

Research Article

Patterns and Determinants of Modern Contraceptive Use in Southern Africa

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Abstract

The main objective of this paper is to study the patterns and determinants of contraceptive use in southern Africa. Four countries, Botswana, Democratic Republic of Congo (DRC), Mozambique and Zambia from the Southern African Development Community (SADC) are selected for the study and DHS data were used for all countries except Botswana. For Botswana, the Botswana Family Health Survey data were used.

There is tremendous variation in the usage of modern contraceptives among the four countries studied. Botswana ranks first in terms of contraceptive prevalence with 76.7 percent of women using a modern contraceptive in 2007 followed by Zambia, Mozambique and DRC. Contraceptive use is concentrated more in 20-39 age group in all countries. Surprisingly, parity does not have a significant relationship with the use of modern contraception in DRC, whereas the study found negative relationship between parity and modern contraceptive use in Botswana. It seems that younger women in Botswana use contraceptives to prevent infection from HIV. Also, those who want to postpone pregnancy are more likely to accept contraception. In the bivariate analysis, age, parity, education, exposure to media, wealth and place of residence (urban) are positively related to contraception.

The logistic regression results show that the age of women, fecundity, desire for children, women's education, wealth status and place of residence are strong predictors of modern contraception. However, the patterns and magnitude of the effects vary between countries. This implies that the level of development, prevalence of HIV/AIDS and sexual practices may work as mediating factors to form the relationship between the individual (like parity, marital status) and household level characteristics (wealth status) with modern contraception. The study confirms that the improvement in education and eradication of poverty would be crucial policy interventions to increase the level of contraception in southern Africa.

Introduction

According to UN (2015), of the 21 high-fertility countries, 19 are in Africa. The largest are Nigeria, Democratic Republic of Congo, United Republic of Tanzania and Uganda. Further, among the major areas of the world, the adolescent birth rate (births per 1,000 women aged 15-19) in 2010-2015 was highest in Africa at 98 per 1,000 women, followed by Latin America and the Caribbean at 67 per 1,000. Fertility in sub-Saharan Africa stood around 5 births per woman in 2010-15, more than double the replacement level. It is not likely to decline at a faster and sustained pace unless a large and growing number of couples is 'ready, willing and able' to practice modern contraception. It is a fact that the 'unmet need' for contraception still remains high in sub-Saharan Africa (SSA). Despite the wide-ranging health and development benefits that family planning offers, contraceptive use is very low. This inequity is fueled by both a growing population and a shortage of family planning services (WHO, 2012). In sub-Saharan Africa, about 60 percent of women who wants to avoid pregnancy have an unmet need for modern contraception due largely to factors such as limited access to contraception, cultural and religious opposition, poor quality of available services, gender based barriers, and spousal disapproval (see Fig.1). In Eastern Africa specifically, the increase in unmet need is associated with socioeconomic variables, the family planning program environment and

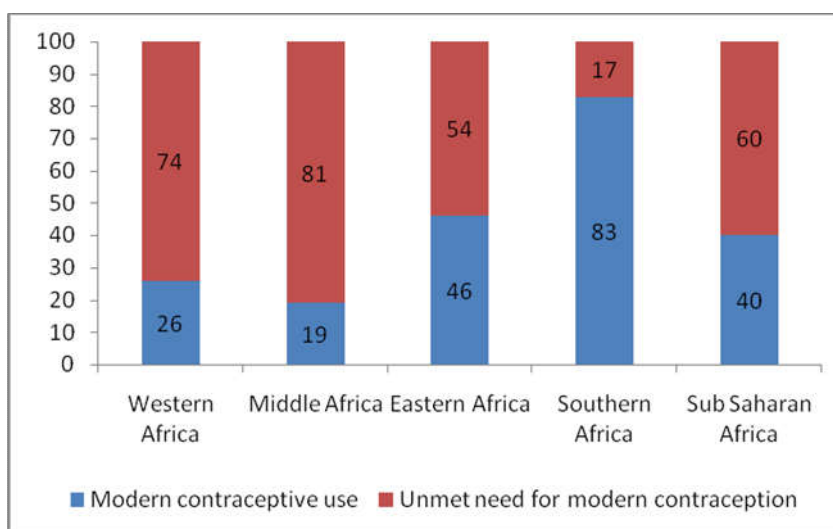
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reproductive behavior models. (Shoran et al. 2009). The study by Darroch and Singh (2013) revealed that among women who want to avoid pregnancy in developing countries, about 74 percent of them are using contraception in 2012. This is only 47 per cent in Sub-Saharan Africa. The regional levels range from 26 percent in West Africa, 19 percent in Central Africa, 46 percent in East Africa and 83 percent in Southern Africa (see Fig. 1).

The prospects in increasing contraceptive use in SSA is quite bleak and it remained constant at about 0.5 percentage points per year between the 1990s and the 2000s (AFIDEP,2012). The pace of progress between the two periods accelerated in both East and Southern Africa, but it slowed down in West Africa, and only increased slightly in Central Africa. East Africa had the biggest improvement in the rate of increase from 0.4 to 1.0 percentage points per year. These patterns show enormous potential for improving levels of contraceptive use even in regions and countries that have increased contraceptive uptake. For instance, Rwanda managed to reduce its level of unmet need from 38 percent in 2005 to 19 percent in 2010, as the country increased the use of modern contraceptives at an impressive average rate of 4 percentage points per year, reaching 45 percent in 2010. However, contraceptive use among women in Sub-Saharan Africa has risen from about 5 percent in 1991 to about 30 percent only in 2006 (Cleland J. G., Ndugwa, R. P. and Zulu, E. M., 2011).

Fig. 1: Prevalence of Modern Contraceptive use among women in Africa, 2012



Source: Darroch & Singh, 2013

Primarily due to the high levels of unmet need for family planning, nearly 3 in 10 births in sub-Saharan Africa are unplanned. The level of unplanned pregnancies is highest in Southern Africa (40 percent), a region with the highest levels of contraceptive use, while West Africa has the lowest (21 percent) level primarily because of relatively high demand for children. These results show that efforts to improve contraceptive use in Africa need to pay particular attention to West and Central Africa; otherwise, the huge inequity between the broader Eastern and Western regions of Africa will widen further in future.

In sub-Saharan Africa, about 40 percent of currently married women aged 15–49 are using modern methods, slightly increased from 35 percent in 2008. The actual number of women using modern methods has increased, but not quickly enough to keep pace with the growing population of women of reproductive age and the increasing desire for smaller families. As a result, the number of women with an unmet need for modern contraception increased from 51 million to 53 million between 2008 and 2012. The proportion of married women wanting to avoid pregnancy with an unmet need for modern contraception is 26 percent in the developing world as a whole, but is much higher in Western Africa, Middle Africa and Eastern Africa (54–81percent) and slightly lower in Southern Africa (17 percent). In 2012, 39 percent of all pregnancies in the region—an estimated 19 million— were unintended, resulting from nonuse or inconsistent use of contraceptives, or from contraceptive failure. These unintended pregnancies have resulted in 10 million unplanned births,

three million miscarriages and six million abortions, virtually all of which will be unsafe. (Singh, S and Darroch JE, 2012; Darroch JE and Singh, S, 2013).

Within sub-Saharan Africa, the southern African countries vary significantly with respect to human development indicators (see Table 1). The human development index value was lowest in Democratic Republic of Congo and highest in Botswana. The prevalence of HIV/AIDS is not only high in southern African countries but it also varies significantly among them. For instance, the prevalence of HIV/AIDS was highest in Lesotho followed by Botswana and was lowest in Congo. How do the patterns of contraceptive use vary in the context of variation in the human development indicators and difference in the prevalence of HIV/AIDS? With this backdrop, the objectives of this paper are; (a) to study the patterns of contraceptive use in southern Africa and (b) to find out the determinants of contraceptive use in southern Africa.

Table 1: Human Development Indicators for Southern African Countries, 2011

Country	Human Development Index	Life Expectancy at Birth	Mean years of Schooling	Per capita Gross National Income (2005 PPP\$)	Prevalence of HIV/AIDS (ages 15-49) (%)
Botswana	0.633	53.2	8.9	13049	22.4
Democratic Republic of Congo	0.286	48.4	3.5	280	1.1
Lesotho	0.450	48.2	5.9	1664	22.9
Malawi	0.400	54.2	4.2	753	10.8
Mozambique	0.322	50.2	1.2	898	10.9
Namibia	0.625	62.5	7.4	6206	14.5
South Africa	0.619	52.8	8.5	9469	18.9
Zambia	0.430	49.0	6.5	1254	12.8
Zimbabwe	0.376	51.4	7.2	376	15.3

Source: UNDP (2012); UNAIDS (2012)

Data and Methods

Four countries belonging to the Southern African Development Community (SADC) viz. Botswana, Democratic Republic of Congo (DRC), Mozambique and Zambia are selected for the study and DHS data were used for all countries except Botswana. In Botswana, DHS was conducted way back in 1988; not any new round later. An equivalent of DHS called BFHS (Botswana Family Health Survey) was conducted by the Central Statistical Organization (renamed recently as Statistics Botswana) in different years and the latest was in 2007. This data set is used here for the analysis. The eligible women for this study are non-pregnant and sexually active at the time of survey. For DRC, the data refer to 2007, for Mozambique 2011 and for Zambia 2007. For the sampling designs of various countries, refer to Measure DHS publications (www.measuredhs.com/data). Analysis is carried out using bi-variate and multi-variate statistical techniques.

Results

Characteristics of Women

Table 2 shows the background characteristics of women in the selected countries of southern Africa. It shows that less than 50% of the women belong to age group of 15-29 in Botswana whereas the same was around 52 % in the other three countries. Women belong to lower order birth was relatively high in Botswana as compared to other three countries. About only 17 percent of the women were fecund in DRC and this was more than 50 per cent in Mozambique and Zambia. Surprisingly non-fecund women were high in DRC, about 40% among the sample. About 40% of the women were never married in Botswana and this was about 12-15 percent in the other three countries. This implies about half of the women in Botswana were married or living together and on the other hand more than

two third of the women were married in the other three countries. Majority of women wants to have a child within the next 12 months in DRC, Mozambique and Zambia. Greater variation was found among women with respect to the level of education. For instance, about less than one tenth of women in Botswana were with no education and this was one-third in Mozambique. The large difference exists with respect to exposure to media to family planning in these countries. For every five women only one woman had exposure to media about family planning in DRC; whereas exposure to media in Botswana was almost universal in the other two countries, Mozambique and Zambia, about half of the women had exposure to media on family planning. Majority of them (78%) are Protestants in Zambia and about 17% them are Muslims in Mozambique. There is not much variation found about women belongs to different wealth quintile groups. Women predominantly live in the rural areas in DRC, Mozambique and Zambia and however, majority of women in Botswana lives in the urban areas. So far as economic status is concerned, about one fourth (23%) of women belonged to the top 20% of the wealth quintile in Botswana, Mozambique and Zambia. Similarly, around 18% belonged to the lowest stratum in all countries. By and large, except DRC, all other three countries studied are better placed economically with slight advantage for Botswana, of course.

Table 2: Characteristics of women in the selected Countries of Southern Africa

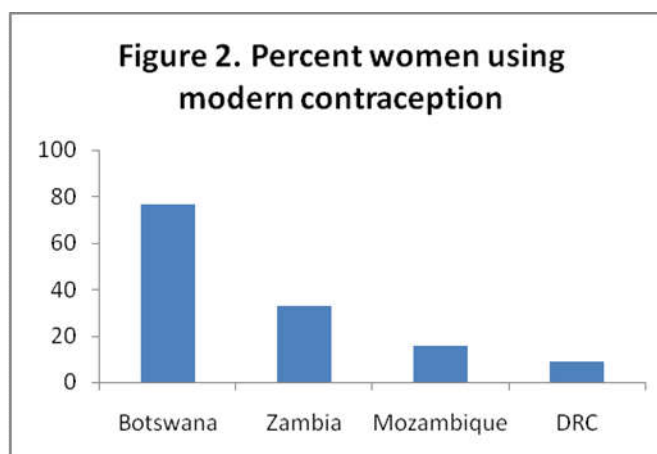
Variable	Botswana	DRC	Mozambique	Zambia
	%	%	%	%
Individual and Household Characteristics				
Age of the women at survey				
15-19	2.7	11.8	15.1	11.6
20-29	37.6	40.1	35.9	41.1
30-39	37.3	27.4	29.3	28.8
40-49	22.3	20.7	19.7	18.5
Parity				
None	1.0	18.1	14.4	11.7
1-2	58.2	27.6	32.3	30.8
3-4	27.2	20.7	24.9	24.8
5 +	13.6	33.6	28.4	32.7
Fecundity	NA			
Fecund		17.4	52.5	50.7
Breastfeeding		40.9	36.5	40.3
Not fecund		41.7	11.0	9.0
Marital Status				
Never married	40.0	15.6	12.0	15.4
Married/living together	55.2	72.5	72.7	68.9
Formerly married	4.8	11.9	15.3	15.7
Want to have a child in the next 12 months	NA			
Yes		67.4	58.6	55.6
No/undecided		32.6	41.4	44.4
Women's education				
No education	6.9	22.1	32.6	11.8
Primary	25.8	38.3	49.1	55.8
Secondary	53.3	36.9	16.7	26.8
Higher	13.9	2.7	1.6	5.7
Media exposure to family planning				
Yes	96.6	19.1	51.9	44.7
No	3.4	80.9	48.1	55.3
Religion				
Catholic	43.1	28.1	29.0	20.3
Protestant	----	29.0	5.3	78.1
Muslims	----	1.1	17.0	1.6

Others	56.9	41.8	48.4	----
Wealth quintile				
Below 20%	18.2	18.8	18.7	17.9
20-40	12.4	20.4	18.0	18.6
40-60	24.1	20.7	18.9	18.2
60-80	22.9	18.2	20.5	22.2
Top 20%	22.5	22.0	24.0	23.1
Place of residence at survey				
Rural	38.3	55.9	65.1	59.3
Urban	61.8	44.1	34.9	40.7
Number of women (N)	4038	7631	10444	5418

Note: For Botswana, religion has been categorised as Christians and others. For Zambia, Muslims includes others as well.

Contraceptive Prevalence

There is tremendous variation in the usage of modern contraceptives among the four countries studied. Botswana ranks first in terms of contraceptive prevalence with 76.7 percent of women using a modern contraceptive in 2007 followed by Zambia (33%), Mozambique and DRC (Figure 2). Consequently, the unmet need for family planning also differs markedly in these countries. The recent estimates show the unmet need for contraception among married women in Botswana was about 10 percent. According to Demographic Health Surveys from the respective countries, the unmet need for contraception among married women was 24.2% in DRC, 18.7% in Mozambique and 26.6% in Zambia. As mentioned earlier, contraceptive prevalence is higher in southern Africa as seen in the case of Botswana and Zambia. Among the four countries studied, Botswana stands apart socio-economically with the highest per capita income and highest literacy rate.



Method-wise contraceptive use among women in the reproductive age group is furnished in Table 3. The use of modern methods varies tremendously from 8% in Mozambique to 51% in Botswana. Unlike in India, sterilization and IUD are not at all popular in southern Africa. Male condom is the most popular method in Botswana. This may be viewed in the context of very high HIV prevalence in Botswana and condom use is promoted very vigorously to prevent HIV. DRC has a success story in sub-Saharan Africa in terms of controlling HIV prevalence and condom use is not that high. Pill and injectable are also popular in Zambia and in Botswana to a limited extent.

Table 3: Current Use of Modern Contraceptives (%) in Selected Countries

Method	DRC	Mozambique	Zambia	Botswana
Tubectomy	-	0.2	1.9	2.2
condom	3.0	2.9	4.0	41.7
IUD	-	0.2	1.2	0.8
Pill	1.0	4.3	11.8	6.1
Injectable	1.0	4.3	19.3	6.8

Implants	-	-	5.5	-
An Modern Method	8.0	12.1	44.8	51.2
Traditional Method	13.0	0.3	4.3	2.6

Patterns of Contraceptive Use Dynamics

Let us now examine the contraceptive behavior across the countries. Are there any distinct patterns emerging? Generally, contraceptive use is concentrated more among 20-39 age group in all countries. But, Botswana, a high income nation in the group, emerges quite distinct in the sense that contraception is widespread across all age groups. Obviously, 20-39 age groups are crucial for the acceptance of a family planning method, either for spacing or limitation, and the same is seen here as well. With respect to parity of women, those who have attained parity levels of 2-4 children are usually expected to accept more. It is quite understandable in the sense the desired or preferred family size is achieved at these parity levels. As seen earlier, here again, Botswana stands apart with an even distribution of women in all parity levels. Next in line is Zambia. Fecundity has a role in determining the overall effectiveness of contraception. For those who are non-fecund, the effectiveness of contraception is absent or limited. Here, 10-14 percent of acceptors is not fecund in DRC, Mozambique and Zambia implying very limited effectiveness for the method accepted.

Contraception among never married women is very high in Botswana compared to other three countries. It is likely that the proportion never married is high in that country, around 50 percent. Still, the method acceptance is higher among the married women. In DRC and Mozambique as well, acceptance rate is higher among never married. In Zambia also, we found that the acceptance level is higher among married women. Obviously, those couples who plan for a child within the next one year are not likely to go for a contraceptive method. Here, strangely 8-33 percent of women have adopted a method while planning to have child within one year, especially in the case of Zambia where more than one third of the acceptors are planning to have a child within one year. Globally, women's educational level is an important determinant for the acceptance of a family planning method. We get a clear linear pattern here as well in the expected direction. The acceptance rate increases as the educational level goes up in all the four countries. Exposure to all types of media is positively related to contraception and it is evident here as well. However, Botswana is an exception although the difference is negligible and perhaps insignificant. So far as religion is concerned, no clear pattern is observed here. By and large, the acceptance rates appear higher among Protestants and lower among Muslims. Generally, economic status is an important determinant for the acceptance of contraception. We get a clear linear pattern here in the expected direction. As expected, the acceptance rate increases as the wealth index goes up in all the countries. Similarly, urban-rural residential status is also a crucial determinant for the acceptance of contraception worldwide, especially in developing countries. As expected, the acceptance rate is higher among those women who live in urban areas in all the countries.

Table 4: Patterns of Modern Contraceptive Use among Women in the Selected Countries of Southern Africa

Variable	Botswana	DRC	Mozambique	Zambia
	%	%	%	%
Individual and Household Characteristics				
Age of the women at survey				
15-19	59.8	11.4	15.6	23.3
20-29	80.4	10.2	19.1	38.6
30-39	81.4	7.6	16.2	35.6
40-49	64.3	5.6	7.4	22.2
Parity				
None	88.9	15.2	17.7	16.6
1-2	79.5	8.2	16.8	33.5
3-4	78.0	7.3	17.0	40.3
5 +	61.2	6.3	11.2	32.8

Fecundity	N.A			
Fecund		11.4	19.8	33.9
Breastfeeding		5.4	10.2	36.1
Not fecund		10.7	11.8	13.9
Marital Status				
Never married	72.0	18.1	29.0	22.2
Married/living together	82.1	6.9	13.5	39.0
Formerly married	52.6	7.1	13.7	18.6
Want to have a child in the next 12 months	N.A			
Yes		7.9	15.6	32.8
No/undecided		10.4	15.1	33.2
Women's education				
No education	56.5	3.0	5.7	26.0
Primary	71.5	6.3	13.3	30.7
Secondary	80.5	13.6	37.5	38.4
Higher	80.2	21.8	46.3	41.8
Media exposure to family planning				
Yes	76.7	14.6	19.8	40.0
No	77.1	7.3	10.7	27.4
Religion				
Catholic	80.1	9.5	16.4	32.6
Protestant	----	7.0	15.0	33.2
Muslims	----	6.9	8.9	20.5
Others	74.1	9.3	17.1	----
Wealth quintile				
Below 20%	66.9	4.1	3.8	30.6
20-40	70.7	5.1	6.1	25.8
40-60	79.2	6.3	8.3	25.9
60-80	80.0	9.8	16.7	37.5
Top 20%	81.6	17.2	35.8	42.3
Place of residence at survey				
Rural	74.0	5.2	8.8	29.2
Urban	78.4	13.1	27.8	37.9
Number of cases (N)	3901	7631	10444	5434

Logistic Regression Results

In order to find the determinants of contraception among women in these countries, we have performed a logistic regression analysis considering all the explanatory variables taken for studying the patterns earlier and keeping contraceptive acceptance as the binary dependent variable. Table 4 provides the adjusted odds ratios from the analysis. By and large, the results confirm the uni-variate analysis performed earlier.

Age of women

In all the four countries, women in younger age groups are more likely to accept modern contraception. However, the patterns vary among the countries. For instance, the women of age group 20-29 in Mozambique are 4.2 times more likely to use modern contraception compared to older age group 40-49, whereas this is only 1.62 times in the case of Botswana. Similarly, in Zambia, women of 20-24 age group is about 3 times more likely to accept contraception in comparison with 45-49 age groups. Botswana does not follow this pattern perhaps due to high prevalence of HIV/AIDS in the country.

Table 5: Adjusted Odd Ratios for the Use of Modern Contraception Southern Africa

Variable	Botswana	DRC	Mozambique	Zambia
	Odd ratio	Odd ratio	Odd ratio	Odd ratio
Individual and Household Characteristics				
Age of the women at survey	0.71	1.99 ***	3.96 ***	3.41 ***
15-19	1.62 ***	2.33 ***	4.20 ***	3.29 ***
20-29	1.86 ***	1.64 ***	2.90 ***	1.96 ***
30-39	1.00	1.00	1.00	1.00
40-49\$				
Parity				
None	3.62 **	1.11	0.20 ***	0.20 ***
1-2	1.69 ***	1.03	0.47 ***	0.57 ***
3-4	1.67 ***	1.07	0.76 ***	0.84 *
5 + \$	1.00	1.00	1.00	1.00
Marital Status				
Never married \$	1.00	1.00	1.00	1.00
Married/living together	1.84 ***	0.60 ***	0.64 ***	2.49 ***
Formerly married	0.56 ***	0.52 ***	0.57 ***	0.89
Want to have a child in the next 12 months	NA			
Yes \$		1.00	1.00	1.00
No/undecided		2.12 ***	1.19 **	1.23 ***
Women's education				
No education \$	1.00	1.00	1.00	1.00
Primary	1.52 ***	1.87 ***	1.62 ***	1.08
Secondary	1.72 ***	2.70 ***	3.34 ***	1.32 **
Higher	1.47 *	3.06 ***	4.48 ***	1.59 **
Media exposure to family planning				
Yes \$	1.00	1.00	1.00	1.00
No \$	0.77	0.69 ***	0.72 ***	0.69 ***
Partner living in household	NA	NI	NI	NI
Yes \$				
Stay elsewhere				
Religion				
Catholic \$	1.00	1.00	1.00	1.00
Protestant	----	0.79 **	0.89	0.99
Muslim	-----	0.68	0.73 ***	0.69
Others	1.20	0.85	1.06	-----
Wealth quintile				
Below 20% \$	1.00	1.00	1.00	1.00
20-40	1.18	1.11	1.63 ***	0.72 ***
40-60	1.73 ***	1.19	1.89 ***	0.65 ***
60-80	1.99 ***	1.37 *	3.19 ***	1.30 *
Top 20%	2.24 ***	1.69 ***	5.36 ***	1.84 ***
Place of residence at survey				
Rural	0.88	0.83	0.80 ***	0.79 **
Urban \$	1.00	1.00	1.00	1.00
Number of cases (N)	3892	7564	10479	5434

\$- reference category; *** p<0.01, ** p<0.05, * p<0.10

Parity

In a society where the demand for children is high, the use of contraception increases as parity increases. In other words, the use of modern contraception would be lower among lower parity women in a normal situation. The results show that the pattern is in the expected direction except in Botswana. In Zambia and Mozambique, women who were not having children. Surprisingly, parity does not have a significant relationship with the use of modern contraception in DRC, whereas the study found the negative relationship between parity and modern contraceptive use in Botswana. In Botswana, women with zero parity were 3.6 times more likely to use contraception and women a parity of 1-4, there are about 70 percent more likely to use contraception compared to women with parity 5 and above. This shows that the relationship between parity and modern contraceptive use may be mediated by the prevalence of HIV/AIDS in the country. It seems that younger women in Botswana may use contraception to prevent the infection from HIV. Among the women who use modern contraception, the condom use is around 60 percent and it is negatively related with the parity in Botswana.

Fecundity

For Botswana, the information was not available. In all other countries, we observed the expected patterns. For example, in Zambia, fecund and breast feeding women are 2.9 and 2.3 times more likely to accept contraception than non-fecund women. In other two countries also, fecund women are more likely to accept contraception.

Marital Status

Results are mixed here. For Botswana and Zambia, married and those cohabiting are more likely to accept contraception. In these countries, married/ living together women are found 1.8 and 2.5 times more likely to accept contraception than never married. For the other two countries, results are in the opposite direction.

Want to have a child within the next 12 months

We get a clear pattern here. Those who are undecided or do not desire to have a child within the next year are more likely to go for family planning in all the three countries. In all three countries for which data are available, those who want to postpone pregnancy are more likely to accept contraception.

Women's education

A clear expected pattern is observed here. The level of education and use of modern contraceptive methods move in the same direction. This is true in all the countries, however, the effect of education is stronger in Mozambique and DRC. In these countries, higher educated women are about 3-4 times more likely to go for contraception compared to women with no education. On the other hand, in Botswana and Zambia, highly educated women are about 50 percent more likely to use modern contraception. Thus, education appears to be a strong predictor for use of modern contraception.

Media exposure to family planning

Media exposure to family planning is likely to increase the awareness on the modern family planning methods. The study found that media exposure to family planning either in the TV or radio is a significant predictor for the use of modern contraception in all the countries except Botswana. Those who had exposure to media on family planning are 30 percent more likely to use modern contraception in DRC, Mozambique and Zambia. The insignificant effect of media on contraceptive use in Botswana is due to less variability in the media exposure and as noted earlier, about 97% women had media exposure on family planning.

Wealth Index

Wealth status appears to be a strong predictor in all the countries studied. The study found the wealth status gradient on the use of modern contraception in Botswana, Mozambique and DRC. As

the wealth status increases, the use of modern contraception also increases. The effect is stronger in Mozambique compared to Botswana and DRC. However, the relationship between wealth status and use of modern contraception is U shaped in Zambia. This needs further investigation.

Place of residence

As expected, rural women are less likely to use modern contraception than urban women in Mozambique and Zambia. But the place of residence is not a significant predictor in Botswana and DRC. In the case of Botswana, with high health care services in the country, the health care services are evenly spread both in the rural and urban areas. However, in the case of DRC with a low health care services in the country, there is no differences between the rural and urban areas.

Discussion and Conclusion

The present analysis brings out some relevant and encouraging results. Although, contraceptive prevalence is low in sub-Saharan region and hence higher fertility levels persisting, we get some clear patterns emerging out from the female contraceptive users. In the bivariate analysis, age, education, exposure to media, wealth and place of residence (urban) are positively related to contraception. Furthermore, the logistic regression results show that age of women, fecundity, preference for children, women's education, and wealth status and place of residence appear as strong predictors for use of modern contraception in Southern Africa. However, the patterns and magnitude of effects vary between countries in Southern Africa. This shows that the level of development and the prevalence of HIV/AIDS and sexual practices may work as a mediating factors to form the relationship between the individual (like parity, marital status) and household level characteristics with the use of modern contraception. In this context, it seems relevant to furnish the prevalence rate of HIV/AIDS in the countries studied here. According to UNAIDS (2015) estimates, the prevalence rate of HIV/AIDS among adults aged 15 to 49 years in DRC is 0.8 percent, 22.2 percent in Botswana, 10.5 percent in Mozambique and 12.9 percent in Zambia. The study suggests the country specific policies targeting specific groups, for example rural women and young low parity women in Mozambique and Zambia, in providing the family planning services. The study also confirms that improvement in education and eradicating poverty would be an important policy intervention to increase the use of modern contraceptive methods, to reduce fertility and to achieve universal access to reproductive health and to improve maternal health in these countries.

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