

**Determinants of Condom use in Botswana: An empirical
Investigation of the Role of Gender
Brothers Wilright Malema***

Abstract

This article is largely motivated by the observation that gender imbalance have tended to aggravate females susceptibility to HIV infection as men used their dominance to dictate on issues of sexual activity with their female counterparts. The paper analyses factors influencing the use of condoms by both sexes and discovers that both males and females respond in similar fashion albeit at differing intensities to determinants of condom use. Using logistic regression analysis we note that education, the never married, those living together, the perception that the partner could be unfaithful and age at first sex are positively correlated to condom use for both males and females. In cases where the faithfulness of the partner was unknown, females were more likely to use condoms whereas there was no observable relationship for males in such cases. There was a negative relationship between condom use and age differences with partner for females whereas the relationship was positive for males. Females who were Professionals, legislators, associate professionals and technicians were less likely to use condoms than the unemployed females. In the case of males it was the associate professionals and technicians who were less likely to use condoms than the unemployed whereas the other professions were not statistically different to the unemployed males in terms of condom use. In conclusion we note that there is no conclusive evidence that gender imbalance impedes the propensity of women to use condoms.

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1. Introduction

The proliferation of HIV/AIDS infection globally, has been more profound amongst females than males, thereby generating a debate on factors behind this trend. Whereas a number of explanations have been raised to explicate this observable scenario, the literature is replete with information attributing this sexual bias in infection rates to gender imbalance. This paper seeks to investigate the role of gender imbalance in the use of condoms as a preventive means to HIV infection. An endeavor to analyse the determinants of condoms use amongst males and females independently is undertaken, in order to ascertain and establish if there are any disparities or similarities in terms of their patterns of use of condoms.

The recognition that HIV epidemics are dynamic, as what is true in one country may not necessarily be true in another, and what was true two years ago may no longer be true today has necessitated the need to keep on upgrading the information on the different dimensions of HIV/AIDS (UNAIDS/WHO, 2004). To this end this study is intended to establish whether gender imbalance is a major factor in the increase in infection rates amongst Botswana women as observed in some countries or to establish the degree of its existence.

1.1 Gender

Males and females have same rights, potential and capacities but discrimination against females on socio-cultural norms often relegates them to lower status and value. This culminates in their considerable disadvantages in accessing resources, decision-making power, choices and opportunities across all spheres of life. Whereas sex is biological, gender is socially ascribed. The gender inequalities, unequal power relations, sexual coercion and violence across women of all ages have exacerbated the HIV/AIDS epidemic and adversely affected the female's sexual, mental and physical health (Smith 2002). Gender dynamics therefore, are understood as different roles, expectations, opportunities, obstacles, needs and identities assigned by society to male and females based on sex (UNFPA, 2002). Gender in HIV/AIDS epidemic is defined as "the array of societal beliefs, norms, customs and practices that define 'masculine' and 'feminine' attributes

and behaviours’’ and is considered to play an integral role in an individual’s vulnerability to infection, in accessing care, support and treatment and in coping when affected or infected (WHO, 2003). The increase in infection rates amongst women, is also prevalent in Botswana in which more women aged 0-34 have high HIV prevalence compared to males of the same age. Above the ages of 34, HIV prevalence is higher amongst males than females. At the average, we observe that 30.6 percent of females are HIV positive compared to 26.5 percent for males (Tebelopele VCT, 2005).

Gender inequality is considered a major factor in the spread of HIV in Botswana. For every boy under 14 years who is HIV positive, there are two HIV positive girls (NACA and ACHAP, 2002). This is attributed to the ‘sugar daddy syndrome’ a phenomenon often cited in areas where HIV/AIDS is fast infecting women more than men. Older men who have relationships with younger girls do at times use force and women are not treated as equals at work, in the household and in sexual relationships (NACA and ACHAP, 2002). If 10-year difference between partners is the cut off point for a relationship to be considered falling within the ‘sugar daddy’ type, then indeed Botswana has this problem. As have been highlighted before in this paper, the ‘sugar mummy’ syndrome in which older women go out with younger men and in some cases by more than 10 years is also present at almost the same degree. The tendency to use condoms as the age differences increase by males is commendable. The tendency of females to reduce the use of condoms as age differences increase might indicate gender imbalance.

1.2 The Global Infection Scenario

The progression of the pandemic has been accompanied by a change in the trend of infections with higher infections being noted amongst women than men (UNFPA 2002, WHO 2003). Globally, almost 50 percent of people who were living with HIV/AIDS in 2002 were women and the percentage stood at 58 percent for women in Sub Saharan Africa (WHO, 2003).

There is ample evidence that HIV/AIDS is increasingly infecting more women than men, despite the observation that at the initial stages of the infection more men than women were infected

(WHO, 2003, UNAIDS/UNFPA/UNIFEM, 2004, Beckmann and Rai 2005). There is considerable literature that details the factors that influence the observable trend in infections. These factors are economic and gender based, with the latter being more complex and influenced by socio-cultural and economic considerations.

In a study conducted in Kenya the prevalence rate stood at 23 percent for young women and 3.5 percent for men of the same age (WHO, 2003). The average infection rate among girls in Mozambique is 15 percent, which is twice that of their male counter parts and this is due largely to the fact that girls are married by the age of 18 often to older men (Beckmann and Rai 2005). In Africa, young women aged 15-24 years are three times more likely to be infected than their male peers due to among others civil conflicts, violence and poverty and the ratio stands at 2 to 1 in the Caribbean largely to drug injection and men sleeping with men(MSM). The percentages of females living with HIV in Asia and the Pacific were 22 percent, in Eastern Europe it was 34 percent and it was 36 percent for Latin America and the Caribbean (De Bruyn . 2005). The predominant mode of infection in these areas has been drug injection.

In countries where young people account for a higher proportion of all new infections, young women who are HIV-positive normally outnumber their seropositive male peers by as much as six times. This calls for the need to address gender and power dynamics between males and females in order to halt the spread of the pandemic (UNFPA 2002).

1.3 Explaining the observable trends

There are some differences in the underlying mechanisms of HIV infection between women and men, primarily due to biological factors, sexual behaviours and socially constructed gender differences. The susceptibility of women to HIV infection is driven by the interaction of biological, socio-cultural norms and structural factors (Mantell et al 2006). Other risk factors in South Africa are sexual activity as against abstaining, multiplicity of partners (serially or concurrently) and unprotected sex including occasional condom use or frequent misuse or

incorrect use (Eaton, Flisher & Aaro. 2003). Young people in South Africa continue to be at greatest risk of HIV infection particularly females (Pettiforet al 2005).

The disparities are also due to some socio cultural norms, beliefs and practices, which in some cases dictate marriage for women at early stages, with their partners being older than them and with more sexual exposure. In Sub-Saharan Africa, the husbands of 15-19 year old girls are on the average ten years older (WHO, 2003). Poverty also drives young girls into relationships with older men or 'sugar daddies' in anticipation of materialistic gains in return for sex (Smith 2002). Women are often raised to be submissive and unaware of sexual matters until marriage, whereas men and boys are expected to be sexually knowledgeable and in some cases to be able to express their sexual prowess through casual and multiple partners (Cullen 2006, UNFPA 2002). The other factor is that women have a larger surface area of mucous membrane exposed during sexual intercourse and they are exposed to larger quantities of infectious fluids such as semen than men are.

1.4 Condom Use

There was reported less condom use with most recent partner for both males and females with females reporting less number of casual partners than males in South Africa. Seventy seven percent of youth reported that they did not use condoms with their last partner and only twenty five percent of women and fifteen percent of men have reported having ever tested HIV (Pettifor, et al 2005). The use of condoms in Sub-Saharan Africa was very low before the advent of HIV/AIDS and they were reserved for prostitutes, untrustworthy partners, casual partners and not frequent or untrusted partners (Speizer, et al 2002). That condoms were used with casual partners is also noted by Eaton, Flisher, & Aaro, (2003). Speizer, et al (2002) noted that males who had personal experience with AIDS by having known someone who died of AIDS were more likely to use condoms than females with same experience and they call for different approaches in fighting HIV/AIDS.

A study at the University of Ibadan, Nigeria involving 422 students with a mean educational level of 17.6 years concluded that there was low condom use among the sexually active students,

with thirty percent and eleven percent of males and females respectively, reporting that they never used condoms (Olley & Rotimi 2003).

Coleman & Ball (2007) point out that the advent of antiretroviral therapy may lead to undetectable viral loads and people's perception about HIV/AIDS, the use of alcohol and drugs, the believe that sex is more pleasurable without condoms, the HIV conspiracy beliefs, religiosity and the general understanding of HIV transmissions may lead to low rates on condom use. In Ethiopia the spread of HIV/AIDS into the rural communities was largely driven by high prevalence of extramarital unprotected sexual intercourse (Molla, Astrom & Brehane 2007).

Young women are reluctant to carry condoms or to suggest for their use for fear of being labeled promiscuous. In some cases, women who are able to influence their sexual partners' behaviour prefer not to use condoms (DE Bruyn 2005). The discussion about HIV and condoms was an issue most women in Xai Xai in Mozambique did not want to talk about despite the high rates of HIV (Epstein 2002).

1.5 Marital Status

Early marriage particularly for girls lead to lower education and early childbearing with adverse health consequences for both the mother and child and less decision making power in the household (Jensen & Thornton 2003). The marriage gaps were correlated to women's power in the household with those with wider marriage gaps less empowered than those with narrow gaps.

In societies where extra-marital and pre-marital sexual relations for men are a norm and women are not empowered to negotiate safe sex practices, being faithful for such women is neither a protective nor a preventive measure against HIV infection (WHO, 2003). As much as promiscuity is associated with men, in Mozambique, the migration of husbands to mines particularly in South Africa left families without anyone to impose some discipline and women became unfaithful (Epstein 2002).

1.6 Gender Violence

It is estimated that 1 in 5 women, globally suffer from physical abuse from an intimate partner, with one-third to one-half of abused women subjected to sexual violence (UNFPA 2002). Violence is both a cause and a consequence of HIV/AIDS and 10 to 69 percent of women will be affected by intimate partner violence in their lifetime. Many women whose positive statuses are known are likely to be beaten and thrown out of their families. A study in South Africa showed that women who were beaten by their intimate partners were 48 percent more likely to become infected than those who were not. In Tanzania, HIV positive women were two and a half times likely to have experienced violence than HIV negative women (UNAIDS/UNFPA/UNIFEM, 2004). South Africa is leading the world in terms of gender based violence with rape against women occurring every 26-36 seconds (Onyejekwe 2004). The growth of the pandemic in Papua New Guinea is aggravated by high incidence of rape, sexual and other forms of violence against women (Cullen 2006).

1.7 Poverty

The economic hardships encountered in many rural and urban areas in Africa render actions, which may pave way for life in five to ten years to come a luxury, in light of immediate needs for survival. People are concerned about where their next meal is going to come from and as such, the fear of death is not a deterrent as death in villages is a daily occurrence (Cullen 2006). The use of condoms, in the prevention of HIV infection is therefore secondary to the need for immediate survival today. The fast spread of HIV/AIDS in developing countries is mostly related to behaviour owing to poverty and paucity of knowledge about transmission and prevention (Anschutz 2004). Females in South Africa are deprived by poverty and financial lack to negotiate safe sex and to seek redress for justice in the event of gender violence (Onyejekwe 2004).

1.8 Confronting the Crisis

The promotion of girls' primary and secondary education and women's literacy is likely to significantly contribute to their knowledge of prevention of HIV infection and to delay sexual activity. The elimination of school fees is also important in keeping girls in schools and in reinforcing their participation and empowerment and in promoting sexual and reproductive health (UNAIDS/UNFPA/UNIFEM, 2004). The need for education is also documented by De Bruyn (2005) who calls for the empowerment of girls and women. Differences in access to productive resources is said to translate into imbalances in sexual power in which the satisfaction of male pleasure supersedes the female pleasure. An understanding of an individual's sexual behaviour or sexual risk requires the understanding of the complex interplay of economic and socio-cultural dynamics that determine the distribution of power (WHO 2004). Complex social and cultural barriers in many countries, both industrialized and developing, make it difficult to talk about sexuality and HIV prevention, even among the educated middle class women and the situation is even worse for poor women with less power (UNAIDS/UNFPA/UNIFEM, 2004).

On the treatment front it is estimated that only 3 percent of people in need of antiretroviral therapy (ART) had access to it in 2003. However, women may still miss treatment even when it is available, as families with limited means may prefer treatment for men and the lack of income and resources may impede women from reaching clinics (UNAIDS/UNFPA/UNIFEM, 2004). Stand-alone STI and HIV/AIDS related services might be underutilized as people may be stigmatized by using such services (WHO, 2003).

2. Methodology

2.1 Data

This paper uses Botswana AIDS impact survey II (BAIS II) data collected by the Central Statistics Office of the Ministry of Finance and Development Planning and the National AIDS Coordinating Agency (NACA) in 2004. The nationally representative sample survey collected data on background characteristics, sexual history and behaviour, sexually transmitted infections,

knowledge about HIV/AIDS, sibling history and antenatal care amongst other variables. It used the 2001 population and housing census as a sampling frame.

2.2 Analytical Tools

The primary mode of analysis is logistic regressions and the corresponding marginal effects. The analysis is based on two regression equations for males and females, so as to establish the relationship between the dependent variable condom use, as a proxy for the risk of HIV infection for both males and females, and predictor variables.

Logistic regression is used in which the dependent variable is condom use (C). The value 1 is used in cases in which the condom was used all the time and 0 otherwise. In light of the observation that more than 70 percent of the respondents had never taken an HIV test, it turned to be logically consistent to expect respondents to use condoms always as a precautionary measure.

Specifically the regression is of the following form:

$$C = \beta_0 + \beta_1 Edu + \beta_2 Maristatus + \beta_3 Unfaithop + \beta_4 Nos \exp art + \beta_5 Knowhiv + \beta_6 Intoxi + \beta_7 Agediff + \beta_8 Area + \beta_9 Empstatus + \beta_{10} Age + \beta_{11} HIVtest + \beta_{12} Firstagesex$$

Edu is education measured in years of schooling

Maristatus is marital status and it was classified into Married, Living together, Divorced, Widowed, Separated and Never married

Unfaithop is the faithfulness of partner classified as Faithful, Unfaithful and don't know

Nosexpart refers to the number of respondent's sex partners

Knowhiv is a variable that sought to find out if the respondent knew his/her HIV status (1 = know and 0 = don't know).

Intoxi sought to find out if the respondent does ever take intoxicating stuff (1 = yes and 0 = no)

Agediff is the age difference between partners

Area is either urban (1) or rural (0)

Empstatus is classified into professional categories Unemployed, Professionals and Legislators, Associate Professionals and Technicians and Others

Age is age of the respondent

HIVtest sought to find out if the respondent ever went for a test

Firstagesex is the respondent's age at first sexual intercourse

2.3 Results

Regression Analysis

The regression analysis below seeks to determine the factors instrumental in the use of condoms by females.

Table 1: Logit regression for females

Dependent Variable: Condom use by females (Rf)		
Explanatory Variables	Coefficients	P – Value
Edu	.0848102	0.000***
Married Omitted		
Living together	.8684349	0.000***
Divorced	-1.11928	0.299
Widowed	-.1494655	0.851
Separated	.0366138	0.963
Never married	1.262065	0.000***
Faithful Omitted		
Unfaithful	.2599632	0.047**
Don't know	.3140723	0.015**
No of sex partners	.0221117	0.791
Intoxication	-.1238421	0.268
Age difference	-.0324851	0.009***
Area	.3788409	0.001***
Age	-.0750174	0.000***
Unemployed omitted		
Professionalsand Legislators	-.4017639	0.080*
Associate Professionals and Technicians	-.6659034	0.007***
Others	-.1640437	0.161
Age at first sex	.041569	0.008***
Sex for money	-.3435787	0.465
Perception about partner caring condoms		
Male condom only omitted		

Female condom only	-.2564517	0.450
Male and Female condoms	.0326599	0,801
Not acceptable	-.2818946	0,214
Not Sure	-.0518237	0.895
Religion	-.0918602	0.496
Constant	-.9382983	0.036
Number of Observations = 1988		
LR chi2 (18) = 328.76		
Prob > chi2 = 0.000		
Pseudo R2 = 1346		

*** Significant at 1 percent, ** Significant at 5 percent and * significant at 10 percent

There is a significant positive relationship between education, urban location, age at first sex and condom use at 1 percent. The results also indicate that those living together and those who were never married were more likely to use condoms than those who were married and these results are positively significant at 1 percent. If females did not know about their partners' faithfulness, they were more likely to use condoms and this at a 5 percent level of significance. There is a negative and significant relationship between age difference between partners and age of respondent as predictors and condom use at a 1 percent. Those who were legislators/managers/administrators/professionals and associate professionals/ technicians, were less likely to use condoms than the unemployed at 10 percent and 1 percent levels of significance respectively.

2.4 Marginal Effects for females

The marginal effects give us the magnitude of change of the dependent variable as you change the predictor variables.

Table 2: Marginal effects for females

Dependent Variable : Condom use by females (Rf)		
Explanatory Variables	Discrete Change of dummy from 0 to 1 (dRf/dx)	P - Value
Education	.0163625	0.000***
Married Omitted		
Living together*	.1729215	0.000***
Divorced*	-.1585081	0.117
Widowed*	-.0278104	0.845

Separated*	.0071245	0.963
Never married*	.2484818	0.000***
Faithful Omitted		
Unfaithful*	.0516987	0.054*
Dont Know*	.0627024	0.018**
Number of Sex Partners	.004266	0.791
Intoxication	.0237527	0.265
Age difference	-.0062674	0.009***
Urban	.0749466	0.001***
Age	-.0144732	0.000***
Unemployed Omitted		
Professionals and	-.0711284	0.054*
Legislators	-.110181	0.001***
Associate Professionals		
and Technicians	-.0314792	0.159
Others		
Age at first sex	.0080199	0.008***
Sex for money	-.0608606	0.422
Perception about partner		
caring condoms		
Male condom only omitted		
Female condom only	-.0465669	0.419
Male and Female condoms	.0062883	0.801
Not acceptable	-.0513493	0.186
Not Sure	-.0098792	0.893
Religion	-.0179586	0.501

*** Significant at 1 percent, ** Significant at 5 percent and * significant at 10 percent

An increase of one year of education and one year of delayed first ever sexual intercourse will increase condom use by 1.6 percent and 0.8 percent respectively. Staying in the urban area as against in the rural area increases condom use by 7.5 percent. People who were living together and those who were never married were likely to use condoms by 17.3 percent and 24.9 percent respectively more than those who were married. For every year by which the respondent's age increases the rate of condom use decreases by 1.4 percent and for every year's increase in the age difference between partners, condom use declines by 0.63 percent.

2.5 Logit results for males

The logit regression analysis result for males is presented below and interpreted immediately after the table. The diagnostic tests indicate that there were no specification errors and that the model fitted the data well. The model was also correctly classified at 73.13 percent.

Table 3: Logit regression for males

Dependent Variable: Condom use by males (Rm)		
Explanatory Variables	Coefficients	P – Value
Edu	.1133458	0.000***
Married Omitted		
Living together	.816419	0.000***
Divorced	.6635852	0.354
Widowed	-.7780796	0.469
Separated	.0673251	0.954
Never married	1.116874	0.000***
Faithful Omitted		
Unfaithful	.2791143	0.073*
Don't know	.1290616	0.361
No of Sex partners	-.0737486	0.364
Intoxi	.0195238	0.874
Age difference	.060569	0.001***
Area	-.1431246	0.254
Age	-.0987437	0.000***
Unemployed omitted		
Professionals and Legislators	-.4120894	0.123
Associate Professionals and Technicians	-.1885543	0.434
Others	-.2504136	0.052*
Age at first sex	.0335263	0.063*
Sex for money	-.536949	0.341
Religion	-.2161631	0.154
Constant	-.1212295	0.807
Number of Observations = 1660		
LR chi2 (18) = 326.02		
Prob > chi2 = 0.000		
Pseudo R2 = 1562		

*** Significant at 1 percent, ** Significant at 5 percent and * significant at 10 percent

There is a positive relationship between education and age difference and males' use of condoms at 1 percent level of significance. There is also a positive relationship between age at first sex and condom use at 10 percent level of significance. Just like in the case of females, males who were living together with their partners and those who never married were more likely to use condoms than those who were married at 1 percent level of significance. If males considered their partners to be unfaithful there were more likely to use condoms than if they perceived them to be faithful and this is at 10 percent level of significance. The age of the respondent is negatively related to condom use at 1 percent level of significance. Occupations that are classified as others were less likely to use condoms than the unemployed at 10 percent level significance.

2.6 Marginal effects for Males

To calibrate the rate of change in condom use resulting from a change in one of the independent variables, the following marginal effects are given. This follows the above logit regression for males.

Table 4: Marginal effects for males

Dependent Variable : Condom use by males		
Explanatory Variables	Discrete Change of dummy from 0 to 1 (dRm/dx)	P - Value
Education	.0224631	0.000***
Married Omitted		
Living together	.1729111	0.000***
Divorced	.1482809	0.394
Widowed	-.1261453	0.352
Separated	.0135431	0.954
Never married	.2218256	0.000***
Faithful Omitted		
Unfaithful	.0574859	0.084*
Dont Know	.0259604	0.368
Number of Sex Partners	-.0146156	0.364
Intoxication	.0038693	0.874
Age difference	.0120037	0.001***
Urban	-.0281772	0.251
Age	-.0195692	0.000***

Unemployed Omitted Professionals and Legislators		0.089*
Associate Professionals and Technicians	-.0747953	0.416
Others	-.0359792	0.049**
	-.0491904	
Age at first sex	.0066443	0.063*
Sex for money	-.093207	0.266
Religion	-.0441332	0.165

*** Significant at 1 percent, ** Significant at 5 percent and * significant at 10 percent

A one year increase in years of education and age difference between males and their partners increases condom use by 2.25 percent and 1.20 percent respectively and this occurs at significance level of 1 percent. Males were likely to increase their condom use by 0.66 percent for every one year delay in having first sexual intercourse and this is significant at 10 percent. Those who were living together and never married were likely to increase their use of condoms by 17.3 percent and 22.2 percent respectively relative to those who married. Men were also likely to increase condom use by 5.75 percent whenever they perceived partners to be unfaithful. The legislators/administrators/managers /professionals and those whose occupations were classified under others were less likely to use condoms relative to the unemployed by 7.48 percent and 4.92 percent respectively.

3. Discussion of Results

The results indicate that years of education for females and the subsequent delay in sexual activity have a positive bearing on condom use. In both cases the rate of increase in condom use resulting from the above two independent variables is higher for males than females. This means that there is more likely to be increased condom use for any additional year to males' education and delayed sexual intercourse than would be gained for females. For both sexes we note that the use of condoms increases by 17.29 percent if partners were living together relative to those who are married. However, in the case of those who never married, females were likely to

increase their condom use by 24.85 percent as against 22.18 percent for males, relative to those who are married.

In cases where it was thought that one's partner is unfaithful, we observe that females were likely to increase condom use by 5.17 percent and males by 5.75 percent relative to when they considered their partners to be faithful. Furthermore females were likely to increase their condom use by 6.27 percent if they were not sure about their partners' faithfulness. This points out to women ability to negotiate or to take precautionary measures in the face of their partners' perceived unfaithfulness.

In the cases of both females and males, we observe that the use of condoms is negatively related to age. An increase in the years of females by one reduces condom use by 1.4 percent and by 2 percent for males. Equally relevant is the issue of age differences between partners in which we note that females reduce the use of condoms by 0.63 percent for a one year increase in the age difference with their partners. On the other hand males use of condoms increases with a year's increase in age differences between partners. The issue of age of respondent and age differences for females is self-reinforcing and would be detrimental for young men who sleep with elderly women. This is on the observation that as the ages of females increase they reduce their use of condoms and that as age differences with their partners increase, they also reduce condom use. This scenario will have adverse consequences for young men in cases of sugar mummy relationships. However, the females' lives are in greater danger if their partners are older because of the inverse relationship between age difference and condom use by females. This may indicate the powerlessness of young ladies in negotiating safer sexual practices or yet still the inability of young men to negotiate safer sex in 'sugar mummy' relationships. The positive relationship between condom use and partner age differentials in the case of males mean that younger ladies will stand a better chance of being protected the younger they are in sugar daddy relationships. However, the observation that condom use is negatively related to age, mean that young ladies may be in danger for sleeping with older men. The positive relationship between condom use and age differences of partners in the case of males, means that young men are most likely to use condoms in sugar mummy relationships, even though this may be militated against by the observation that females reduce their use of condoms as they grow older.

The regression results have also shown that professionals/legislators/managers and associate professionals/technicians use condoms less often than the unemployed. Even though this might be contrary to expectations, the observation that these classes of occupations have had more HIV tests than the unemployed and other occupations may explain this scenario. People who know their status may decide not to use condoms if they trust each other's faithfulness and know each other's status.

It is important that individuals take responsibility about their sexual behaviour and is surprising that we observe no significant relationship between condom use and number of sexual partners. However, perceived unfaithfulness by women about their partners lead to increased condom use and this may be indicative that females have the power to negotiate or even to take precautionary measures whenever they perceive their lives to be in potential danger. It is also possible that the elderly male partners will exercise the 'daddy' responsibility and insist on condom use for their younger sexual partners. The observation that females' use of condoms increases by 5.17 percent whenever they think that their partners are unfaithfully is indicative of women ability to negotiate safer sexual practices contrary to the literature. This is slightly lower than 5.75 percent increase for males.

4. Conclusions

Based on the results of this analysis it will be advisable to investigate some other means which could logically explain the relative higher increase in infection rates amongst females relative to males. From the results obtained in this article, it is clear that gender imbalance as an explanatory phenomenon on the inequalities in infection rates is not adequate.

It would be tragic to emphasize the empowerment of women relative to men in the fight against HIV/AIDS. This is because sexual intercourse involves two individuals and it will be beneficial if the two parties could have an equivalent comprehension of the underlying dynamics of HIV/AIDS. Empowering females and not males may be a potential source of destruction since a discord will arise if partners do not have an almost equal level of understanding. Even though

women may press for safe sex, it will be difficult if the partner is not at par with her suggestions. The alternative may be to break the relationship.

That women were able to use condoms in the event that they suspected their partners of infidelity bares proof to the fact that women had some power in the negotiation of safe sex and gender imbalance may not necessarily be accountable for the gender disparities in HIV.

Also of interest is the observation that males used condoms often when the age differences with their partners increased which may mean that they were protective of their partners. This however, is in contrast with what we observe for females, who tended to use condoms with less intensity with an increase in age differences with their partners and this may serve to point to some gender imbalance.

It is important that people should be encouraged to go for HIV testing so as to utilize the available medical services and to make informed choices with regard to sexual activity. The 27 percent level of those who tested is very low.

Further research will be beneficial, particularly if it was to seek some explanations as to why certain trends are observed. It will be important to know why females use condoms less often when the age differences between them and their partners increase. It will only be when such explanations are availed that we will be able to make a pronouncement on the extent of the impact of gender imbalance on the high infections of HIV amongst women. It could be that the biological factors are the main contributing factors to the current scenario, in which more females are being infected.

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