite variable derived from questions on whether the young females used condoms with the most recent, 2nd most recent and 3rd most recent partner during the 12 months before the survey. The values assigned for the variables were 0=No, 1=yes and 8= don't know. For easy analysis the value labels were recorded into 0=no/don't know and 1=yes. A variable named consistent score was created to compute the scores for the respondents. A respondent who scored 3-2 was referred to as consistent while those who scored 0-1 were regarded as not consistent condom users. With those results the categories consistent and inconsistent we formed. The value 0 was assigned Inconsistent while 1 was assigned for Consistent.

INDEPENDENT VARIABLES

- *Wealth*: This is the main explanatory variable.it was determined by ownership of items according to the Demographic and Health Survey comparative report 6 (Zimbabwe National Statistics Agency and ICF International, 2015). Wealth was categorized into poor, poorest, middle, rich and richest with values ranging from 1-5 respectively. It was then recoded into poor, middle and rich, with values 0, 1 and 2 respectively.
- *Age*: The ages of the female respondents ranged from 15 years to 35 years. For easy analysis of the data, age was grouped into two categories; 15-24 and 25-35, with values 0 and 1 respectively.
- *Marital status*: The marital status of the respondents was categorized into three; never married, married and divorced/widowed/separated. The values assigned for each label are 0, 1 and 2 respectively.
- *Education*: Education was recorded into primary/none and secondary/higher with values 0 and 1 respectively.
- Residence: Residence was categorized into rural and urban with values 0 and 1 respectively.
- Employment: Employment was categorized into unemployed and employed, with values 0 and 1 respectively.
- Media access: Access to media helps determine if the respondent has access to information on the use and importance of use of condoms as well as issues of HIV/AIDS. This was measured using the following questions;
  1. *Frequency of reading newspaper/ magazine*
  2. *Frequency of listening to radio*
  3. *Frequency of watching television*

  The value labels assigned to the variables were 0=not at all, 1=less than once a week, 2=at least once a week and 3=almost every day. From these three variables, a variable named media score was computed. A respondent who scored 0-4 was regarded as having low access to media while those with a score of 5-9 have higher access to media. The variable level of media access was created, and the categories were low access (0) and high access (1).

- HIV knowledge; Knowledge of HIV can help determine the use of condoms during sexual intercourse. To find out how knowledgeable the respondents are, the following 5 questions were asked:

1. *Can get HIV from mosquito?*
2. *Can get HIV by sharing food with a person with AIDS?*
3. *A healthy-looking person can have AIDS?*

4. *Reduce risk of getting HIV: always use condoms during sex*
5. *Reduce risk of getting HIV: have 1 sex partner only, who has no other partners*

A composite variable, knowledge score was computed. A respondent who scored 0-2 was more knowledgeable about HIV those score 3-5 were less knowledgeable. Level of HIV Knowledge was categorized into low Knowledge and high knowledge with values 0 and 1 respectively.

STATISTICAL DATA ANALYSIS

The data was analyzed using SPSS version 25. To examine the linkages between consistent condom use and wealth as well as other variables, chi-square tests through cross-tabulations and logistic regression analysis models were used. A total of 4 regression models were employed to assess the association between dependent and independent variables. The first model regressed each independent variable at a time (univariate). The second model introduced wealth and demographic variables, the third model included wealth and socio-economic variables. The last model all independent variables were introduced. Measures of association used are p-value, odd ratios and 95% confidence interval.

LIMITATIONS OF THE STUDY

The dependent variable consistency of condom use was measured based on self-reports. Reports on condom use are based on recall, therefore subject to bias because respondents may over or underreport condom use based on how condom use is stigmatized or how a person is expected to behave. The reference period used to question respondents on condom use was 12 months before the survey, hence a long period for individuals to remember all their sexual activity experience. Questions on consistent condom use were limited to three most recent partners during the 12 months before the survey and does not take into consideration those with four or more partners.

RESULTS

SAMPLE DESCRIPTION OF THE RESPONDENTS

Out of the total female respondents who reported on the use of condoms with 3 most recent partners, more than half (53%) were aged between 25-35 years. Almost half (45%) of the young females come from rich families while 37% and 18% come from poor and middle-income families respectively. Majority (72%) of the female respondents were married whereas 15% and 13% of them were never married and widowed/divorced/separated respectively. Majority (71%) of the respondents have attained secondary education as their highest level of education. Thirty six percent of the respondents reside in urban areas. Sixty four percent of the respondents indicated they are unemployed.

TABLE 1: SAMPLE BACKGROUND CHARACTERISTICS

Variable	*categories*	*frequency*	*%*
Age group	15-24	2440	47
	25-35	2774	53
Marital status	never married	781	15
	Married	3774	72
	Wid/div/sep	659	13
Education	primary/none	1522	29
	secondary/higher	3692	71
Residence	rural	3319	64
	urban	1895	36
Employment	unemployed	3332	64
	employed	1882	36
Wealth	poor	1935	37
	middle	916	18
	rich	2363	45
Total		5214	100

Table 1: total number of young women who reported on the use of condom during sexual intercourse 12 months prior the survey

Main explanatory variables

TABLE 2: CONDOM USE, MEDIA ACCESS & HIV KNOWLEDGE

VARIABLE	*CATEGORIES*	*FREQUENCY*	*%*
Consistency of Condom use	inconsistent	4050	78
	consistent	1164	22
Media access	low access	3789	73
	high access	1425	27
HIV knowledge	Low knowledge	1342	26
	high knowledge	3872	74
Total		5214	100

Table 2: condom use, media access & HIV knowledge

The results show that, over a fifth (22%) of the young women were consistent condom users. Majority (73%) of the respondents have lower access to media and majority (74.3%) are more knowledgeable about HIV/AIDS.

BIVARIATE ANALYSIS

According to table 3, over a fifth (22%) of the female respondents were consistent condom users. The proportion of consistent condom use is high among females who come from rich households (28%) compared to those who come from poor families (17%) and middle incomed families (18%). With P-value of 0.00, wealth revealed to be significantly associated with consistency of condom use.

Among those aged 25-35 years, 23% were found to be consistent as compared to 22% from those aged 15-24 years. Age was not significantly associated with consistency of condom use, with P-value=0.155.

The proportion of those who are consistent is high among those never married (42%) compared to those who are married (17%) and divorced/widowed/separated (32). Marital status was significantly associated with consistent condom use (P-value=0.00).Twenty four percent of those with secondary/higher education were consistent condom users compared to 19% from those who have attained primary or no education. Education was significantly associated with consistent condom use (P-value=0.00).

The proportion of consistent condom use is high among those residing in urban areas (30%) compared to those residing in rural areas (18%). With P-value=0.00, place of residence was significantly associated with consistent condom use. Twenty percent from those unemployed were found to be consistent condom users compared to 26% from those who are employed. Employment status was significantly associated with the dependent variable, (P-value=0.00).

Twenty percent from those with low media access were found to be consistent condom users whereas 28% from those with high access to media were found to be consistent condom users. Level of access to media revealed to be associated with consistent condom use (P-value=0.00). The proportion of consistent condom use is high among those with low HIV knowledge (37%) compared to those who are knowledgeable about HIV (17%). Level of HIV knowledge revealed to be significantly associated with consistency of condom use with (P-value=0.00).

TABLE 3: PERCENTAGE OF WOMEN WHO ARE CONSISTENT CONDOM USERS BY BACKGROUND CHARACTERISTICS

variable	*categories*	*frequency*	*%*	*consistent*	*%*	*p-value*
wealth	poor	1935	37	331	17	0.000
	middle	916	18	169	18	
	rich	2363	45	664	28	
Age-group	15-24	2440	47	529	22	0.155
	25-35	2774	53	635	23	
marital status	never married	781	15	327	42	0.000
	married	3774	72	623	17	

	wid/div/sep	659	13	214	32	
Education	primary/none	1522	29	285	19	0.000
	secondary/higher	3692	71	879	24	
Residence	Rural	3319	64	604	18	0.000
	urban	1895	36	560	30	
Employment	Unemployed	3332	64	671	20	0.000
	employed	1882	36	493	26	
Media	low access	3789	73	764	20	0.000
	high access	1425	27	400	28	
HIV knowledge	Low knowledge	1342	26	496	37	0.000
	High knowledge	3872	74	668	17	
total		5214	100	1164	22	

MULTIVARIATE ANALYSIS

In order to compare the association between the dependent variable and independent variables 4 regression models were made. Model 1 is univariate, model 2 included wealth and demographic variables only, model 3 included wealth and socio-economic factors while model 4 included all variables (demographic and socio-economic). This is shown in table 4 below.

In model 1, the independent variables were analyzed with the dependent variables individually. Wealth, marital status, education, residence, employment, level of media access and level of HIV knowledge were significant indicators of consistency of condom use. Young women from rich households are about 2 times more likely to be consistent condom users compared to those from poor and middle income households. Women are married and those divorced/widowed/separated are less likely to be consistent condom users than those who are never married with odd ratios of 0.275 and 0.668 respectively. Young women with secondary/higher education (OR=0.737), residing in urban areas OR=0.530), those employed (0.710), with high access to media (OR=0.647) and have high HIV Knowledge (OR=0.356) are less likely to be consistent condom users.

The second model included wealth and demographic variables such as age, marital status and residence. All the independent variables in the model revealed to be significantly associated with consistency of condom use. Women from rich households are 1.3 times more likely to be consistent condom users compared to those from poor and middle income households. Women aged 25-35 and those residing in urban areas are 1.3 and 1.4 times more likely to be consistent condom users, while young women who are married and divorced/widowed/separated are less likely to be consistent condom users than those who are never married, with odds ratios of 0.281 and 0.664 respectively.

In model 3, the main explanatory variable (wealth) was included with socio economic variables such as education, employment, media access and HIV knowledge. All the socio-economic variables were significant predictors of consistency of condom use. Women from rich households are about 2 times more likely to be consistent condom users than those from poor and middle-income households. While women with secondary/higher education, employed and those with high media access are 1.3 times more likely to use condom consistently. With odds ratio of 0.280, young women with high HIV knowledge are less likely to use condoms consistently than those with low HIV knowledge.

Model 4 introduced wealth and controlled for all other demographic and socio-economic variables. Wealth remained a significant indicator of consistency of condom use among young women. All other independent variables were significant, that is, women aged 25-35, those employed, and have higher access to media are about 1.2 times more likely to be consistent condom users compared to others. Women with secondary/higher education and those residing in urban areas are 1.3 times and 1.4 times more likely to use condoms consistently. Women's marital status and level of HIV knowledge were negatively associated with consistent condom use. That is, women who are married (OR=0.280, CI=0.234-0.335), divorced/widowed/separated (OR=0.729, CI=0.576-0.922) and those with high HIV knowledge (OR=0.265, CI=0.227-0.309) were less likely to be consistent condom users compared to other women.

TABLE 4: BINARY LOGISTIC REGRESSION ANALYSIS: LIKELIHOOD OF CONSISTENT CONDOM USE

variable	categories	MODEL1		MODEL2		MODEL3		MODEL4	
		ODDS RATIO	95% C.I.	ODDS RATIO	95% C.I.	ODDS RATIO	95% C.I.	ODDS RATIO	95% C.I.
wealth	poor	1		1		1		1	
	middle	1.096	0.893-1.345	1.010	0.818-1.248	1.075	0.867-1.331	1.004	0.805-1.253
	rich	1.894***	1.633-2.197	1.348***	1.088-1.670	1.904***	1.585-2.288	1.368***	1.078-1.736
Age group	15-24	1		1				1	
	25-35	1.072	0.941 -1.222	1.220***	1.059-1.405			1.180***	1.018-1.369
Marital status	Never married	1		1				1	
	Married	**0.275*** **	0.232-0.324	0.281***	0.236-0.334			0.280***	0.234-0.335
	Wid/div/sep	0.668***	0.538-0.829	0.664***	0.530-0.832			0.729***	0.576-0.922
Education	primary/none	1				1		1	
	secondary/ higher	0.737***	0.635-0.856			1.280***	1.080-1.516	1.285***	1.079-1.531
Residence	rural	1		1				1	
	urban	0.530***	0.465-0.605	**1.361*** **	1.117-1.659			**1.421*** **	1.154-1.749
Employment	unemployed	1				1		1	
	employed	0.710***	0.622-0.812			1.299***	1.128-1.495	1.237***	1.067-1.434
Media Access	low access	1				1		1	
	high access	0.647***	0.563-0.745			1.262***	1.066-1.493	1.232***	1.033-1.469

HIV knowledge	Low knowledge	1		1		1	
	High knowledge	0.356***	0.310-0.409	0.280***	0.241-0.325	0.265***	0.227-0.309

***=p<0.05 significant

DISCUSSION

This study was aimed at investigating the linkages between consistent condom use and household wealth among young women in Zimbabwe as well as demographic, socio economic factors like age, marital status, educational attainment, place of residence, employment status, level of media access and level of HIV knowledge. Condom use among young women in Zimbabwe is very low with about two fifths reporting to have ever used a condom during their last sexual encounter with 3 most recent partners. This study presented evidence to support the hypothesis that women from poor households are less likely to be consistent condom users. Similar results were found by (Thankian, Mwaba, Menon, & Jacqueline, 2017), young women from rich backgrounds were 1.4 times more likely and those from middle incomed households were 1.6 times more likely to report having used condoms consistently with their partners than those from poor families. The reason for inconsistent condom use among women from poor families may be attributed to limited decision making power and the costs of condoms. Women from poor households are often submissive and unable to insist on the use of condoms if their partners are very much financially dominant. Wealth remained significant at bivariate level and multivariate level across all the 4 regression models.

Individual demographic and socio-economic characteristics such as age, marital status, education, residence, employment, access to media and HIV knowledge were significantly associated with consistent condom use among young women in Zimbabwe. The first model revealed marital status, education, residence, employment, media access and level of HIV Knowledge to be negatively associated with consistent condom use.

At binary level age was not significant but revealed to be significant predictor at multivariate level in the 2nd and last model. Women aged 25-35 years were 1.2 times more likely to be consistent condom users compared to those aged 15-24 years. This may possibly be due to the fact that older women have a greater intension to talk to a partner about a condom, use it during sexual intercourse and say no to sex without a condom (Ntozi, Najjumba, Ahimbisibwe, Ayiga, & Odwee, 2003). They may more actively participate in condom related educations.

Consistent condom use was significantly different between urban and rural participants. A study by (Shewamene, Legesse, Tsega, Bhagavathula, & Endale, 2015) found similar results, women from urban areas were 4 times more likely to be consistent condom users. Due to the information gap between rural and urban areas, access to information through media and different health institutions, may contribute to higher general awareness of and the importance of consistent condom use among people residing in cities and towns (Kennedy MPH, O'Reilly, Medley, & Sweat, 2007).

The study revealed that married women are less likely to be consistent condom users (OR=0.275, CI=0.232-0.324). This could be explained by voicelessness due to lack of sexual decision-making power, economic dependence, low self-efficacy or fear (Mugweni, Omar, & Pearson, 2015). Trust is also regarded as a relational barrier to safer sex negotiation. In addition, asking for safe sex in Zimbabwe was sometimes seen as licensing an affair, thus some women preferred not to confront their husbands about infidelity.

Young women with higher level of education were more likely to be consistent condom users than those with primary or none. The influence of educational attainment has been widely reported. Education is believed to enhance and promote people's health reasoning, therefore individuals with a higher level of education are more likely to adopt safer sexual practices (Ngome, 2016). Young women who are employed are 1.2 times more likely to be consistent condom users. A similar study by (Davidoff-Gore, Luke, & Wawire, 2011) argued that employment opportunities could reduce the need to rely on sexual relationships for economic support while simultaneously increasing individuals negotiating power to practice protective sexual behaviors.

Media access was found to be significantly associated with consistent condom use but the same cannot be said for level of HIV knowledge. Young women who are more knowledgeable were less likely to be inconsistent condom users than those with low HIV knowledge. Similar results were found by (Yi, et al., 2015). It is important to integrate HIV and STI education, because HIV knowledge alone may not be enough to increase condom use.

In conclusion, there is clear evidence of low condom use among young women in Zimbabwe, with about two fifths reporting consistent use of condoms. It emerged from the findings of this study that household wealth is a significant predictor of consistent condom use at bivariate level and at multivariate level across all the 4 regression models. Marital status, education, place of residence, employment status, media access and HIV knowledge were also significant across all the regression models while age was only significant in the 2nd and last models. It may be noted that majority of young women who are inconsistent condom users are from poor households, rural areas, unemployed, have low access to media, have primary/low

education and are married. Therefore, with high condom distribution in Zimbabwe, correct and consistent use of condoms should be encouraged everywhere.

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