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Factors associated with consistent condom use among women in Botswana

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TITLE

FACTORS ASSOCIATED WITH CONSISTENT CONDOM USE AMONG WOMEN IN BOTSWANA

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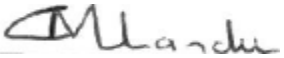
A research report submitted to the Faculty of Health Sciences, University of the Witwatersrand, Johannesburg, in partial fulfillment of the requirements for the degree of Master of Science in Infectious Disease Epidemiology

Johannesburg, November 2017

DECLARATION

I, Chenai Mlandu, declare that this research report is my own, unaided work. It is being submitted for the Degree of Master of Science in Infectious Disease Epidemiology at the School of Public Health, Faculty of Health Science, University of Witwatersrand, Johannesburg. It has not been submitted before for any degree or examination at this or any other University.

Signature of candidate  Date…10 November…2017…….

Acknowledgements

Firstly, I would like to acknowledge my supervisors Ms Mercilene Machisa and Prof Nicola Christofides for their support and supervision in completing my research. I extend my gratitude to South African Medical Research Council and Gender Links for providing the data and my lecturers for imparting their knowledge.

Dedication

I dedicate this research to my mother, Mrs J Mlandu.

Abstract

Consistent condom use is one of the most effective ways of reducing sexual transmission of HIV. Apart from risky sexual behavior, gender inequalities are increasingly being recognized as crucial influences of unsafe sex practice. Botswana has high HIV prevalence and women are at greater risk of HIV. Therefore, this study assessed the prevalence and associated factors of consistent condom use among women in Botswana.

Methods

The study was a secondary data analysis using data drawn from a national cross-sectional household-based survey in 2011.The primary study sampled 639 women, aged 18 and above, using a multi-stage procedure, in which 55 Primary Sampling Units (PSUs) were randomly sampled and thereafter 20 households in each PSU were randomly selected. An eligible woman was sampled in each household. A standardised questionnaire, self-administered using PDAs and supported by trained female research assistants, was used to collect data. Secondary data analysis was restricted to 480 sexually active women who were in a heterosexual relationship and responded to the condom use questions. Logistic regression analysis, accounting for clusters, was used to explore the association between consistent condom use and explanatory predictor variables.

Results

Approximately 43% of the women reported consistent condom use in the year before the survey. Consistent condom use was more likely if women had attained high levels of education (aOR=2.17; 95% CI=1.34-3.51) and expressed high relationship power (aOR=1.59; 95% Cl=0.93-2.71). However, women were less likely to report consistent condom use if they were; ever physically abused by partner (aOR=0.45; 95% Cl=0.25-0.84), cohabiting with current partner (aOR=0.33; 95% CI=0.13-0.83) and had more than one sexual partner in year preceding the survey (aOR= 0.63; 95% CI=0.43-0.91).

Conclusion

Women's risk of HIV may be heightened by power imbalances that affect sexual decisions in heterosexual relations. Our study findings highlight the importance of addressing risky sexual behavior and gender inequalities to curb the spread of HIV. Effective HIV programs promoting condom use should have targeted condom messages on cohabiting and polygamous relationships, and gender responsive strategies encompassing safe sex skills, violent and controlling behaviors change.

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Nomenclature

aOR: Adjusted Odds Ratio

BAIS: Behavior AIDS Impact Survey

BWP: Botswana Pula

CI: Confidence Interval

CTQ: Child Trauma Questionnaire

GBV: Gender Based Violence

GBVI: Gender Based Violence Indicators

GL: Gender Links

GOB: Government of Botswana

HIV/AIDS: Human Immunodeficiency Virus/ Acquired Immune Deficiency Syndrome

IPV: Intimate Partner Violence

MOH: Ministry of Health

PDA: Personal Data Assistants

PSI: Population Services International

PSU: Primary Sampling Units

SRPS: Sexual Relationship Power Scale

STI: Sexually Transmitted Infection

WAD: Women's Affairs Department

UNAIDS: United Nations Program on HIV and AIDS

WHO: World Health Organisation

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CHAPTER 1: INTRODUCTION

1.1 BACKGROUND

At the end of 2016, approximately 36.7 million people were living with Human Immuno-Deficiency Virus (HIV) worldwide (1). According to UNAIDS (2014), Sub-Saharan Africa remains the center of the global epidemic with 24.7 million of all people living with HIV and over 60% women , aged 15 years and older, accounting for people living with HIV (2). Heterosexual transmission is the primary contributor of the spread of the epidemic in this region (2). Botswana is among countries with the highest HIV prevalence rates in the world; estimated at 21.9% among adults aged 15-49 years (3). The last national sexual behavior survey (2013) reported significantly higher HIV prevalence rate among women (20.8%) than men (15.6%) in the general population (4).

Condoms remain the most commonly used and available safer sex practice option for protection against STI/HIV (5, 6). Consistent condom use, defined as always using a condom (5), is most effective in lowering the risk of sexually transmitted HIV by 80-90% compared to non-use (6, 7). HIV continues to disproportionately affect women and their ability to negotiate condom use is increasingly being recognized as an essential component in HIV prevention strategies (5, 8). The existence of gender inequalities reflected in women's lower socio-economic status, lack of autonomy and other extreme forms of gender inequality, such as partner violence, constrain women's ability to negotiate condom use in heterosexual relations (8-12). This has awakened great interest in HIV research on the impact of gender related factors on women's risk of HIV (8, 9).

The Government of Botswana supports equitable access of condoms regardless of race, age, ethnicity or gender, as stated in the Botswana National Policy on HIV and AIDS (13). In 2014, the Botswana AIDS Progress Report indicated that sexual transmission of HIV continued to be worsened by declining condom use among sexually active women and men, as recorded by the last two Behavior AIDS Impact Survey (BAIS) reports in 2008 and 2013 (14). Considering the higher rate of HIV infection among

women and reported decline in condom use by both sexually active women and men in Botswana, this study assessed prevalence and associated factors of consistent condom use among women in Botswana.

1.2 LITERATURE REVIEW

1.2.1 HIV and Condom Programming in Botswana

Condoms offer dual protection against unplanned pregnancy and STI/HIV (15). The aim of condom programming in Botswana is to motivate sexually active women and men to use condoms consistently and correctly by improving access to condoms that meet quality standards (16). In the Ministry of Health's (MOH) National Strategy Framework, the Government of Botswana set a target of achieving zero HIV infections by 2016, and the use of male condoms was a vital component in achieving this target (16, 17).

1.2.1.1 Condom Distribution and Access

The condom market in Botswana comprises of public, social marketing and commercial sectors (17). Due to high HIV prevalence in Botswana, it is necessary that rates of condom use remain high and free condoms be targeted at those who cannot afford (4, 17). Through the public sector, the Government of Botswana (GOB) has made efforts to improve condom access. The public sector has dominated the condom market by free condom distribution; 60% of condoms (fully subsidized) are supplied by MOH to the public, through public health facilities (16). Population Services International (PSI) supplies 35% of condoms through social marketing initiatives and the private sector meets only 5% of the condom demand (16, 17).

Over the years, there has been substantial improvement in condom distribution and access. In 2012, distribution of the male condom covered 94 % of the need for HIV prevention compared 63 % in 2007 (16), and over thirteen brands were available in the market to cater for users of different brand preferences (17). However, more efforts are needed to improve distribution of the female condom which

contributed 1% of the total condom distribution in 2011 (22,352,600 male condoms versus 225,832 female condoms) (16). Moreover, a stable and sustainable market with cohesion of all sectors is essential to keep a consistent supply of high quality condoms (17).

1.2.1.2 Condom Use

Despite increased concerted efforts by the Government and other partners in improving condom distribution and access over the years (16, 17), the proportion of sexually active women and men using condoms declined, based on BAIS reports (BAIS III:2008 and BAIS IV:2013) (18). Condom use at last sex with non-regular partner declined from 89.5% to 83.14% for women aged 15-49 years , and 90.4% to 81.2% for men of the same age group (4, 19).

1.2.2 Socio-demographic factors associated with condom use

Selected socio-demographic factors such as; income, education, age, number of children and relationship status have been found to be associated with condom use (15, 20-24). The relationship between these factors and condom use is not consistently reported in literature and there are contradictory results. Studies conducted in Angola and Ghana have shown that income and levels of education are significant factors underlying low condom use among women (25, 26). Significant income and education gaps between women and their male partners translate into power imbalances in sexual interactions (10, 27). Specifically, women who are financially dependent upon their partners may not be able to negotiate condom use, while women who are highly educated feel more empowered to engage with their partner in discussing sexual matters (10, 23, 27). However, one particular study from DHS data, in Zimbabwe, found no significant differences of condom use by women's level of education. Possibly, education levels were generally high among women in Zimbabwe or other aspects such as couple dynamics may have acted to reduce the impact of women's education (9).

Low condom use has been reported among older women (28) and women in marital type or cohabiting relationships (21, 29). Older women might be in unstable relationships and tend to trust their partners. Thereby, reducing the perceived need for condoms as means of HIV prevention (28). On the other hand, younger women might be exposed to HIV/AIDS information and possibly be in unstable relationships which increases their use of condoms Generally, low condom use among cohabiting partners has been attributed to women's lack of autonomy (30), more stable relationship (31) and male partner objections (32). Among HIV positive women the desire to bear children had a negative impact on condom use (22, 33). There is limited information on the influence of the number of children or desire to bear children on condom use among women in the general population; hence, we compared findings with women living with HIV.

1.2.3 Behavioral factors associated with condom use

Behavioral factors found to be associated with condom use in the literature include; violent exposures such as Intimate Partner Violence (IPV) and history of childhood abuse, alcohol abuse, risky sexual behaviors and testing of HIV status (31, 34-40). There is much evidence in research showing that women with abusive partners are less likely to use condoms consistently (34, 41). Several attributable causes could be fear of retaliatory violence or negative partner reaction (42) and low self-efficacy to communicate about condom use with partner (29, 42). Only one study reported that women who were physically and financially abused by their partners were more likely to suggest use of condoms (10). Possibly, there was under-reporting of abuse or these women did not feel obliged to have sex on their partner's terms and insisted on condom use (10, 44). IPV also occurs in the context of men feeling entitled to sexual access and control over their female partners (43, 44) .

Majority of research indicate that history of childhood abuse is linked with low condom use (40, 45, 46). Childhood sexual and physical abuse have been linked with risky sexual behavior among emerging adults including; increased number of sexual partners and unprotected sex (45, 47). Mental effects of childhood abuse can persist into adulthood which may bring a negative impact on condom use in intimate relationships (40). In particular, women who have been victims of childhood abuse have been shown to exhibit fear (46), low relationship power (46), and a psychological conditioning of anticipating negative partner reactions (48), which diminishes their ability to negotiate condom use (40, 46, 48).

Findings from numerous studies highlighted the link between alcohol abuse, increase in number of sexual partners, transactional sex and low condom use (35, 37, 49-53). In particular, binge drinking among college female students was related to ineffective condom use (35). Moreover, condom use is much lower when both partners consume alcohol (51). On the other hand, a meta-analysis study argues that alcohol consumption is not necessarily linked to unprotected sex, but this association is dependent on sex experience of partners and context (54). Alcohol consumption also drives other risky sexual practices such as transactional sex and high sexual partners (34, 35, and 55). In transactional sex, condom use is often avoided while seeking financial or material return for the sexual transaction (53) but then, one study in peri-urban areas of South Africa reported higher rates of condom use among young women who had transactional sex history with their main partners (56). It is possible that these women were more assertive to use condoms because they had high perception of HIV/STI risk compared those with no history of transactional sex (56).

An increase in number of sexual partners is an important indicator of practicing risky sexual behavior which heightens the risk of HIV (38, 55). Acquiring various sexual partners may be indicative of women's multiple needs such as financial, material or sexual pleasure which may not be fully met by a

single partner (37, 56). In contrast, a study among rural young women in South Africa found that women with more than one sexual partners reported high condom use (31).This could be due to a greater sense of HIV risk responded by increased condom use (31) or may also suggest that sexual partners were not fully disclosed (59).

Several studies reported that women who had undergone HIV testing reported more condom use (31, 57). For instance, cohort studies in Rwanda and Uganda showed that HIV sero-testing and counseling among HIV sero-discordant couples, increased condom use , and was associated with low HIV incidence (39, 58). This supports the role of Voluntary Test and Counseling in increasing awareness of HIV risk and ultimately changing risky behavior (31). However, awareness of HIV status may not be sufficient to explain social aspects affecting condom use (31, 59).

1.2.4 Gender Attitudes associated with condom use

Factors which assess gender attitudes including; gender equitable beliefs and relationship power have been found to be associated with condom use (5, 60, 61). The influence of gender beliefs on women and men's behavior may be an important determinant of condom use (60). There is limited research on the underlying inequitable gender beliefs that influence sexual behavior practices such as condom use (12). Scant evidence from few studies showed that women who expressed less equitable gender beliefs had reduced levels of condom use, thus elevating their risk of acquiring HIV (60, 62). Inequitable gender beliefs place women in an unequal position in the relationship and inculcate masculine concepts of male dominance and sexual entitlement (12, 32).

Relationship power imbalance may constrain women's ability to negotiate safer sex and increase their risk of HIV infection (5, 63). Relationship power has been shown to be inversely related to IPV (64, 65) and directly related to condom use (5, 66, 67). Other studies suggest that power imbalances in heterosexual relationships may not have a prominent effect on non-condom use (68, 69). Variation in

these findings may due to inadequate sample sizes or different conceptualization of relationship dominance and power, which calls for further research across varied populations (5, 69).

1.3 Problem Statement

Botswana has one of the highest levels of HIV infection rates in the world (2) and HIV infection is more prominent in women than men (4). The Government of Botswana has declared HIV to be a national emergency and set programs to promote and increase condom access to curb the spread of HIV (18). The last two BAIS (III and IV) indicated an increase of 0.9% in HIV prevalence rate in the general population between 2008 and 2013. This increase was attributed to decline in condom use by both women and men aged 15-49 years with non-regular partner (4, 19). In order to promote condom use and improve these statistics, it is important understand the factors acting as barriers to condom use among women, who are more affected by HIV than men (4).

1.4 Justification

There is evidence from literature that relationship dynamics, gender and socio-economic inequalities in heterosexual relations are associated with low condom use among women (21, 31, 56, 60, 70). However, these studies were conducted in contexts such as South Africa and there is limited evidence on factors that contribute to consistent condom use in Botswana (27). Moreover, the way in which men and women relate is influenced by different cultures, socialization and economic forces (5, 9). Many of these studies also have limited generalizability due to non-representative samples (27, 31, 34, 70). However, our study drew data from a national cross-sectional household-survey on Gender Based Violence Indicators (GBVI) in 2011 (71), which selected participants from all major nine districts in Botswana.

Data from GBVI survey (2011) is still relevant as it was the only GBVI survey conducted in Botswana. The GBVI survey (2011) had comprehensive data on sexual related behaviors compared to other related surveys such as BAIS III and BAIS IV. BAIS surveys reported on knowledge, cultural and socio-

demographic factors associated with the HIV epidemic and sexual behaviors, such as condom use at last sex with non-regular partner (4, 19). Whereas, the GBVI survey (2011) measured consistent condom use in past year and additional risk and protective factors which allowed us to explore factors including IPV, transactional sex, relationship power, number of sexual partners and alcohol abuse. Overall, the major significance of our study is identifying significant factors of consistent condom use among women that will better inform and improve condom programming, HIV policies, programs and interventions in Botswana, and ultimately reduce new cases of HIV infection (17).

1.5 Research Question, Aim and Objectives

Research Question

What factors are associated with consistent condom use among women in Botswana in 2011?

Aim

To investigate the factors associated with consistent condom use among women in Botswana in 2011.

Objectives

1. To determine the prevalence and patterns of condom use among women in Botswana in 2011.
2. To determine the relationship between socio-demographic, behavioral and gender attitude factors and consistent condom use among women in Botswana in 2011.

CHAPTER 2: METHODOLOGY

This chapter highlights details on the primary study design and the secondary data analysis. Background information is given on the primary study site, study population, sampling technique, sample size and data collection. For the secondary data analysis, there are details on final sample size, measurement of sample power and selected variables, management of data and data analysis plan. Final details are on ethical considerations in the primary study and secondary data analysis.

2.1 Study Design

The primary study was a cross sectional household survey that aimed to assess the extent, effects and response to Gender Based Violence (GBV). The survey was conducted collaboratively by the Government of Botswana's, Women's Affairs Department (WAD) and Gender Links (GL), a civil society organization, in 2011 (71).

2.2 Study Site

Botswana is divided into nine major districts which are North-West, North-East, Central, Ghanzi, Kweneng, Southern, Kgathleng, South-East and Kgalahadi as shown in Figure 1; and the major districts are further divided into sub-districts. The GBVI survey covered all major districts in Botswana. The latest population and housing census conducted in 2011 estimated Botswana's population at 2,024,904 million. Approximately 30% of the proportion of women in the population was above 18 years and older (72).

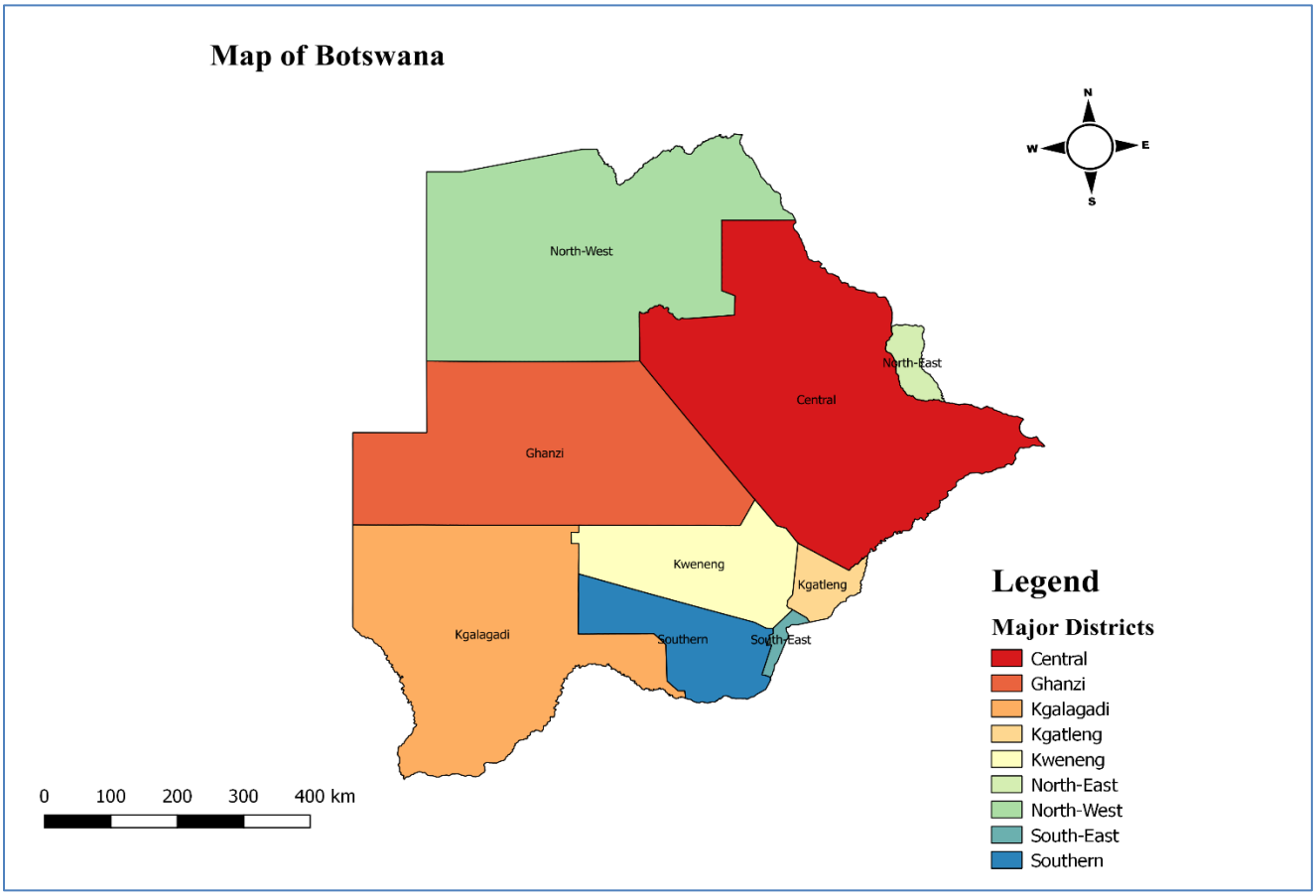

Figure 1: Map of Botswana

2.3 Study Population

The study population was women aged 18 years and older living in Botswana in the year 2011.

2.4 Study Sample

The primary study employed multi-stage sampling of Primary Sampling Units (clusters), GL and WAD randomly sampled 55 Primary Sampling Units (PSUs) from the sampling frame provided by Botswana Statistics. Researchers then randomly selected 20 households in each of the PSUs using an interval method, 99% of the sampled households had an eligible woman over the age of 18 (71). Six hundred and thirty-three women gave written consent and voluntarily participated in the research with trained researchers. In secondary data analysis, the final sample was restricted to women who; were in a

heterosexual relationship, ever had sex and responded to the items asking about condom use. Four hundred and eighty of 633 women were eligible for the secondary data analysis as shown in Figure 2.

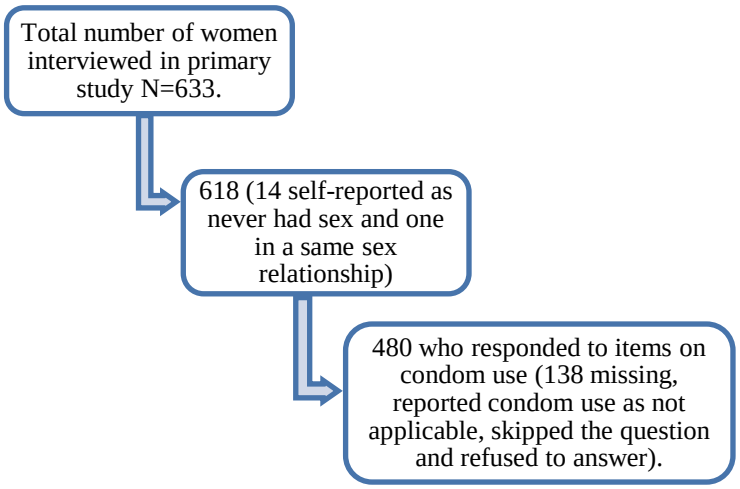

Figure 2: Flow chart for final sample of factors associated with consistent condom use.

Sample power analysis was done to determine adequacy of sample size to detect differences in effects of exposure factors on the study outcome. The power calculation was based on study proportion differences between consistent (43%) and inconsistent condom use (57%), using one sample size proportion of 480 participants. We obtained sample power above 0.80 (1.00), therefore our final sample size of 480 participants was adequate to detect differences in effects of exposure factors on consistent condom use.

2.5 Data Collection

A standardised questionnaire consisting of close-ended questions was used for data collection in the primary study. The participants self-administered the questionnaire in English or Setswana using Personal Data Assistants (PDAs) (71). The participants were assisted by trained female researchers, and skipped questions that they did not wish to answer using a skip button. Selected variables from the GBVI survey were used in the secondary data analysis.

2.6 Measurement of Variables

2.6.1 Condom use

The outcome of the study was consistent condom use. Participants were asked if they had used condoms in the past year and possible responses were; no use, always, often or sometimes. Condom use was categorised into consistent condom use and inconsistent condom use. Consistent condom users were defined as women who reported *always* using condoms with any partner in the past year. Inconsistent condoms users were defined as women who used condoms sometimes or often, but not always, and never used condoms with any partner in the past year.

2.6.2 Socio-demographic factors

Age, income and education level were assessed by the following questions, "How old are you?" and the responses were from 1 (18-20) to 8 (55 and above), and recoded as 18-29, 30-44 and 45 and above. Income was assessed as, "How much do you earn per month, before tax, and including benefits?" and the responses were recoded as <BWP1000, BWP1000- BWP2000 and >BWP2000. Education level was assessed as, "What is the highest standard or grade you have completed at school?", and the responses were recoded to a binary variable as incomplete high school and lower, and complete high school and over.

Number of children was assessed with an item that asked, "How many children have you given birth to?, and the responses were from 0, 1-2, 3-4 and 5 and above children (21). Women's relationship status at the time of the survey was assessed as, "Do you currently have a husband or boyfriend". Women were also asked whether they lived with their partner by a follow up question, "Do you live with him", and the responses from the two questions were recoded to a categorical variable of; no current partner, not cohabiting with current male partner or cohabiting with current male partner. Cohabiting in this study

was defined as being in a sexual relationship and living together with a male regardless of marital status (21).

2.6.3 Behavioral Factors

2.6.3.1 Violent Exposures

Intimate Partner Violence

Life time experience of physical and sexual Intimate Partner Violence (IPV) was assessed using items from WHO Multi-country Study on Women's Health and Domestic Violence (73). Five items were asked about lifetime physical abuse against women by current husband or boyfriend, which included if they were ever; slapped, shoved, hit, kicked and threatened with weapon. Participants experienced physical abuse in lifetime by partner if they said yes to any of the items. Three items were asked about lifetime sexual abuse against women by current husband or boyfriend, which included if they were ever; forced to do something humiliating or degrading, physically forced to have sex, and had sex because they were afraid to refuse. Participants experienced sexual abuse in lifetime by partner if they said yes to any of the items. IPV in lifetime was recoded to a categorical variable, as no abuse (reported neither physical nor sexual abuse IPV), physical abuse (reported physical IPV only), sexual abuse (reported sexual IPV only) and both physical and sexual abuse (reported both forms of abuse).

History of Childhood Abuse

We assessed history of childhood abuse using a 14 item modified version of the short form Child Trauma Questionnaire (CTQ) (74). The CTQ is 28 item retrospective self-report inventory measuring childhood abuse experiences; subdivided into three scales measuring abuse (sexual, emotional and physical) and two scales measuring neglect (physical and emotional). Participants were asked if they experienced any acts of child abuse described in Table 1. Responses were on a 4 point Likert scale; never (1), sometimes (2), often (3) and very often. We summed up responses of all the 14 items to get a childhood abuse score (Cronbach's alpha= 0.68) (75) .

2.6.3.2 Alcohol Consumption

Alcohol consumption was measured using items from the Alcohol Use Disorders Identification Test Scale (76). Participants were asked if they drank alcohol in the past 12 months. A follow up question asked how often they had 5 or more drinks on one occasion and possible responses were from never (1), less than monthly (2), monthly (3), weekly (4), and daily or almost daily (5). A score of 4 or more equivalent to drinking five or more drinks on one occasion weekly or daily was considered binge drinking (77). Partner drinking problem was measured by asking the question how often the current or most recent boyfriend/husband drank alcohol, and possible responses were never, less than monthly, weekly, daily or almost daily. Partner drinking problem was recorded to a categorical variable; not drinking, drink on less than a month or monthly basis, and drink on daily or weekly basis.

2.6.3.3 Risky Sexual Behavior

Women were asked if they engaged in transactional sex based on the following items; if they had a relationship with a casual partner; for assistance in paying for things they could not afford, housing, food or other bills, and support for children or other dependents and receiving cosmetics, jewellery, cellphone or other items or other gifts. Responses were from true (1), somewhat true (2), somewhat false (3) and false (4). The responses true and somewhat true were recoded as engaged in transactional sex and the responses false and somewhat false were recorded as not engaged in transactional sex (37). Women were asked to report how many sexual partners they had in the past year, and the responses were from 0 (1) to 50 or more (8) sexual partners.

2.6.4.4 Testing of HIV status

To assess whether the participant took an HIV test, participants were asked, “When did you last have an HIV test”, responses were from never tested (0), last 12 months (1), 2-5 years (2), more than 5 years ago (3) and don’t know (7). We created a binary variable HIV test i.e. ever tested versus never tested.

Participants who responded that they took an HIV test during the specified periods and those who did not know when last they had an HIV test were classified as ever tested. Participants who tested for HIV were also asked follow up questions, “Did you take the test the result” and “Was the HIV test positive”. We created a three level variable for knowledge of HIV status namely; unknown HIV status (equivalent to never tested for HIV or have been tested but did not take the result), negative HIV status and positive HIV status.

2.6.5 Gender Attitudes

2.6.5.1 Gender Equitable Beliefs

To understand participants’ attitudes towards gender beliefs, participants were asked how they agreed with 10 items on a 4-point Likert scale modified from the Gender Equitable Men (GEM) scale. The GEM scale is a validated 24 item scale measuring attitudes toward gender beliefs in intimate relationships and reflects prevailing gender beliefs in the community (78). The scale is applicable for both men and women and assesses attitudes on various domains such as reproductive health and disease prevention, sexuality, daily life duties and violence. Participants’ attitudes were assessed on 10 items on sexuality, reproductive health and daily life duties as shown in Table 1. The responses were scored on a 4 point Likert scale; strongly agree (1), agree (2), disagree (3) and strongly disagree (4). High scores represented more support for gender equitable beliefs. Certain items were reverse scored if a high score would reflect low support for gender equitable beliefs .We summed up responses for all the 10 items to get a gender equitable belief score (Cronbach’s alpha= 0.65).

2.6.5.2 Relationship Power

Relationship power was assessed using 10 items on the relationship control subscale from the modified Sexual Relationship Power Scale (SRPS) (65). Relationship power refers to engaging in behaviors against the partner’s wishes, having more control over decision making in a relationship and greater

control over partner's behavior (65). Women's control in the relationship was assessed based on 10 items addressing aspects on safer sex negotiation, partner communication and behaviors as outlined in Table 1. Responses were scored on a 4 point Likert Scale (1= Strongly Agree, 2= Agree, 3= Disagree 4=Strongly Disagree). We summed up the responses and divided by 10 items to obtain the total mean Relationship power score. The mean score was used in the analysis (Cronbach's alpha= 0.82) (69).

Table 1: Variable and Scale Items

Variable	Scale	Items
Child Abuse	**CTQ Scale**	**Before l reached 18, l**
(Cronbach's alpha=0.68)	**Sexual Abuse subscale**	had sex with someone because l was forced or threatened, forced to have sex against my will, had sex with a man 5 years older than me , someone touched my buttocks or genitals or made me touch them when l did not want to.
	Physical Abuse subscale	l was beaten at home with a belt or stick or whip or something else which was hard, I was beaten so hard that it left a mark or bruise, l was beaten or physical punished at school by a teacher.
	Emotional Abuse subscale	l saw or heard my mother being beaten by her husband or boyfriend, l was told l was lazy or stupid or weak by someone in my family, l was insulted or humiliated by someone in my family in front of other people.
	Physical Neglect subscale	I did not have enough to eat, l lived in different households at different times, I spent time outside the home and none of the adults knew where l was.
	Emotional Neglect subscale	One or both of my parents were too drunk to take care of me.
Relationship Power	**SRP Scale**	
(Cronbach's alpha=0.82)		
	Relationship Control Subscale	If l ask my partner to use a condom, he would beat or hit me, be angry, think that l'm having sex with other people. My partner, won't let me wear certain things, has more to say than l do about important decisions that affect us, tells me who l can spend time with, does what he wants, wants to know where lam. When my

		partner and l disagree he gets his way most of the time. My partner expects me to please because he buys me things.
Gender Equitable beliefs (Cronbach's alpha=0.65)	**GEM Scale**	You don't talk about sex, you just do it, and they are times when a woman deserves to be beaten. Changing nappies, giving kids a bath, and feeding the kids are the mother's responsibility. It is a women's responsibility to avoid getting pregnant. Men are always ready to have sex. My husband or boyfriend would be outraged if l asked him to use a condom. Men should be embarrassed if they are unable to get an erection during sex. Men have to be strong .I think that a man should have the final say in all family matters. l think that men should share the work around the house with women such as doing dishes, cleaning and cooking.

2.7 Data Management

Data was analysed using STATA version 14 (Stata Corp, College Station, Texas, USA). Data cleaning was done by initial checking of completeness of data using descriptive commands. Data fields were examined separately for errors and missing values. The percentage of missing data for each variable was calculated to check if it was within the recommended 15-20% benchmark (79). Variables were recorded and re-categorized where necessary. Internal consistency of modified scales was re-tested using Cronbach's alpha test for variables with measurement scales.

2.7.1 Data Analysis

To account for clustering, all analysis was done using the survey command. For the descriptive analysis, methods appropriate for cluster analysis were used. Summary measures for categorical variables were described using proportions, and for continuous variables we used means and 95% confidence interval. To test for association of each explanatory variable with condom use, we used Pearson's chi square test for categorical variables, and Wald test for continuous variables. In building the model, we fitted all the

explanatory variables in the model as the survey command does not allow for stepwise selection. We removed the explanatory variables by a backward elimination approach, maintaining variables which were significant at the 20% level and through theoretical consideration on certain variables including; binge drinking and transactional sex (36, 80, 81). We assessed for multicollinearity of the explanatory variables in the final model using the Variance Inflation Factor (VIF). The mean VIF was 1.14 (not considerably greater than 1), showing absence of multicollinearity of factors. We tested for interaction between several factors using Wald test, and there was no interaction present. The level of statistical significance was set at p=0.05 and marginally significant at p<0.05-1.00. The final model showed no lack of fit as shown by Pearson or Hosmer–Lemeshow's goodness of fit test (p= 0.828). Table 2 gives a summary of the data analysis plan.

Table 2 : Data Analysis Plan

Objective	**Variables**	**Analysis**	**Data Presentation**
1. To determine the prevalence and patterns of consistent condom use among women in Botswana in 2011.	a) Categorical Variables - education level, age-group, income, binge drinking, relationship status, number of children, partner drinking problem, IPV, transactional sex, HIV test and knowledge of HIV status and condom use.	Tabulate categorical variables using survey command to account for clustering.	Summary of socio-demographic characteristics as presented in Table 3.
		Summarise continuous variables using survey command to account for clustering.	Summary of behavioral characteristics and gender attitudes as presented in table 4.
	b) Continuous Variables gender equitable beliefs history of childhood abuse, relationship power and number of sexual partners	Use Chi-square test and Wald Test for cross tabulation of condom use and explanatory variables, accounting for clustering	Prevalence of condom use as presented in table 5 & 6.

2. To determine the relationship between socio-demographic, behavioral and gender attitude factors associated with consistent condom use among women in Botswana in 2011.	Dependent Variable – Categorical-Condom Use Independent Variables a)Categorical Variables- education level, age-group, income, relationship status, number of children, binge drinking, partner drinking problem, IPV, transactional sex, HIV status, HIV test, relationship power and gender equitable beliefs b) Continuous Variables - gender equitable beliefs, history of childhood abuse, relationship power and number of sexual partners	Bivariate Analysis- Apply logistic regression to test association of each explanatory variable with outcome (use of survey command to account for clustering). Multivariate Analysis- Fit Multiple Logistic Regression Model- (use of survey command to account for clustering). Fit all explanatory variables and use backward selection approach, maintaining variables with p-value of 0.20 and theoretical consideration. Test for multicollinearity of selected variables in final model. Test for goodness of fit on final model. Level of statistical significance set at p=0.05 and p<0.05-1.00 as marginally significant. Test overall significance of the three level categorical variables using Wald Test.	Adjusted model as presented in table 7.

2.8 Ethical considerations

Botswana's Ministry of Health Research and Development Division gave ethical clearance for the primary study in July 2010. Researchers invited participants to participate voluntarily and were told that non-participation would not affect them in any way. Participants were informed that they could skip any question they chose and could withdraw from the survey at any time. Participants received an information sheet about the survey, read to them when necessary. After the full briefing, respondents signed a consent form. To maintain confidentiality and privacy of information from participants, data access was restricted to researchers and there was de-identification of participants by generation of id-numbers (15). Participants who reported IPV and childhood abuse were referred to counselling services

and peer support groups. Ethics clearance for the secondary data analysis was granted by the University of Witwatersrand Human Research Ethics Committee in December 2016 (approval number: M1611118)

CHAPTER 3: RESULTS

This chapter presents detailed results on descriptive and analytical data analysis. Firstly, there is a summary on socio-demographic and behavioral characteristics, and gender attitudes of participants. Followed by, prevalence of consistent condom use by participants' socio-demographic, behavioral and gender attitudes factors. The final presentation of results is on multivariate logistic regression analysis of the final model.

3.1 Socio-demographic Characteristics

The analysis was restricted to 480 women who were in a heterosexual relationship, ever had sex and responded to the question about condom use. Table 3 shows socio-demographic characteristics of study participants. Over half of the women had not completed high school education (58.7%). Most women were unemployed in the past year before the survey (57.1%), but the majority with any source of income, earned less than BWP1000 per month (23.7%). Less than half of the women were younger, aged between 18-29 years (47.5%). Nearly forty four percent of women were cohabiting with current partner at the time of the survey (43.8 %) and more than half of the women had one to two children (56.6%).

Table 3 : Summary of women's socio-demographic characteristics of Sample N=480	
Variables	**n (%)**
Education level (n=479)	
High School Incomplete and lower	281 (58.7)
High School Complete and over	198 (41.3)
Income in past year (n=473)	
No income	270 (57.1)
< BWP 1000	112 (23.7)
BWP 1000-2000	41 (8.7)
> BWP 2000	50 (10.5)
Age group (n=480)	
18-29	228 (47.5)
30-44	171 (35.6)
45+	81 (16.9)
Relationship Status (n=478)	
No current partner	73 (15.3)
Not cohabiting with current husband/boyfriend	195 (40.8)
Cohabiting with current husband/boyfriend	210 (43.8)
Number of children (n= 414)	
0	8 (1.9)
1-2	234 (56.6)
2-4	106 (25.6)
5+	66(15.9)

3.2 Behavioral Characteristics and Gender Attitudes

Table 4 shows behavioral characteristics and gender attitudes of study participants. Nearly thirty percent of women reported experiencing any form of IPV in their lifetime at the time of the survey. Almost one fifth of women experienced physical IPV (18.1%), 4.4% experienced sexual IPV and 6.6% experienced both physical and sexual IPV. The mean childhood abuse score was 19.3; 95%CI18.8-19.8. Fourteen percent binge drank in the 12 months before the survey. About half of the women had a current or most recent partner that consumed alcohol at the time of survey. Twenty percent had partners who occasionally drank alcohol (less than a month/monthly basis) and nearly twenty nine percent had partners who frequently drank alcohol (daily or weekly basis). About one in five women engaged in

transactional sex (21.4%). The average number of sexual partners in the past year was 1.25; 95% 1.18-1.31. Forty three percent of women reported consistent condom use in the past year. Majority of women had taken an HIV test (94.9%). Only 7.9% did not know their HIV status, 73.7% knew their HIV negative status and 18.4% knew their HIV positive status. The mean gender equitable belief score was 27.6 (95% CI 27.0-28.2) and the total mean relationship power score was 2.94; 95%CI 2.87-3.02.

Table 4: Summary of women's behavioral characteristics and gender attitudes of Sample N=480

Variables	**n (%) or mean (95%CI)**
Violent Exposures	
IPV **(n=457)**	
No abuse	324(70.9)
Physical abuse only	83 (18.1)
Sexual abuse only	20 (4.4)
Sexual and Physical Abuse	30 (6.6)
History of Child Abuse **(n=480)**	
Child Abuse Score	19.3 (18.8-19.8)
Alcohol Abuse	
Binge Drinking **(n=462)**	
No	396 (85.7)
Yes	66 (14.3)
Partner Drinking Problem **(n=437)**	
No drinking	215(49.2)
Drink less than a month/monthly basis	97(22.2)
Drink daily/weekly basis	125(28.6)
Sexual Risky Behaviors	
Transactional Sex **(n=467)**	
Never engaged in transactional sex	367 (78.6)
Engaged in transactional sex	100 (21.4)
Sexual Partners in past year **(n=433)**	
Mean number of sexual partners	1.25(1.18-1.31)
Past Year Condom Use **(n=480)**	
Consistent condom use in past year	207 (43.1)
Inconsistent condom use in past year	273 (56.9)
Awareness of HIV status	
HIV tested **(n=473)**	
No	24 (5.1)
Yes	449 (94.9)
Self-reported HIV status **(n=467)**	
Unknown	37 (7.9)
Negative	344 (73.7)
Positive	86 (18.4)

Gender Attitudes	
Gender Equitable Beliefs **(n=480)**	
Gender Equitable Beliefs Score	27.6(27.0-28.2)
Relationship Power **(n=446)**	
Total Relationship power mean score	22.94 (2.87-3.02)

3.3 Prevalence of Condom use by socio-demographic, behavioral and gender attitude factors

3.3.1 Prevalence of condom use by socio-demographic factors

Table 5 shows prevalence of past year condom use by socio-demographic factors. The proportion of consistent condom use was significantly higher among women with high education attainment (51.5%) than those with low education attainment (37.4%) (p=0.002). Consistent condom use decreased significantly with age (p=0.028). Younger women aged 18-29 reported more consistent condom use (48.2%) compared to older women, aged 30-44 (43.9%) and 45 and above (28.0%).

Relationship status was significantly associated with consistent condom use (p=0.011). Women not cohabiting with their current partner used condoms more consistently (49.5%) than those cohabiting with their current husband or boyfriend (35.4%). Similar proportions of consistent condom use were reported among women with no current partner and those not cohabiting with their current partner (49.3% and 49.2%). There were no significant differences in the proportions of women who used condoms consistently by income (p=0.162) and number of children (p=0.151).

Table 5: Prevalence of past year condom use by socio-demographic factors of Sample N=480

	Past Year Condom use			
	Inconsistent (n=273)	Consistent (n=207)		
Variables	**n (%)/ mean (Cl)**	**n (%)/ mean (Cl)**	**Total (n)**	**P-value**
Education level				
High School Incomplete and lower	176 (62.6)	105 (37.4)	281	0.002
High School Complete and over	96 (48.5)	102 (51.5)	198	
Total (n)	272	207	479	
Income				
No income	148 (55.0)	121 (45.0)	269	0.162
<P1000	73 (65.2)	39 (34.8)	112	
P1000-2000	21 (51.2)	20 (48.8)	41	
>P2000	25 (50.0)	25 (50.0)	50	
Total (n)	267	205	472	
Age group				
18-29	117(51.8)	109 (48.2)	226	0.028
30-44	96 (56.1)	75 (43.9)	171	
45+	59 (72.0)	23 (28.0)	82	
Total (n)	272	207	479	
Relationship Status				
No current partner	37 (50.7)	36 (49.3)	73	0.011
Not cohabiting with current male partner	99 (50.8)	96 (49.2)	195	
Cohabiting with current male partner	136 (64.8)	74 (35.2)	210	
Total (n)	272	206	478	
Number of Children				
0	2 (25.0)	6 (75.0)	8	0.151
1-2	132 (56.4)	102 (43.6)	234	
3-4	65 (60.8)	42 (39.2)	107	
5+	45 (68.2)	21 (31.8)	66	
Total (n)	244	171	415	

3.3.2 Prevalence of condom use by behavioral and gender attitude factors

Table 6 shows prevalence of past year condom use by behavioral and gender attitude factors. IPV in lifetime was significantly associated with consistent condom use (p= 0.003). Consistent condom use was lower among women who ever experienced physical IPV (27.7%) than those who never experienced IPV (45.1%). However, consistent condom use was higher among women who ever experienced sexual IPV (60.0%), as well as among women, who ever experienced both physically and sexually IPV

(53.3%), compared to those who never experienced IPV (45.1%). History of childhood abuse was marginally associated with consistent condom use (p=0.062). Women who used condoms consistently had lower childhood abuse scores (mean 18.9; 95% Cl 18.2-19.5).

Knowing one's HIV status was significantly associated with consistent condom use (p=0.045). The prevalence of consistent condom use was higher among women knew their HIV negative status (47.1%) compared to those did not know their HIV status (40.5%). On the other hand, the prevalence of consistent condom use was lower among women who knew their HIV positive status (31.4%) compared those who did not know their HIV status (40.5%).

Higher relationship power was significantly associated with increased consistent condom use (p=0.019). Women who reported consistent condom use expressed high relationship power (mean 3.04; 95%CI 2.93-3.16). Gender equitable beliefs was significantly associated with consistent condom use (p=0.005). Women who used condoms consistently reported higher scores of equitable gender beliefs (mean 28.3; 95% Cl 27.4-29.1).There were no significant differences in the proportions of women using condoms consistently by binge drinking (p=0.832), partner drinking problem (p=0.518), number sexual partners in past year (p=0.425) HIV tested (p=0.113) or transactional sex (p=0.803) characteristics.

Table 6: Prevalence of past year condom use by behavioral and gender attitude factors of Sample N=480

	Past Year Condom Use			
	Inconsistent (n=273)	Consistent (n=207)		
Variables	**n (%)/ mean (Cl)**	**n (%)/ mean (Cl)**	**Total (n)**	**P-value**
Behavioural				
Violent Exposures				
IPV				
No abuse	178 (54.9)	146 (45.1)	324	0.003
Physical abuse only	60 (72.3)	23 (27.7)	83	
Sexual abuse only	8 (40.0)	12 (60.0)	20	
Sexual and Physical Abuse	14 (46.7)	16 (53.3)	30	
Total (n)	260	197	457	
History of Child Abuse				
Child Abuse Score	19.7 (19.0-20.3)	18.9 (18.2-19.5)	480	0.062
Alcohol Abuse				
Binge drinking				
No	226 (57.1)	150 (42.9)	396	0.937
Yes	38 (57.6)	48 (42.4)	66	
Total (n)	264	198	462	
Partner Drinking Problem				
No drinking	119 (55.4)	96 (44.6)	215	0.518
Drink less than a month/monthly basis	60 (61.9)	37 (38.1)	97	
Drink daily/weekly basis	72 (57.6)	53 (42.4)	125	
Total (n)	251	186	437	
Sexual Risky Behaviours				
Transactional Sex				
Never engaged in transactional sex	207 (56.4)	160 (43.6)	367	0.803
Engaged in transactional sex	55 (55.0)	45 (45.0)	100	
Total (n)	262	205	467	
Sexual Partners in past year				
Mean number of sexual partners	1.26(1.18-1.34)	1.23(1.16-1.29)	433	0.425
Awareness of HIV Status				
HIV Tested				
No	17 (70.8)	7 (29.2)	24	0.113
Yes	251 (55.9)	198 (44.1)	449	
Total (n)	268	205	473	
Knowledge HIV Status				
Unknown	22 (59.5)	15 (40.5)	37	0.045
Negative	182 (52.9)	162 (47.1)	344	
Positive	59 (68.6)	27 (31.4)	85	
Total (n)	263	204	467	

Gender Attitudes				
Gender Equitable Beliefs				
Gender Equitable Beliefs Score	27.1 (26.5-27.7)	28.3 (27.4-29.1)	480	0.005
Relationship Power				
Total mean Relationship Power	2.87 (2.77-2.96)	3.04 (2.93-3.16)	446	0.019

3.4 Multivariate analysis of factors associated with consistent condom use

Table 7 shows multivariate analysis of factors associated with consistent condom in the final model. Education was significantly associated with consistent condom use (p=0.002). Women with high education attainment were twice more likely to report consistent condom use than those with lower education attainment (aOR2.17; 95%CI=1.34-3.51). Relationship status was marginally associated with consistent condom use (p=0.059). Women not cohabiting with current partner were 51% less likely to use condom use consistently compared to those with no current partner (aOR 0.39; 95% CI=0.15-1.00). The likelihood of consistent condom use was much lower for women cohabiting with current partner, who were 57% less likely to use condoms consistently compared to those with no current partner (aOR 0.33; 95% CI=0.13-0.83). Number of sexual partners in past year was significantly associated with consistent condom use (p=0.016). For every additional sexual partner that women had in the past year, consistent condom use decreased by 37% (aOR 0.61; 95% CI=0.42-0.89).

IPV in lifetime was significantly associated with consistent condom use (p=0.014). Physical IPV in lifetime was negatively associated with consistent condom use, women who ever experienced physical IPV were 55% less likely to use condoms consistently compared to women who never experienced IPV (aOR 0.45; 95% Cl=0.25-0.84). Sexual IPV in lifetime was positively associated with consistent condom use, women who ever experienced sexual IPV were 1.7 times more likely to use condoms compared to women who never experienced IPV (aOR1.69; 95% Cl=0.86-3.31), however the association was statistically insignificant. This could be due to a small cell size of 8 observations (inconsistent condom use) and 12 observations (consistent condom use) (82). Sexual and physical IPV

in lifetime was positively associated with consistent condom use, women who ever experienced both sexual and physical IPV were significantly twice more likely to report consistent condom use than those who never experienced IPV (aOR 2.16; 95% CI=1.05-4.43). High relationship power was marginally associated with increased consistent condom use (p=0.090). Women's consistent use of condoms increased by 59% for every total mean score increase in relationship power (aOR 1.59; 95% Cl=0.93-2.71). We found no significant associations between consistent condom use and age (p=0.615), transactional sex (p=0.836) or binge drinking (p=0.813).

Table 7: Multivariate model of factors associated with condom use consistency among women in Botswana (N=369)

Variables	Consistent Condom Use			
	Unadj OR (95% CI)	P- value	aOR (95% CI)	P-value
Education level				
High School Incomplete and lower	**Ref**			
High School Complete and over	1.78 (1.24-2.57)	0.003	2.17 (1.34-3.51)	0.002
Relationship Status				
No current partner	**Ref**			
Not cohabiting with current male	1.00 (0.55-1.79)	0.991	0.39 (0.15-1.00)	0.050
Cohabiting with current male partner	0.56 (0.31-0.99)	0.048	0.33 (0.13-0.83)	0.019
IPV				
No abuse	**Ref**			
Physical abuse only	0.47 (0.26-0.83)	0.010	0.45 (0.25-0.84)	0.013
Sexual abuse only	1.83 (0.99-3.40)	0.056	1.66 (0.86-3.31)	0.123
Sexual and Physical Abuse	1.39 (0.76-2.55)	0.278	2.13 (1.05-4.43)	0.037
Number of sexual partners in past year	0.88 (0.64-1.20)	0.407	0.63(0.43-0.91)	0.016
Relationship Power				
Total mean score	1.76 (1.09-2.86)	0.022	1.59 (0.93-2.71)	0.090
Age-group				
18-29	**Ref**			
30-44	0.85(0.57-1.26)	0.417	0.94 (0.55-1.60)	0.806
45+	0.43(0.21-0.91)	0.027	0.61 (0.23-1.64)	0.322
Transactional Sex				
Never engaged in transactional sex	**Ref**			
Engaged in transactional sex	1.06 (0.67-1.67)	0.803	0.94 (0.53-1.66)	0.836
Binge drinking				
No	**Ref**			
Yes	1.04 (0.70-1.54)	0.832	1.08 (0.58-1.99)	0.813

Abbreviations: undj OR= Unadjusted Odds Ratio , aOR= Adjusted Odds Ratio, CI = Confidence Interval

CHAPTER 4: DISCUSSION

4.0 INTRODUCTION

Condoms remain the major option used in preventing sexual transmission of HIV (5). There is growing interest in establishing the impact of gender related factors on HIV risk among women (23). Women's vulnerability to HIV infection has been exacerbated by gender related imbalances (63), hence our study aimed to investigate factors that influence consistent condom use among women in Botswana. Factors which emerged as significantly associated with consistent condom use in the multiple logistic regression were education, relationship status, number of sexual partners in past year, IPV in life time and relationship power.

4.1 Relationship between Condom Use and Socio-demographic Factors

The great proportion of women in our study had low education attainment. We found that high education attainment was a significant positive predictive factor for consistent condom use. This finding concurs with two earlier studies done in Kenya (70) and Uganda (22) which found that women who had completed high school or tertiary education were more likely to use condoms consistently. These findings suggest that women with high education attainment are more likely to be exposed and receptive to HIV information, making them use condoms consistently to prevent HIV infection (23). It is also possible that they have high self-efficacy for negotiating condom use that is derived from their higher educational status (10, 23). Overall, our findings indicate that high levels of education enhance women's sexual health choices in safer sex practice regarding consistent condom use (23).

Our study also showed that relationship status significantly influenced consistent condom use. Women cohabiting with current male partner reported the lowest levels of consistent condom use, and had reduced likelihood of consistent condom use compared to women with no current male partner. The negative association between cohabitating with partner and consistent condom corroborates with

previous research (21-23). This suggests low acceptability of condom use in marital or more stable relationships, heightening the risk of HIV infection (21). These findings could be attributed to married or cohabiting women's lack of autonomy in making decisions on sexual matters regarding condom use (30), which may be sanctioned by cultural norms that give women a subservient role to men (24). Negotiating or discussing condom use may also imply lack of trust or infidelity (21, 24). Women in married or cohabiting relationships tend to trust their partners which lowers their risk perception of HIV infection, and reduces the need for condoms for protection against HIV (23, 28).

4.2 Relationship between Condom Use and Behavioral Factors

Findings in our study also showed evidence of an association between number of sexual partners in past year and consistent condom use, with a pattern of decreased consistent condom use with increasing number of sexual partners. These findings are in line with those obtained among females students in Cameroon, whereby females with more than one sexual partners were less likely to use condoms (38). Similarly among a hard to reach population of women in South Africa, women with more than 5 partners reported less consistent condom use (56). This is of concern in the context of a setting with high HIV prevalence because having more sexual partners increases the risk of HIV transmission in unprotected sexual encounters (55). Thus, women with more sexual partners were at high risk of HIV infection which was further heightened by lack of consistent condom use (38).

Almost one third of the women in our study reported ever experiencing IPV. We found that women who ever experienced physical IPV were less likely to use condoms consistently, thus elevating their risk of HIV infection (63). Our results corroborate with previous research findings which documented a negative association between IPV and consistent condom use (34, 41). Several mechanisms may offer possible explanations for our current findings. There could have been fear of negotiating condom use among women with abusive partners due to potential negative partner reactions (34, 42). The fear of abuse may have impaired open communication with their partners on sexual matters concerning condom

use (42). It is also possible that women with abusive partners lacked control in sexual decision-making, and were more likely to submit to their partners to avoid conflict or violence (34, 64). Especially, if their partners asserted conservative patriarchal attitudes and used violence as a measure of subordination and expression of masculinity (12, 32).

With regards to other form of IPV, women who ever experienced sexual IPV and those who ever experienced both sexual and physical IPV had an increased likelihood of consistent condom use. However the association was not statistically significant for sexual IPV and consistent condom use. These findings are not in the anticipated direction of most previous studies reviewed in the introduction which found a negative association between IPV and consistent condom use (27, 34, 41). Possibly, social desirability bias reporting on consistent condom use was higher among women who experienced sexual IPV or it was due to a small cell size (15, 82). This calls for further research to clarify the potential influence of sexual IPV on condom use behavior.

4.3 Relationship between Condom Use and Gender Attitudes

Our study findings found a marginal association between relationship power and consistent condom use. Women with high relationship power were more likely to report consistent condom, showing the key role that relationship power plays in safer sex decision making, and consequently in HIV risk (63). Our findings concur with several earlier studies which found that women with high levels of relationship power were more likely to use condoms consistently (5, 66). This suggests that women in inequitable heterosexual relationships exert less influence on condom use with their partners. Their lack of power in the relationship may attributed to fear of partner violence (64). IPV is the evidence of power imbalances in these relationships; hence it was associated with less consistent condom use in this study. It may also be due to culturally sanctioned norms of masculinity which foster a submissive role to their male partners, leading to acceptance of men sexual entitlement and justification of violence, with the result that women remain in abusive relationships (12, 43). However, our study showed no significant effect of

inequitable gender beliefs on condom use behavior. This effect could have been masked by other factors such as education and age (60).

4.4 Limitations and Strengths

Findings for this study should be considered in light of several limitations. The study was cross-sectional, hence no causal inferences can be drawn. Primary survey collection of data on condom use and associated factors, such as IPV was self-reported and subject to information bias. Participants might have provided socially acceptable responses to sensitive questions. Questionnaires were self-administered with the assistance of trained female researches, and assurance of confidentiality was given to participants, thereby reducing this limitation. However, sexual IPV had few observations which might have created bias in estimates.

While participants were encouraged to respond to every question, they were also allowed to skip questions which they felt uncomfortable answering. Missing data was generated from non-response creating potential bias in estimates. However, this limitation was reduced by estimating missing data and comparing if the loss of data was within 15-20% benchmark (79). The data loss for all variables was within the recommended 15-20% benchmark. Therefore, the missing data posed no serious threat to validity of the obtained estimates. Data on condom use and alcohol use related to one year period and thus it was subject to recall bias.

Despite the limitations, the study has several strengths; our findings were nationally representative as data collected, through multistage random sampling, represented the whole population. Sample power was adequate to detect differences in effects of risk factors on consistent condom use. Our analysis accounted for clusters at district level, giving us robust estimates.

CHAPTER 5: Conclusion and Recommendations

5.1 Conclusion

Our study showed that less than half of the women used condoms consistently implying that a substantial proportion women of in this population where at great risk of HIV. Women's frequency of consistent condom use with partner was empowered by high education attainment and diminished by marital type, abusive, male controlled and polygamous relationships. In summary, our findings suggest that power imbalances in heterosexual relations and practice of risky sexual behavior influence consistent condom use among women.

5.2 Recommendations

Our study has several implications for HIV programs promoting condom use at primary, secondary and tertiary levels in Botswana. Ultimately, primary intervention is the main goal to ensure that there are no new cases of HIV. These interventions include developing gender responsive strategies addressing gender inequalities affecting women's vulnerability to HIV. This can be achieved by promoting advancement of women's education through government initiatives such as education grants for women, and delivering sexual health information on condom use using media platforms (pamphlets, billboards, radio, television) accessible to different levels of literacy. HIV programs need to be tailored for women with abusive and controlling partners. Both women and men should be educated on openly discussing sexuality and condom negotiation skills. This also includes training targeted at men, on violence against women as a component of gender and sexuality training. Referral services such as women's groups, counseling services, peer support groups and shelters should be provided for women experiencing partner violence.

Condom socially marketing and condom use messages must targeted at cohabiting and polygamous relationships to encourage continually use of condoms within these relationships. At the secondary level, condom use campaigns should be targeted at women who are HIV positive and sero-discordant couples. Finally, there is a need to further explore the influence of gender beliefs on relationship power and intimate partner violence and their downstream effects on women's condom use and HIV risk.

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APPENDICES

APPENDIX I- PLAGIARISM DECLARATION



PLAGIARISM DECLARATION TO BE SIGNED BY ALL HIGHER DEGREE STUDENTS

SENATE PLAGIARISM POLICY: APPENDIX ONE

I ___Chenai Mlandu____ (Student number: __1155482____) am a student registered for the degree of __MSC Infectious Disease Epidemiology_in the academic year ___2017___.

I hereby declare the following:

- I am aware that plagiarism (the use of someone else's work without their permission and/or without acknowledging the original source) is wrong.
- I confirm that the work submitted for assessment for the above degree is my own unaided work except where I have explicitly indicated otherwise.
- I have followed the required conventions in referencing the thoughts and ideas of others.
- I understand that the University of the Witwatersrand may take disciplinary action against me if there is a belief that this is not my own unaided work or that I have failed to acknowledge the source of the ideas or words in my writing.

Signature:  Date: ___31 August 2017____

APPENDIX II -ETHICS CLEARANCE CERTIFICATE

R14/49 Miss Chenai Mlandu

HUMAN RESEARCH ETHICS COMMITTEE (MEDICAL)

CLEARANCE CERTIFICATE NO. M1611118

NAME: (Principal Investigator)	Miss Chenai Mlandu
DEPARTMENT:	School of Public Health
PROJECT TITLE:	Factors Associated with Consistent Condom use among Women in Botswana
DATE CONSIDERED:	25/11/2016
DECISION:	Approved unconditionally
CONDITIONS:	
SUPERVISOR:	Nicola Christofides and Mercilene Machisa
APPROVED BY:	Professor P Cleaton-Jones, Chairperson, HREC (Medical)
DATE OF APPROVAL:	30/11/2016

This clearance certificate is valid for 5 years from date of approval. Extension may be applied for.

DECLARATION OF INVESTIGATORS

To be completed in duplicate and **ONE COPY** returned to the Research Office Secretary in Room 301, Third Floor, Faculty of Health Sciences, Phillip Tobias Building, 29 Princess of Wales Terrace, Parktown, 2193, University of the Witwatersrand. I/we fully understand the conditions under which I am/we are authorized to carry out the above-mentioned research and I/we undertake to ensure compliance with these conditions. Should any departure be contemplated, from the research protocol as approved, I/we undertake to resubmit the application to the Committee. **I agree to submit a yearly progress report**. The date for annual re-certification will be one year after the date of convened meeting where the study was initially reviewed. In this case, the study was initially reviewed in November and will therefore be due in the month of November each year. Unreported changes to the application may invalidate the clearance given by the HREC (Medical).

Principal Investigator Signature

Date 03/02/17

PLEASE QUOTE THE PROTOCOL NUMBER IN ALL ENQUIRIES

APPENDIX 111- EDITED QUESTIONNAIRE SHOWING SELECTED VARIABLES

Relationship Survey Women (English)

RELATIONSHIPS HOUSEHOLD SURVEY - Botswana

WOMENS QUESTIONNAIRE

Q1.	Self administered Interview	1	Yes
		0	No
Q2.	Study ID number:		__ __ __ __ __
Q3.	Visit Number		__ __
Q4.	Date of Interview	__ __ / __ __ / __ __ __ __	mm / dd / yyyy
Q5.	Interviewer Number		__ __ __ __
Q6.	Interview Site	__ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __	
Q7.	Cluster Number		__ __
Q8.	Start time of interview:	__ __ : __ __ : __ __	hh : mm : ss

READ: Thank you very much for agreeing to participate in this survey. We would like to remind you that this questionnaire is anonymous and that there will be no way to link you to your answers. We aim to protect your privacy because we want you to feel free in answering our questions. We know some questions are more difficult to answer than others. Please take your time and relax. All the questions are about your life and your ideas. There are no right or wrong answers. The first questions we will ask you are about yourself, your home and your childhood. If there is a question you do not want to answer please tell me and I will skip to the next question.

SECTION 1: BACKGROUND

READ: Let us begin. Please remember that everything you tell me will be kept secret.

Q9. How old are you? (Choose one)

01	18-20
02	21-24
03	25-29
04	30-34
05	35-39
06	40-44
07	45 -49
08	50 - 54
09	55 or older
97	Don't Know
98	Refuse to Answer
99	Not Applicable

Q10. What is the highest standard or grade you have completed at school? (Choose one)

01	No schooling	
02	Primary school incomplete	
03	Primary school complete (grade7/std5)	
04	High school incomplete	
05	High school complete	
06	Further degree/Qualification incomplete	
07	Further degree/Qualification complete	
08	DON'T KNOW	
98	Refuse to Answer	
99	Not Applicable	

Q15. Have you worked to earn money in the last 12 months?

1	Yes	
0	No	***Skip to Q18***
8	Refuse to Answer	***Skip to Q18***

Q16. How much do you earn per month, before tax, and including benefits? (Choose one)

01	P1 - P500
02	P501 - P1000
03	P1 001 - P2000
04	P2001 - P5000
05	P5001 - P10 000
06	P10 001 - P20 000
07	P20 000 or more
97	Don't Know
98	Refuse to Answer
99	Not Applicable

SECTION 2: CHILDHOOD (FROM BIRTH TO 18 YEARS)

READ: I want to ask you some questions about your childhood and teenage years. Can you tell me how often the following things happened to you? I will read out some statements and I want to know if each one was never true, sometimes true, often true or very often true.

Q24. Before I reached 18 I did not have enough to eat. (Choose one) (Choose one)

1	**Never true**
2	**Sometimes true**
3	**Often true**
4	**Very often true**
7	Don't Know
8	Refuse to Answer
9	Not Applicable

Q25. Before I reached 18 I lived in different households at different times. (Choose one)

1	**Never true**
2	**Sometimes true**
3	**Often true**
4	**Very often true**
7	Don't Know
8	Refuse to Answer
9	Not Applicable

Q26. Before I reached 18 I saw or heard my mother being beaten by her husband or boyfriend. (Choose one)

1	**Never true**
2	**Sometimes true**
3	**Often true**
4	**Very often true**
5	No mother
7	Don't Know
8	Refuse to Answer
9	Not Applicable

Q27. Before I reached 18 I was told I was lazy or stupid or weak by someone in my family. (Choose one)

1	**Never true**
2	**Sometimes true**
3	**Often true**
4	**Very often true**
7	Don't Know
8	Refuse to Answer
9	Not Applicable

Q28. Before I reached 18 someone touched my buttocks or genitals or made me touch them when I did not want to. (Choose one)

1	**Never true**
2	**Sometimes true**
3	**Often true**
4	**Very often true**
7	Don't Know
8	Refuse to Answer
9	Not Applicable

Q29. Before I reached 18 I was insulted or humiliated by someone in my family in front of other people. (Choose one)

1	**Never true**
2	**Sometimes true**
3	**Often true**
4	**Very often true**
7	Don't Know
8	Refuse to Answer
9	Not Applicable

Q30. Before I reached 18 I was beaten at home with a belt or stick or whip or something else which was hard. (Choose one)

1	**Never true**
2	**Sometimes true**
3	**Often true**
4	**Very often true**
7	Don't Know
8	Refuse to Answer
9	Not Applicable

Q31. Before I reached 18 I had sex with a man who was more than 5 years older than me. (Choose one)

1	**Never true**
2	**Sometimes true**
3	**Often true**
4	**Very often true**
7	Don't Know
8	Refuse to Answer
9	Not Applicable

Q32. Before I reached 18 one or both of my parents were too drunk to take care of me. (Choose one)

1	**Never true**
2	**Sometimes true**
3	**Often true**
4	**Very often true**
5	No parents
7	Don't Know
8	Refuse to Answer
9	Not Applicable

Q33. Before I reached 18 I was beaten so hard at home that it left a mark or bruise. (Choose one)

1	**Never true**
2	**Sometimes true**
3	**Often true**
4	**Very often true**
7	Don't Know
8	Refuse to Answer
9	Not Applicable

Q34. Before I reached 18 I spent time outside the home and none of the adults at home knew where I was. (Choose one)

1	**Never true**
2	**Sometimes true**
3	**Often true**
4	**Very often true**
5	No adults
7	Don't Know
8	Refuse to Answer
9	Not Applicable

Q35. Before I reached 18 I had sex with someone because I was threatened or frightened or forced. (Choose one)

1	**Never true**
2	**Sometimes true**
3	**Often true**
4	**Very often true**
7	Don't Know
8	Refuse to Answer
9	Not Applicable

Q36. Before I reached 18 I was beaten or physically punished at school by a teacher . (Choose one)

1	**Never true**
2	**Sometimes true**
3	**Often true**
4	**Very often true**
5	Did not go to school
7	Don't Know
8	Refuse to Answer
9	Not Applicable

Q37. Before I reached 18 I was forced to have sex against my will by a boyfriend. (Choose one)

1	**Never true**
2	**Sometimes true**
3	**Often true**
4	**Very often true**
7	Don't Know
8	Refuse to Answer
9	Not Applicable

SECTION 3: COMMUNITY IDEAS ABOUT GENDER RELATIONS (Social norms)

READ: Now I would like to ask your opinion on some statements on what you and your community thinks about relations between men and women, can you tell me if you and your community strongly agree, agree, disagree or strongly disagree with the following statements:

Q43. I think that a man should have the final say in all family matters. (Choose one)

1	Strongly Agree
2	Agree
3	Disagree
4	Strongly Disagree
7	Don't Know
1	Strongly Agree
2	Agree
3	Disagree
4	Strongly Disagree
7	Don't Know
8	Refuse to Answer
9	Not Applicable

Q45. I think that men should share the work around the house with women such as doing dishes, cleaning and cooking. (Choose one)

1	Strongly Agree
2	Agree
3	Disagree
4	Strongly Disagree
7	Don't Know
8	Refuse to Answer

SECTION 5: GENDER EQUITABLE WOMEN SCALE

Q74. You don't talk about sex, you just do it. (Choose one)	1	Strongly Agree
	2	Agree
	3	Disagree
	4	Strongly Disagree
	7	Don't Know
	8	Refuse to Answer
	9	Not Applicable
Q75. There are times when a woman deserves to be beaten. (Choose one)	1	Strongly Agree
	2	Agree
	3	Disagree
	4	Strongly Disagree
	7	Don't Know
	8	Refuse to Answer
	9	Not Applicable
Q76. Changing nappies, giving kids a bath, and feeding the kids are the mother's responsibility. (Choose one)		
	1	Strongly Agree
	2	Agree
	3	Disagree
	4	Strongly Disagree
	7	Don't Know
	8	Refuse to Answer
	9	Not Applicable
Q77. It is a woman's responsibility to avoid getting pregnant. (Choose one)	1	Strongly Agree
	2	Agree
	3	Disagree
	4	Strongly Disagree
	7	Don't Know
	8	Refuse to Answer
	9	Not Applicable
Q78. Men are always ready to have sex. (Choose one)	1	Strongly Agree
	2	Agree
	3	Disagree
	4	Strongly Disagree
	7	Don't Know
	8	Refuse to Answer
	9	Not Applicable

Q79. My husband or boyfriend would be outraged if I asked him to use a condom. (Choose one)

1	Strongly Agree
2	Agree
3	Disagree
4	Strongly Disagree
7	Don't Know
8	Refuse to Answer
9	Not Applicable

Q80. Men have to be strong. (Choose one)

1	Strongly Agree
2	Agree
3	Disagree
4	Strongly Disagree
7	Don't Know
8	Refuse to Answer
9	Not Applicable

Q81. Men should be embarrassed if they are unable to get an erection during sex. (Choose one)

1	Strongly Agree
2	Agree
3	Disagree
4	Strongly Disagree
7	Don't Know
8	Refuse to Answer
9	Not Applicable

SECTION 7: SEX AND PREGNANCY

READ: The next set of questions is about different aspects of your health and any children you may have.

Q96. How many children have you given birth to? (Choose one)

00	None	***Skip to instruction before Q103***
01	1	
02	2	
03	3	
04	4	
05	5	
06	6	
07	7	
08	8 or more	
97	Don't Know	
98	Refuse to Answer	***Skip to instruction before Q103***
99	Not Applicable	***Skip to instruction before Q103***

SECTION 8: PARTNER

READ: We will now be asking you about your current partner.

Q103. Do you currently have a husband or boyfriend?	1	Yes	
	0	No	***Skip to Q107***
	7	Don't Know	
	8	Refuse to Answer	***Skip to Q107***
	9	Not Applicable	***Skip to Q107***

Q104. Do you live with him?	1	Yes
	0	No
	7	Don't Know
	8	Refuse to Answer
	9	Not Applicable

Q109. Are you in a same sex relationship?	1	Yes	***Skip to Q113***
	0	No	
	7	Don't Know	
	8	Refuse to Answer	
	9	Not Applicable	
	98	Refuse to Answer	
	99	Not Applicable	***Skip to Q115***

Skip to Q115.

Q115. Does your current or most recent boyfriend/husband drinks alcohol? How often? (Choose one)

1	EVERY DAY/NEARLY EVERY DAY
2	ONLY AT WEEKENDS
3	A FEW TIMES IN A MONTH
4	LESS THAN ONCE A MONTH
5	NEVER
6	NOT NOW
7	Don't Know
8	Refuse to Answer
9	Not Applicable

SECTION 9: RELATIONSHIP CONTROL

READ: Would now like to read out some statements and I would like you to think about your relationship with _____. For each statement to tell me if you strongly agree, agree, disagree or strongly disagree.

Q119. If I ask my partner to use a condom, he would beat or hit me. (Choose one)

1	Strongly Agree
2	Agree
3	Disagree
4	Strongly Disagree
7	Don't Know
8	Refuse to Answer
9	Not Applicable

Q120. If I ask my partner to use a condom, he would get angry. (Choose one)

1	Strongly Agree
2	Agree
3	Disagree
4	Strongly Disagree
7	Don't Know
8	Refuse to Answer
9	Not Applicable

Q121. My partner won't let me wear certain things. (Choose one)

1	Strongly Agree
2	Agree
3	Disagree
4	Strongly Disagree
7	Don't Know
8	Refuse to Answer
9	Not Applicable

Q122. My partner has more to say than I do about important decisions that affect us. (Choose one)

1	Strongly Agree
2	Agree
3	Disagree
4	Strongly Disagree
7	Don't Know
8	Refuse to Answer
9	Not Applicable

Q123. My partner tells me who I can spend time with. (Choose one)

1	Strongly Agree
2	Agree
3	Disagree
4	Strongly Disagree
7	Don't Know
8	Refuse to Answer
9	Not Applicable

Q125. My partner does what he wants, even if I don't want him to. (Choose one)

1	Strongly Agree
2	Agree
3	Disagree
4	Strongly Disagree
7	Don't Know
8	Refuse to Answer
9	Not Applicable

Q126. If I ask my partner to use a condom, he would think that I'm having sex with other people. (Choose one)

1	Strongly Agree
2	Agree
3	Disagree
4	Strongly Disagree
7	Don't Know
8	Refuse to Answer
9	Not Applicable

Q127. When my partner and I disagree, he gets his way most of the time. (Choose one)

1	Strongly Agree
2	Agree
3	Disagree
4	Strongly Disagree
7	Don't Know
8	Refuse to Answer
9	Not Applicable

Q128. Because my partner buys me things he expects me to please him. (Choose one)

1	Strongly Agree
2	Agree
3	Disagree
4	Strongly Disagree
7	Don't Know
8	Refuse to Answer
9	Not Applicable

Q129. My partner always wants to know where I am. (Choose one)

1	Strongly Agree
2	Agree
3	Disagree
4	Strongly Disagree
7	Don't Know
8	Refuse to Answer
9	Not Applicable

SECTION 10: EXPERIENCE OF INTIMATE PARTNER VIOLENCE

READ: In any relationship there are good times and bad times. I now want to ask you about some of the bad times we have in relationships and what has happened. Remember there is no right or wrong answer and anything you say will be kept confidential.

PHYSICAL ABUSE

READ: Men often fight with their girlfriends/wives and often these fights get physical. I am going to ask some questions about this because we want to learn more about what women experience in their lives. I want you to speak freely and remember that everything you say will be confidential.

Q142. Has a current or previous husband or boyfriend ever slapped you or threw something at you which could hurt you? Did this happen many times, a few times, once or did it not happen? (Choose one)

1	NEVER
2	ONCE
3	FEW
4	MANY
7	Don't Know
8	Refuse to Answer
9	Not Applicable

Q143. Has a current or previous husband or boyfriend ever pushed or shoved you? Did this happen many times, a few times, once or did it not happen? (Choose one)

1	NEVER
2	ONCE
3	FEW
4	MANY
7	Don't Know
8	Refuse to Answer
9	Not Applicable

Q144. Has a current or previous husband or boyfriend ever hit you with a fist or with something else which could hurt you? Did this happen many times, a few times, once or did it not happen? (Choose one)

1	NEVER
2	ONCE
3	FEW
4	MANY
7	Don't Know
8	Refuse to Answer
9	Not Applicable

Q145. Has a current or previous husband or boyfriend ever kicked, dragged, beat, choke or burnt you? Did this happen many times, a few times, once or did it not happen? (Choose one)

1	NEVER
2	ONCE
3	FEW
4	MANY
7	Don't Know
8	Refuse to Answer
9	Not Applicable

Q146. Has a current or previous husband or boyfriend ever threatened to use or actually use a gun, knife or other weapon against you? Did this happen many times, a few times, once or did it not happen? (Choose one)

1	NEVER
2	ONCE
3	FEW
4	MANY
7	Don't Know
8	Refuse to Answer
9	Not Applicable

Q147. Have any of the previous questions ever happened to you?

1	Yes	
0	No	***Skip to instruction before Q178***
7	Don't Know	
8	Refuse to Answer	***Skip to instruction before Q178***
9	Not Applicable	***Skip to instruction before Q178***

SEXUAL ABUSE

READ: There are also other things which women experience that they sometimes do not talk about. I want you to speak freely and remember that everything you say will be confidential.

Q178. Has a current or previous husband or boyfriend ever physically forced you to have sex when you did not want to? Did this happen many times, a few times, once or did it not happen? (Choose one)

1	NEVER
2	ONCE
3	FEW
4	MANY
7	Don't Know
8	Refuse to Answer
9	Not Applicable

Q179. Have you ever have sex with a current or previous husband or boyfriend when you did not want to because you were afraid of what he might do? Did this happen many times, a few times, once or did it not happen? (Choose one)

1	NEVER
2	ONCE
3	FEW
4	MANY
7	Don't Know
8	Refuse to Answer
9	Not Applicable

Q180. Has a current or previous husband or boyfriend ever forced you to do something sexual that you found degrading or humiliating? Did this happen many times, a few times, once or did it not happen? (Choose one)

1	NEVER
2	ONCE
3	FEW
4	MANY
7	Don't Know
8	Refuse to Answer
9	Not Applicable

Q181. Have any of the previous questions happened to you?

1	Yes	
0	No	***Skip to instruction before Q184***
7	Don't Know	
8	Refuse to Answer	
9	Not Applicable	***Skip to instruction before Q184***

SECTION 14: SEXUAL BEHAVIOUR

READ: : The next questions are about your sexual relationships. I know that these questions can be embarrassing. Please remember that everything you say will be kept secret and your name will not appear anywhere on the questionnaire. We are asking over 600 women the same questions, and we know that women have a wide range of experiences. Some start having sex in their early teens; some start a bit later. Most of us have more than one partner. Please remember that everything you say will be kept secret and cannot be linked to you.

Q249. When was the last time you had sex? (Choose one)

00	Never had sex	***Skip to Q266***
01	More than 12 months ago	
02	12 Months ago	
03	6 - 11 months ago	
04	3 - 5 months ago	
05	1 - 2 months ago	
06	2 - 3 weeks ago	
07	1 day - 1 week ago	
97	Don't Know	
98	Refuse to Answer	***Skip to Q266***
99	Not Applicable	***Skip to Q266***

Q250. In the past year, would you say you use condoms always, often or sometimes? (Choose one)

1	NO USE
2	ALWAYS
3	OFTEN
4	SOMETIMES
7	Don't Know
8	Refuse to Answer
9	Not Applicable

Q251. How many sexual partners have you had sex with in the last year? (Choose one)

00	0
01	1
02	2-4
03	5-9
04	10-14
05	15-19
06	20-29
07	30-50
08	50 or more
97	Don't Know
98	Refuse to Answer
99	Not Applicable

READ: We would like to ask you about the number of sexual partners you have had in your WHOLE LIFE including this year. We want to know about the number of different partners.

READ: We as women often find ourselves in situations where we need someone to help us.

Q257. I have had a relationship with a casual partner in part because I hoped he would help me pay for things I couldn't afford by myself. (Choose one)

1	True
2	Somewhat true
3	Somewhat false
4	False
7	Don't Know
8	Refuse to Answer
9	Not Applicable

Q258. I have had a relationship with a casual partner in part because I hoped he would help me pay for things like housing, food, or other bills. (Choose one)

1	True
2	Somewhat true
3	Somewhat false
4	False
7	Don't Know
8	Refuse to Answer
9	Not Applicable

Q259. I have had a relationship with a casual partner in part because I hoped he would help me support my children or other people who depend on me for financial support. (Choose one)

1	True
2	Somewhat true
3	Somewhat false
4	False
7	Don't Know
8	Refuse to Answer
9	Not Applicable

Q260. I have had a relationship with a casual partner in part because he gave me cosmetics, clothes, jewelry, cell phone or other items I could not afford on my own. (Choose one)

1	True
2	Somewhat true
3	Somewhat false
4	False
7	Don't Know
8	Refuse to Answer
9	Not Applicable

SECTION 15: SEXUALLY TRANSMITTED DISEASES AND HIV TESTING

READ: Thank you for answering these questions. Now we just have a few more questions about your health.

Q266. When did you last have an HIV test? (Choose one)

0	Never tested	***Skip to Q270***
1	Last 12 months	
2	2-5 years ago	
3	More than 5 years ago	
7	Don't Know	
8	Refuse to Answer	***Skip to Q270***
9	Not Applicable	***Skip to Q270***

Q267. Did you take the result?

1	Yes	
0	No	***Skip to Q270***
7	Don't Know	
8	Refuse to Answer	***Skip to Q270***
9	Not Applicable	***Skip to Q270***

Q268. Was the HIV test positive?

1	Yes	
0	No	***Skip to Q270***
7	Don't Know	
8	Refuse to Answer	***Skip to Q270***
9	Not Applicable	***Skip to Q270***

Q269. Have you experienced violence because of your HIV status? (Check all that apply)

__	Emotional abuse
__	Physical abuse
__	Sexual violence
__	Don't Know
__	Refuse to Answer
__	Not Applicable

SECTION 18: SUBSTANCE USE ALCOHOL AND DRUG USE

READ: Please remember that whatever you share in this research will be kept confidential and will only be used for the purpose of understanding women's lives and relationships. Now we have some different questions. We are going to ask you about drinking alcohol and some questions about your health.

Q304. Have you drunk alcohol in the past 12 months?	1	Yes	
	0	No	***Skip to Q307***
	7	Don't Know	
	8	Refuse to Answer	***Skip to Q307***
	9	Not Applicable	***Skip to Q307***

Q305. How often do you have a drink containing alcohol? (Choose one)	1	Monthly or less
	2	2-4 times a month
	3	2-3 times a week
	4	4 + times a week
	7	Don't Know
	8	Refuse to Answer
	9	Not Applicable

Q306. How often do you have 5 or more drinks on one occasion? (Choose one)		
	1	Never
	2	Less than monthly
	3	Monthly
	4	Weekly
	5	Daily or almost daily
	7	Don't Know
	8	Refuse to Answer
	9	Not Applicable

9

FINISH

Q310. Was this a Self-administered Interview?	1	Yes
	0	No
	7	Don't Know
	8	Refuse to Answer
	9	Not Applicable

READ: I would like to thank you very much for helping us. We have talked about some very difficult things today. I appreciate the time you have taken. I realise that these questions may have been difficult for you to answer, but it is only by hearing about women's lives that we can really begin to understand them. We really appreciate your openness with us. Most women have difficult times in their lives and it's good to share them and remember we did not bring them on ourselves. We really appreciate your participation in this study. By sharing this personal information with you are helping us with our research and that will ultimately help many other people in the country.

Q311. **End Time of Interview:**	__ __ : __ __ : __ __	hh : mm : ss
	97	Don't Know (Hour)
	98	Refuse to Answer (Hour)
	99	Not Applicable (Hour)