

## **Introduction**

The high HIV and AIDS infection rate in Southern African region has led to an increase in the demand for contraception to avoid pregnancy among women who are infected and for the prevention of sexually transmitted infections (UNAIDS, 2019; Adeniyi et al., 2018; Vermund et al., 2015). The problem comes at a background where some women avoid using contraception method due to health risks associated with these methods, myths and misconceptions pertaining to use of contraception, and societal norms which associate the use of method with promiscuity (MacQuerry et al., 2016; Raselekoane et al., 2016; Kabagenyi et al., 2014). As a result, the number of unintended pregnancies has increased in the region (Adeniyi et al., 2018). Unintended pregnancies can increase the demand for abortion services thus worsening the already burdened health sector (Yazdkhasti et al., 2015).

Involving men in contraceptive-use will not only reduce unplanned pregnancies, but has the added benefit of reducing the scourge of sexually transmitted diseases, especially HIV and AIDS, which has affected millions of people in the regions. This is more especially because men are inclined to engage in multiple sexual partnerships which predisposes their sexual partners to the risk of infection (Tanser et al., 2011; Mhele, 2017). On the other hand, research findings indicate also that men play a crucial role in women's decision to use contraception; a factor that is directly related to the level of unintended pregnancy (Blackstone et al., 2017).

However, while studies have been undertaken on contraceptive use in this region, few have looked into male contraceptive use. Of those studies that have ventured into this area, most were focussed on specific segments of the male population, such as student population (Raselekoane, 2016). The purpose of this paper is, therefore, to determine the levels of contraceptive use among males and to establish which factors are critical in determining the use of both male and female methods.

## **Data and methods**

The study used a combined Demographic and Health Survey (DHS datasets in men's file from four countries in Southern Africa which collected the latest data in the past six years. The countries are South Africa (2016), Zimbabwe (2015), Lesotho (2014) and Namibia (2013) respectively. The population in the study is the national representative sample of men aged 15-54. The sample was restricted to 9301 participants who were sexually active within four weeks prior to data collection, but excluded those that were either declared infecund or were sterilised. The data was weighted in order to adjust for differences in probability of selection and to adjust for non-response.

Descriptive statistics was used to establish the distribution of the characteristics of participants in the study. Also, chi-square statistics were applied to determine the variables which were significantly associated with the use of contraceptive method. At multivariate level, the study used multinomial logistic regression model to estimate the relative risk ratio that an individual would use either male or female method relative to not using any method. The model is relevant for this type of study because the dependent variable has more than two nominal outcomes that are not in any order.

### Variables in the study

Respondents were asked if they, or their partner, had used any method the last time they had sex, and the type of method used. For the purpose of this study, the responses from this question were categorised into three outcomes which are: not using, female method (pill, iud, injection, female condom, female sterilization, implants and contraceptive patch) and male method (condom and male sterilisation) and coded "0" for not using, "1" for female method and coded "2" for male method. Traditional methods such as withdrawal and periodic abstinence were excluded from the analysis. The methods excluded contributed less than 1% of the total methods used by the respondents.

The predictor variables were age groups categorised as (15-24, 25-34, 35-44 and 45-54 ) place of residence (rural area and urban), marital status (never in union, currently in union and formerly in union ); number of the living children, (5 or more, 3-4, 1-2 and 0); Discussed family planning with health worker (Yes, no); age at first sex (less than 15, 15-16, 17-18, 19-20 and 21 or more). Furthermore, number of other sexual partners categorised as "0" "1", and 2 or more. The other variables were educational level attained (no education, primary, secondary and higher level) household wealth index (poorest, poor, middle, rich and richest; whether an individual agree with the statement that 'contraceptive make women promiscuous' (disagree, agree and don't know) and whether he agrees that contraception is woman's business (disagree, agree and don't know).

### Results

Table 1 presents bivariate analysis showing the percentage using contraceptive method by different socio-economic factors. The findings indicated that slightly less than one-third of the participants (32%) did not use any form of contraception during the last four weeks while majority (37%) and 31% used partner and male method respectively. (*See bottom of Table 1*). All of the variables in Table 1 were statistically significant at 5% level.

Non-use of the method was positively and significantly ( $p < 0.001$ ) correlated with age of the respondents ranging from 25% among the youngest age group to 46% among those 45 years and over. On the other hand, the use of male method was negatively associated with the age of the individual while the opposite was true with partner method. Furthermore, the highest percentage of non-users (34%) were residing in the rural areas and a larger number (42%) and female method was more preferred in the rural area. In contrast, most urban residents (38%) were using male method with only 32% relying on the partner method ( $p < 0.05$ ).

Regarding marital status, the highest percentages of non-users (37%) were in union followed by those who were formerly in union (25%), and the least number occurred those who were never in union (19%). Significant majority of those who were never in union (69%) and slightly more than a half (54%) of those who were formerly in union respectively preferred male method. In contrast, slightly less than a half of those who were currently in union relied mostly on partner method (47%) compared to 20% and 12% respectively of those who were never or formerly in union. Among those who discussed family planning with a health worker, only 22% was not using any method compared to 33% of those who did not do so. Furthermore, slightly more than half (51%) of those who discussed family planning used

partner method compared to only 34% of those who did not have any discussion on this matter.

Significant majority (60%) of those with no living children were using male contraception, however, there was a shift towards partner method as the number of children increased. Surprisingly, the highest number of the non-users (35%) were found among those with the highest number of children. Moreover, while the use of partner method increased with age of sexual debut, the opposite was the case with male method. Interestingly, the study further revealed that an increase in number of sexual partners corresponded with an increase in the use of male method and a decrease among non-users. For example, while 51% and 63% of those who had one and two additional sexual partner used male method, only 15% of those who did not have an additional partner used this method.

As expected, the percentages of non-users decreased with an increase in the level of education with half of those who had no education not using any method compared to 36%, 29% and 27% of those who had primary, secondary and higher levels of education respectively. Similarly, those using partner method also increased with the level of education. Likewise, the percentages of those using some method somehow increased with the household wealth index, especially among those using male method.

**Table 1:** The use of contraceptive method by different socio-economic variables

Variable	(% )Not using a method	(% ) method used		Total	P Value
		Female	Male		
<b>Age group</b>					
15-24	24,94	16,78	58,28	1702	0.000
25-34	30,74	38,34	30,92	3384	
35-44	32,98	45,95	21,08	2702	
45-54	40,52	38,33	21,12	1513	
<b>Place of residence</b>					
Urban	30,27	31,74	37,99	4671	0.005
Rural	33,63	41,52	24,81	4630	
<b>Marital Status</b>					
Never in union	19,05	11,76	68,90	2500	0.001
Currently union	37,12	47,22	15,66	6462	
Formerly union	25,60	20,10	54,30	339	
<b>Discussed FP with health worker</b>					
No	32,77	34,98	32,25	8009	0.000
Yes	22,71	50,94	26,34	1148	
<b>No of living children</b>					
5 or more	35,63	46,51	17,9	1044	0.001
3-4	30,11	53,30	16,58	2332	
1-2	31,80	41,20	26,96	3481	
0	30,57	9,80	59,6	2318	
<b>Age of sexual debut</b>					
Below 15	25,42	27,96	46,62	939	0.001
15-16	31,78	26,03	42,19	2139	
17-18	33,78	31,33	34,89	2375	
19-20	35,91	40,56	23,47	1687	
21 and above	29,85	53,12	17,03	2161	
<b>Other sexual partners</b>					0.000

0	38,08	47,56	14,36	5365	
1	24,7	24,26	51,04	2737	
2	20,09	15,66	63,45	926	
3 or more	24,74	16,42	58,79	273	
<b>Educational level</b>					0.000
No education	49,98	21,34	28,69	417	
Primary	36,33	33,73	29,94	2192	
Secondary	30,03	37,57	32,43	5527	
Higher	27,69	42,04	30,28	1165	
<b>Wealth index</b>					0.001
Poorest	38,33	36,14	25,53	1485	
Poor	32,98	38,61	28,41	1629	
Middle	33,44	33,99	32,58	1778	
Richer	29,13	36,02	34,85	2200	
Richest	28,51	38,17	33,33	2209	
<b>Contr. makes women promiscuous</b>					0.001
Disagree	29,70	41,23	29,06	5218	
Agree	32,11	33,07	34,81	3398	
Don't know	45,99	18,07	35,95	558	
<b>Contraception is women' business</b>					0.000
Disagree	30,29	39,73	29,98	6672	
Agree	32,64	32,56	34,80	2169	
Don't know	49,22	08,90	41,88	334	
<b>TOTAL</b>	<b>31,94</b>	<b>36,62</b>	<b>31,43</b>	<b>9301</b>	

### Multivariate analysis

The multivariate analysis revealed that contraception use was more likely to decrease with age; this finding was more evident with the use of partner method. Among those staying in the rural areas, partner method increased by more than a half relative to non-use while the risk for male method decreased by 31% ( $p < 0.005$ ). Equally, the risk for using male method decreased significantly among participants who were currently in union and those who were no longer in relationship. Furthermore, the number of living children was negatively and significantly associated with the use of partner method.

Similarly, participants who had discussed family planning with health worker were significantly more likely to use a method than otherwise; the risk increasing by 72% and 51% for both partner and male methods respectively ( $p < 0.005$ ). Participants who were undecided about whether or not they want another child were less likely to use partner method while male method increased by 50% ( $p < 0.05$ ). On the other hand, the use of method increased by 22% ( $p < 0.05$ ) and 84% ( $P < 0.005$ ) for both partner and male method when couples did not want additional child.

Having an additional sexual partners was associated with increased risk of using male method relative to non-use. Compared to those who did not have an additional sexual partner, the relative risk of using the method increased by 82% and two-folds ( $p < 0.005$ ) when the number of additional sexual partners increased to one and two respectively.

Wealth index was only statistically significant ( $p < 0.005$ ) for partner method with relative risk increasing by 42% and 58% ( $p < 0.005$ ) respectively for those came from “richer” and “richest” households. Education seems to have the greatest effect on the use of a partner method but less so on the male method. Compared to those with no education, the likelihood of using partner method increased by 74% for those with primary level of education and more than twice for those who had attained secondary and higher levels of education respectively ( $p < 0.005$ ). However, the variable was significant ( $p < 0.05$ ) only at primary level of education for male method. Attitudes towards contraception use was fundamental on whether partner method would be used or not.

Those who were of the opinion that use of contraceptive encourages promiscuity among women, and those who were uncertain about the matter, had lower relative risk ratio for using partner method ( $p < 0.05$ ). Similarly, those who did not have a particular opinion as to whether contraception is women’s business had a significantly lower risk of using a partner method when compared to those who disagreed with the statement.

The results in the study indicated that more than one-third of respondents in this study is not using any method and majority of those using were dependent on partner method. Age, place of residence, fertility preferences and discussing family planning were associated with both partner and male method. On the other hand, the number of living children, the level of education and wealth index was associated mainly with partner method while male methods were associated with marital status and an increase in the number of sexual partners.

**Table 1:** Relative risk ratios estimates for using male or female method relative to no method

Variable	Female/partner method	95% CI	Male method	95% CI
<b>Age group</b>				
15-24	<b>1.00</b>	-	<b>1.00</b>	
25-34	0.80	0.62 - 1.02	0.86	0.69 - 1.08
35-44	0.63***	0.47 - 0.84	0.68**	0.52 - 0.89
45-54	0.42***	0.31 - 0.56	0.61***	0.45 - 0.83
<b>Place of residence</b>				
Urban	<b>1.00</b>		<b>1.00</b>	
Rural	1.50***	1.23 - 1.83	0.70***	0.58 - 0.87
<b>Marital Status</b>				
Never in union	<b>1.00</b>	-	<b>1.00</b>	
Currently union	0.99	0.73 - 1.35	0.16***	0.12 - 0.22
Formerly union	0.81	0.51 - 1.28	0.68*	0.46 - 0.99
<b>Fertility preference</b>				
Have another	1.00		1.00	
Undecided	0.72*	0.52 - 0.98	1.55*	1.05 - 2.28
No more	1.22*	1.03 - 1.44	1.84***	1.46 - 2.34
<b>No. of living children</b>				
5 or more	<b>1.00</b>		<b>1.00</b>	
3-4	1.10	0.90 - 1.35	0.86	0.65 - 1.13
1-2	0.75**	0.60 - 0.93	0.97	0.72 - 1.31
0	0.16***	0.12 - 0.22	0.77	0.54 - 1.11

<b>Discussed FP with health worker</b>				
No	<b>1.00</b>		<b>1.00</b>	
Yes	1.70***	1.40 – 2.07	1.52***	1.21 – 1.92
<b>Age of sexual debut</b>				
Below 15	<b>1.00</b>		<b>1.00</b>	
15-16	0.74*	0.57 – 0.97	0.88	0.67 – 1.15
17-18	0.78	0.61 – 1.01	0.85	0.66 – 1.09
19-20	0.94	0.72 – 1.22	0.86	0.65 – 1.15
21 and above	1.44**	1.12 – 1.87	0.94	0.69 – 1.26
<b>Other sexual partners</b>				
0	<b>1.00</b>		<b>1.00</b>	
1	1.26*	1.05 – 1.51	1.82***	1.42 – 2.32
2	1.33	0.90 - 1.96	2.02***	1.44 – 2.82
3 or more	0.79	0.47 – 1.32	1.83**	1.68 – 2.90
<b>Household wealth index</b>				
Poorest	<b>1.00</b>		<b>1.00</b>	
Poor	1.17	0.95 - 1.44	1.16	0.91 – 1.49
Middle	1.06	0.86 - 1.33	1.19	0.94 – 1.51
Richer	1.42***	1.12 – 1.81	1.32*	1.01 – 1.72
Richest	1.58***	1.18 – 2.11	1.25	0.94 – 1.68
<b>Educational level</b>				
No education	<b>1.00</b>		<b>1.00</b>	
Primary	1.74***	1.23 – 2.46	1.48*	1.06 – 2.05
Secondary	2.18***	1.55 – 3.08	1.32	0.96 – 1.81
Higher	2.35***	1.56 – 3.53	1.41	0.96 – 2.08
<b>Contr. makes women promiscuous</b>				
Disagree	<b>1.00</b>		<b>1.00</b>	
Disagree	0.88*	0.77 – 1.01	0.99	0.85 – 1.18
Agree	0.61**	0.42 - 0.89	0.70*	0.50 -0.99
Don't know				
<b>Contraception is women' business</b>				
Disagree	<b>1.00</b>		<b>1.00</b>	
Disagree	0.92	0.79 – 1.08	1.05	0.89 – 1.15
Agree	0.32***	0.19 - 0.54	0.85	0.58 – 1.25
Don't know				

\*\*\* P<0.005 \*\*0.005 – 0.009 \* 0.01-0.04

## Discussion

Different studies have indicated that while fertility level in Southern African region is comparatively low, the region has experienced higher HIV and AIDS prevalence rates in the world and this has increased the demand for contraception to avoid further pregnancy and to prevent transmission of sexually transmitted infections. On the other hand, there is an indication that, among those who are infected with a virus, most of the pregnancies were deemed to have been unplanned (Adeniyi et al., 2018;) which points to the need to increased contraceptive prevalence rate. Men's participation in family planning, or lack of it, has major implications for alleviating these two social problems identified. The purpose of this study was to determine socio-economic

factors associated with contraceptive use among males who were sexually active in active in the past four weeks this region.

The findings in the study indicated that contraceptive use in this region was high with more than two-thirds (68%) of the participants using some method. However, the majority (37%) of those who were using a method were relying on partner method, an indication that contraceptive use is still associated with females. Invariably, condom was almost the only method of choice among those who resorted to male method (not shown). Different studies have indicated that the use of contraception among men is inhibited by the limited information and choices of contraception available to males (Hardee et al., 2017; Kabagenyi, 2014).

Consistent with previous studies, the results indicated that the use of a method was likely to decrease with age of the participants. While this might be a reflection of negative attitudes towards contraceptive use among the elderly people, it might also be that the perceived likelihood of giving birth diminishes with age of the individuals.

Fertility preference was critical determinant of the use of a method showing that those who no longer wanted to have children had an increased likelihood of using contraception. However, the results were stronger for male method, suggesting that males were more likely to participate in family planning if they were motivated to do so. The results further pointed out that those who discussed family planning with health worker were also more likely to have used a method. These two findings have an implication for policies that exclude men from programs that are designed to reduce fertility levels.

While studies have indicated that marriage is not a determinant of fertility in many countries in this regions, results in this study indicate that males who were not in union were more likely to use contraception than rely on the partner. This may be an indication further indicated that Compared to men who were never in union, those who were in union or formerly in one were significantly less likely to use male contraception. This suggest that never married males are more likely to make an effort prevent having children before marriage.

## References

1. Amo-Adjei J, Tuoyire DA. Timing of Sexual Debut among unmarried youths aged 14-24 years in sub-Saharan Africa. *J Biosoc Sci*. 2018 Mar;50(2):161-177.
2. Bearak J, Popinchalk A, Alkema L, Sedgh G. Global, regional, and sub-regional trends in unintended pregnancy and its outcomes from 1990 to 2014: estimates from a Bayesian hierarchical model. *Lancet Glob Health*. 2018;6(4):e380–e389. doi:10.1016/S2214-109X(18)30029-9
3. Blackstone S., Nwaozuru U., and Iwelunmor J. Factors Influencing Contraceptive Use in Sub-Saharan Africa: A Systematic Review *International Quarterly of Community Health Education* 2017, Vol. 37(2) 79–91.
4. Hardee K., Croce-Galis M and Gay J. Are men well served by family planning programs? *Reproductive Health*, (2017) 14.14.
5. Hardee, Karen, Melanie Croce-Galis, and Jill Gay. 2016. "Men as Contraceptive Users: Programs, Outcomes, and Recommendations," Working Paper. Washington, DC: Population Council, The Evidence Project.
6. Kabagenyi A Jennings L,, Reid A, Nalwadda G., Ntozi J. and Atuyambe L. Barriers to male involvement in contraceptive uptake and reproductive health services: a qualitative study of men and women's perceptions in two rural districts in Uganda. *Reproductive Health* 2014 11:21.
7. MacQuarrie, Kerry L.D., Jeffrey Edmeades, Mara Steinhaus, and Sara K. Head. 2015. *Men and Contraception: Trends in Attitudes and Use*. DHS Analytical Studies No. 49. Rockville, Maryland, USA: ICF International.
8. Mhele K. Covariates of Multiple Sexual Partnerships among sexually active men in Lesotho. *African Journal of Reproductive Health* 2017; 21[1]: 7381).
9. Peer, N., Morojele, N., London, L. Factors associated with contraceptive use in a rural area in Western Cape Province. *South African Medical Journal*, [S.I.], v. 103, n. 6, p. 406-412, feb. 2013.
10. Raselekoane NR, Morwe KG, Tshitangano T. University of Venda's male students' attitudes towards contraception and family planning. *Afr J Prm Health Care Fam Med*. 2016;8(2), a959. <http://dx.doi.org/10.4102/phcfm.v8i2.959>
11. Singh S., Sedgh G., and Hussain R. *Studies in Family Planning* 2010; 41[4]: 241–250)
12. Vermund SH, Sheldon EK, Sidat M. Southern Africa: The Highest Priority Region for HIV Prevention and Care Interventions [published correction appears in *Curr HIV/AIDS Rep*. 2015 Sep; 12(3):373]. *Curr HIV/AIDS Rep*. 2015; 12(2):191–195. doi:10.1007/s11904-015-0270-z



13. Yazdkhasti M., Pourreza A., Pirak A., and Abdi F. Iran Journal of Public Health. 2015 Jan; 44(1): 12–21.