

Factors Influencing Contraceptive Use and Method Choice Among Married Women in Malawi

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Abstract

Although the contraceptive prevalence is relatively high at 42.2 percent in Malawi, the total fertility rate continues to be high at 5.7 children per woman in 2010. There has been dearth of studies that have systematically studied the determinants and factors that influence contraceptive use and choice of particular methods by individual women to present a wholesome picture of contraceptive use dynamics in Malawi. Using the Malawi Demographic and Health Survey conducted in 2010, bivariate and multivariate statistical analyses are used to examine the determinants of contraceptive use and method choice among married women. Qualitative data collected in three district are also used to understand the social and cultural factors that influence the use and choice of contraceptive method. The results show that age and fertility related factors are significantly associated with married women's contraceptive use and choice. There is poor method mix driven by desire to have children. Although there has been a steady increase in the use of family planning methods over the years, the levels are still low for young women who have just got married and are under intense social and cultural pressure to prove their fertility and hence fertility rates remain high.

Key words: Malawi, young married women, contraceptive use, method choice, fertility desire.

1 Introduction

The promotion of family planning is one of the critical priority areas in the country's efforts to reduce total fertility rate, slow down population growth and reduce maternal and child mortality. This is spelt out in the Malawi's Growth and Development Strategy II, the country's overarching development framework, and also in the National Population Policy. These documents emphasize on substantial reductions in these three measures as one way of meeting Millennium Development Goals number 4 and 5 and enhance the social and economic development of the country (Government of Malawi, 2012, 2013).

There are a number of reasons family planning program is a critical for Malawi. The country is experiencing rapid population growth. The 2008 Population and Housing Census enumerated 13.1 million people. This was a rise from 9.8 million people enumerated in the 1998 census, giving an inter censal growth rate of 2.8 percent per annum, one of the highest in the world (Government of Malawi, 1999, 2009). A population's growth rate is deemed rapid if its annual increase is 2 percent or more, equivalent to a doubling of population size every 36 years (Cleland *et al.*, 2006). At the current growth rate, the population is projected to reach 45 million by 2050, exerting pressure on social services and sustenance of natural resources (De-Negri and McKee, 2012; Government of Malawi, 2012).

Fertility is high at 5.7 children per woman (National Statistical Office and ICF Macro, 2011). Among the main features of Malawi's fertility is the high adolescent fertility rate that emanates from low levels of educational attainment and early marriage among women. The 2010 MDHS shows that by the age of 19, almost 64 percent of women had already started the childbearing process (57.2 percent had at least a live birth while 6.5 percent were pregnant with first child). The median age at first birth is currently estimated at 18.9 years (National Statistical Office and ICF Macro, 2011) which provides for a longer childbearing period ending up with high fertility rates. With this high fertility, there are prospects that the population would continue to grow even after attaining replacement level fertility of 2.1 children per woman due to the effect of population momentum (a high concentration of young people who are already born and are yet to go through reproduction)(AFIDEP and PAI, 2012).

The family planning program in Malawi has registered remarkable progress in terms of utilization of modern contraceptive methods. This is evident in the rise in modern contraceptive prevalence rate (CPR) from 7.4 percent in 1992 to 42.2 percent in 2010, a rise of close to 35 percentage points in two decades (National Statistical Office and ICF Macro, 2011). This is remarkable when compared with other countries in sub-Saharan Africa. For example, in Nigeria, contraceptive use only increased from 6 percent in 1990 to 10 percent in 2008 (Federal Office of Statistics and IRD/Macro International, 1992; National Population Commission and ICF Macro, 2009). In addition, while family planning programs in some sub-Saharan African countries have been in existence since the 1960s (for example, Ghana) and the 1970s (for example, South Africa and Kenya), the current family planning program in Malawi has only been in existence from the 1980s. The National Population Policy was adopted in 1994 while the National Family Planning Policy and Contraceptive Guidelines were adopted in 1996 liberalizing the practice of family planning in the country (Chimbwete, Watkins and Zulu, 2005; Government of Malawi, 1996; Solo, Jacobstein and Malema, 2005).

In as much as there has been such progress, there are still some issues about the family planning program that warrant further investigation to fill in some gaps in knowledge. First, although the CPR is relatively high at 42.2 percent, the total fertility rate continues to be high at 5.7 (National Statistical Office and ICF Macro, 2011). This mismatch raises some questions about contraceptive use dynamics and fertility in Malawi bearing in mind that there are some countries

in Sub Saharan Africa with similar levels of CPR but have lower levels of TFR. For example Kenya's CPR is at about 40 percent while its TFR is at 4.5 (Population Reference Bureau, 2012).

In addition, data show that both Malawian women and men would like to have fewer children than their current fertility rate. The desired family sizes are 3.9 for women and 4.0 for men against a fertility rate of 5.7. Furthermore, one in every four (26 percent) of currently married women has an unmet need for family planning (14 percent for spacing and 12 percent for limiting) meaning that they want to either delay the next pregnancy or stop childbearing altogether, but they are not using any method of family planning (Government of Malawi, 2013).

Of particular significance to this study is the issue of contraceptive method mix in the country. Although there has been a surge in the CPR as outlined above, data show that the injectables (Depo-provera) is the most prevalent method among married women in the country (steadily increased from 1.5 percent in 1992 to 26 percent in 2010) followed by female sterilization (increased more than five times from 1.7 percent in 2004 to 9.7 percent in 2010). This contraceptive method mix reveals that only two methods (injectables and female sterilization) account for 77 percent of all contraceptive use in the country (National Statistical Office and ICF Macro, 2011). This method mix reality raises some questions about the country's contraceptive use dynamics particularly on the factors influencing contraceptive use and method choice among women.

1.1 Statement of the problem and justification of the study

While studies have been conducted on various aspects of contraceptive use in Malawi (Chimbiri, 2007; Chonzi, 2000; Cohen, 2000; Kaphagawani, 2006; Palamuleni, 2008; Zulu, 1998) most of the studies have focused on levels, trends, determinants and differentials of contraceptive use in the country. Although some factors have been examined and have shown to individually influence or determine particular method knowledge and use (Babalola *et al.*, 2012; Cohen, 2000; Kaphagawani, 2006; National Statistical Office and ICF Macro, 2011), they have not been examined simultaneously to identify those factors that significantly influence contraceptive use and method choice in Malawi. There has been dearth of studies that have systematically studied the trends, determinants and factors that influence contraceptive use and choice of particular methods by individual women to present a wholesome picture of contraceptive use dynamics in Malawi. In addition, there has also been lack of studies that have explored the contextual factors such as social and cultural issues, women's attitudes towards particular contraceptive methods and community and peer influences associated with contraceptive use and method choice. This lacuna is what motivates the carrying out of this study.

Contraceptive choice is a central element of quality of care in the provision of family planning services and an important dimension of women's reproductive rights (Díaz *et al.*, 1999). In addition, method choice is a key determinant of the impact of contraceptive practice on fertility as the use of more effective methods even by a smaller proportion of eligible couples can produce greater impact, for example decline in fertility levels, than use of less effective methods by a larger proportion of couples (Shah, 1991). Hence, understanding factors associated with contraceptive method choice is not only important for improvements in quality of care and program planning and management but also to enable the country realize desired impact of contraceptive practice on unwanted fertility, child and maternal health (Magadi and Curtis, 2003).

By identifying the factors influencing contraceptive use and method choice, the study will enhance knowledge and in-depth understanding of the contraceptive use dynamics in Malawi. The results can be used by policy makers, family planning program implementers and other stakeholders to identify and draw up interventions that would deal with attitudinal, social, cultural and programmatic factors that influence method mix and choice in Malawi. As an academic pursuit, the study will build upon and contribute to the existing knowledge, debates

and understanding of contraceptive use dynamics in high fertility countries like Malawi. It will also provide evidence for family planning policies and program interventions that would improve levels of contraceptive use, reduce unmet need for family planning, trigger fertility decline and reduced the rate of population growth in Malawi.

1.2 Study Objectives

The overall goal of this study is to investigate the trends and factors that influence contraceptive use and method choice among married women in Malawi. The specific objectives are to:

1. Examine the patterns and determinants of contraceptive use and method choice among married women
2. Identify the social and cultural factors that influence use and choice of particular contraceptive methods

1.3 Research Questions:

To achieve the objectives, the study seeks to find answers to the following questions:

- What are the demographic and socio-economic characteristics of married women who use various contraceptive methods?
- What are social, cultural and religious factors that influence women's contraceptive use and method choice?

2 Data and methods

2.1 Data Sources

2.1.1 2010 Malawi Demographic and Health Survey

The first part of the study is based on the analysis of data obtained from 2010 Malawi Demographic and Health survey (MDHS). The MDHS, as a nationally representative survey, has been consistent in collecting information about family planning in Malawi which is of interest to this study's objectives. The study utilized the individual recode (women questionnaire) of the datasets that focused on women aged 15-49 years. Information obtained from responses to the questionnaire provided data on the socio-economic and demographic characteristics of users of a variety of contraceptive methods. The 2010 DHS collected data from 23,020 women. However, this study's population comprises a subsample of married women only who comprised 15,445. The 2010 MDHS final reports detail the technical aspects of the survey including the sample design, sample frame, sample selection and implementation, sampling errors, non-sampling errors and data quality. The presentation of those details is beyond the scope of this study.

2.1.2 Qualitative data

Qualitative data were collected from the three districts of Ntcheu, Mangochi and Zomba targeting married women and key informants (Health workers, traditional leaders). In-depth interviews (IDIs), focus group discussions (FGDs) and key informant interviews (KIIs) were used as data collection methods. Guided by the study objectives to generate themes, semi-structured interview guides (IDIs and KIIs) and FGD guide were developed to explore factors that influence women's contraceptive behaviors (contraceptive use and method choice). Further, the guides also touched the cultural, social and economic issues that include gender and partner influence (opposition and secrete use), value for children and practices pertaining to childbearing and contraceptive practices as they relate to women.

2.2 Variables

2.2.1 Dependent variables

The dependent variables for this study are two folds and are obtained from the questions in the 2010 MDHS related to 'current use' and 'method used'. The first variable, contraceptive use, focuses on whether a woman is currently using any form of modern contraception or not. The variable is categorised as 'yes' or 'no'. The second variable, method used, focuses on whether a woman is currently using a particular method or not. The methods of interest are condoms, pills, injectables and female sterilization.

2.2.2 Independent variables

The following variables are employed as independent variables: age, level of education, religion, place of residence, level of income, region, number of living children, fertility preference/desires, husband's living in the house, decision maker for using contraception, husband knows that respondent is using contraception, and respondent employment status.

2.3 Data Analysis

We start by examining the characteristics of women who do not use contraceptives vis-a-vis those who use and then we explore the determinants of contraceptive use. We also look at the contraceptive methods used by women with certain characteristics. We finish by examining the determinants of the choice of a particular contraceptive method (condom, pill, injectables and female sterilization).

We employ bivariate and logistic regression in the analysis. Multivariate analysis helps to ascertain the effect of the independent variables since the confounding effect of other

independent variables are taken into account and controlled for. It is then possible to isolate the variables whose relationships to the dependent variables were statistically significant as tested at 0.05 significance level.

2.4 Study limitations

It is reckoned that reporting of current contraceptive use might be inaccurate on the basis that in most rural and traditional societies discussions about sex and sex related subjects are regarded as a taboo. There is also a possibility that respondents may wish to provide responses that they feel are socially acceptable or may withhold some information about their own contraceptive practice, particularly the young and formerly married women, since use of contraceptives among such women is still frowned upon. There could also be other women who use contraceptives clandestinely and due to partner or community opposition they may not wish to share their experiences.

3 RESULTS

3.1 Non users of contraceptives among married women

Table 3.1 presents the percentage distribution of married women who do not use modern contraceptive methods by their socio-demographic characteristics at the time of survey. The results show that the highest proportions of non-users by age are women in the youngest age groups (15-24) while by number of children living are women with no children. It is opined that women in these age groups and without children have just gotten into marriage and they may be under intense pressure to prove their fertility hence might not want to jeopardize their chances of childbearing through contraceptive use. This is corroborated by the qualitative results from indepth interviews with young married women. The following excerpts, for example, indicate views of some married women.

“For married young women with no children they should not go for family planning. It is for married women with children. Unless she has a health problem but otherwise she should not.” [In-depth interview with young married woman, Zomba]

“I also see that it is not logical to practice family planning if you do not have a child. Some women take advantage out of it to do prostitution because they cannot get pregnancies” [In-depth interview with young married woman, Ntcheu]

Quantitative results also show that 96 percent of married women with no living child do not use contraceptives as opposed to about 50 percent of those with 4-5 children.

As expected, the results show that there are higher proportions of married women who do not use contraceptives are in rural areas (59 percent) compared to those in urban areas (49 percent), and non-use is also high if the husband does not stay in the house. The results also show that the greatest proportion of women who do not use contraceptives are those with no education (62.6 percent) compared to those with primary education (57.9 percent) and those with secondary or higher education (51.1 percent). Looking at religion, close to 70 percent of Muslim married women do not use contraceptives compared to 56 percent of Christian married women. It is also noted that – may be arising from lack of access to resources that would enable them access and afford services – poorest married women and those not currently working have higher proportions of non-use compared to the rich and working women.

Table 3.1: Percentage distribution of uses and non-users of contraceptives among married women, Malawi 2010

	Non-users	Users	Number
Age group			
15-19	72.42	27.58	1164
20-24	61.49	38.51	3319
25-29	55.12	44.88	3634
30-34	53.49	46.51	2664
35-39	53.05	46.95	2083
40-44	55.00	45.00	1389
45-49	61.74	38.26	1192
Region			
North	58.67	41.33	2867
Centre	57.47	42.53	5330
South	57.56	42.44	7248
Place of residence			
Rural	58.88	41.12	13618
Urban	49.21	50.79	1827
Level of education			
No education	62.60	37.40	2743
Primary	57.88	42.12	10447
Secondary+	51.13	48.87	2255
Religion			
Christian	56.05	43.95	13500
Muslim	69.83	30.17	1793
Other/no religion	65.73	34.27	143
Missing	44.44	55.56	9
Wealth quintile			
Poorest	63.78	36.22	2808
Poorer	60.14	39.86	3239
Middle	59.25	40.75	3448
Richer	55.06	44.94	3220
Richest	49.89	50.11	2730
Number of living children			
None	95.73	4.27	937
1-3 children	58.93	41.07	8037
4-5 children	49.98	50.02	4008
6+ children	52.01	47.99	2463
Husband lives in the house			
No	70.42	29.58	2133
Yes	55.69	44.31	13256
Missing	58.93	41.07	56
Ethnicity			
Chewa	56.81	43.19	4640
Tumbuka	57.95	42.05	1691
Lomwe	55.46	44.54	2436
Yao	66.30	33.70	1650
Ngoni	55.06	44.94	1996
Others	57.90	42.10	3026
Missing	83.33	16.67	6
Currently working			
No	62.18	37.82	6253
Yes	54.68	45.32	9166
Missing	65.38	34.62	26
Total	57.73	42.27	15445

3.1.1 Main reasons for non-use of contraceptive methods

Women who reported not using contraceptives were asked to state the reason for not using. Some of the reported reasons for not using included not having sex, menopausal, health concerns, breastfeeding, fear of side effects, opposition by respondent or partner, and interference with body processes. Of these, the two main reasons that stood out across all background characteristics are breastfeeding and fear of side effects. However, married women in the 45-49 age bracket reported menopausal as the main reason for non-use. Surprisingly, married women who reported that their husbands/partner lives in the house sighted not having sex as the main reason for not using contraceptives. On opposition to contraceptive use, the 2010 MDHS data show that women's opposition was more prominent than partner opposition. For example, 7.5 percent of married women age 30-34 indicated that they opposed contraceptive use while 4.4 percent indicated that their partners opposed. The main reasons for non-use of contraceptives are presented in *appendix A*.

In-depth interviews with married women indicated that most opposition comes from their partners. Some of the reasons women gave as to why partners oppose contraceptive use include misconception that contraception takes away the pleasure during intercourse, the fear that men will relinquish their decision making powers on childbearing, and the need for many children.

"If a married young woman is practicing family planning, she becomes aggressive as such she is the one who determines child bearing in the family." [In-depth interview with young married woman, Zomba]

"The other reason is that men are the ones who want many children as a result they do not want their wives to go for contraception." [In-depth interview with young married woman, Ntcheu]

Apart from partner opposition, women also had other reasons for non-use of contraceptives. In patriarchal societies, women are required to have many children because it is viewed as a symbol of worth. Women also fear side effects such as continuous menses and general bodily pains. They also have misconceptions similar to those held by men. The following excerpts explains what drives married women not to use contraceptives.

"The other thing is that this is a patrimonial society and they expect a woman to bear children for they take or consider it as worth in a society. So if a woman is not bearing children or is practicing child spacing, they see nothing happening." [In-depth interview with young married woman, Ntcheu]

"...the injection goes to settle in the womb of the woman. So the man doesn't feel the way he is used to when having sexual intercourse. When he goes to have sex with another woman who doesn't use contraceptive methods and finds that the other woman is warm during sexual intercourse, he then accuses you saying 'you are using contraceptive methods, I will go to another woman who is warm'" [In-depth interview with young married woman, Mangochi]

3.2 Contraceptive users among married women

This section presents the likelihood of contraceptive use by married women of different characteristics when other factors are held constant. The factors being considered include, age of the woman (age groups), place of residence (urban or rural), level of education, religion, wealth, number of living children, whether husband lives in the house, ethnicity and employment status.

From Table 3.2, the results show that the odds of using modern contraceptive methods decreases with increasing age of a woman. Young married women aged 20-24 are almost twice (OR=1.8; p=0.00) more likely to use contraceptives than married women at the end of their reproductive cycle (45-49 years). The results also show that the likelihood of using contraceptives

increases with increasing level of a woman's education and wealth quintile. Women with secondary or higher are more likely (OR=1.6; p=0.00) to use contraceptives compared to those with no education or with primary education. Married women who are in the richest wealth quintile are more likely (OR=1.6; p=0.00) to use contraceptive methods compared to the poorest married women. There is also a strong association between contraceptive use and place of residence. The odds of married women using a contraceptive method are higher among those resident in the urban than those in the rural areas (OR=1.3; p=0.00).

As expected, the probability of married women using contraceptives increases with increasing number of living children. Women with no living child are less likely (OR=0.029; p=0.00) to use contraceptives compared to women with six or more children. The results also show that married women whose husbands are present in the household are almost twice likely (OR=1.82; p=0.00) to use contraceptives compared to women whose husbands stay away from their household. This could be attributed to the fact that these women might be experiencing less coital frequency hence feel less likely to become pregnant.

Table 3.2: Logistic regression results of current use of contraceptives by married women, Malawi 2010

	Odds ratio	Std. Err.	P>z
Age group			
15-19	2.160	0.236	0.000
20-24	1.813	0.156	0.000
25-29	1.818	0.147	0.000
30-34	1.583	0.125	0.000
35-39	1.482	0.115	0.000
40-44	1.330	0.110	0.001
45-49*	1.000		
Place of residence			
Rural	1.000		
Urban	1.285	0.077	0.000
Level of education			
No education*	1.000		
Primary	1.208	0.059	0.000
Secondary+	1.613	0.115	0.000
Religion			
Christian	1.748	0.137	0.000
Muslim*	1.000		
Other/no religion	1.346	0.266	0.134
Wealth quintile			
Poorest*	1.000		
Poorer	1.162	0.064	0.007
Middle	1.207	0.066	0.001
Richer	1.378	0.078	0.000
Richest	1.573	0.105	0.000
Number of living children			
None	0.029	0.005	0.000
1-3 children	0.507	0.033	0.000
4-5 children	0.881	0.051	0.029
6+ children*	1.000		
Husband lives in the house			
No	1.000		
Yes	1.817	0.096	0.000
Ethnicity			
Chewa*	1.000		
Tumbuka	0.842	0.052	0.005
Lomwe	1.020	0.054	0.711
Yao	1.035	0.086	0.678
Ngoni	1.005	0.057	0.935
Others	0.908	0.045	0.053
Currently working			
No*	1.000		
Yes	1.304	0.046	0.000

*reference category

3.3 Method choice

Contraceptive method choice is critical in realizing the impact of contraceptive practice as the use of more effective methods even by a smaller proportion of eligible couples can produce greater impact, than use of less effective methods by a larger proportion of couples (Magadi and Curtis, 2003). The study investigated the choice of method type by married women. Table 3.3 depicts the percentage distribution of married women's use of particular type of methods by their socio-demographic characteristics.

Injectables are the most common type of contraceptives among women who are users of family planning. However, there are variations by subgroups of women. These methods can be secretly used even in situations where the spouse disapproves of family planning. Unlike other methods, they are easily accessed even in the rural areas as they can be supplied by the lower cadres of health workers (Health Surveillance Assistants).

“Most women here use injectables and norplant. Some of the reasons are that because they don’t want to be known that they are using contraceptive methods may be because they are doing it on their own without the knowledge of the husband. Also, they are methods that women say they are easy to remember. They just stick to the date that they have told by the provider for the next injection and norplant takes a very long time to for one to come and have another one unlike pills which can easily be forgotten because they are taken on a daily basis. Some use injections because they want to gain weight. After seeing their friends who are using and they are building their bodies well, they are encouraged by that. They want to have smooth bodies (wosalala) as well” [Key informant interview, Community Health Worker – HSA: Ntcheu]

The 2010 MDHS results also show that use of female sterilization is second to injectables and increases with age of the woman. While the proportions of married women using condoms and pills appear to increase with levels of education, the proportions decreases with education levels when one considers female sterilization. These results are intriguing as it would be expected that the more a woman is educated the more her desire to limit births and hence would go for the terminal methods. The higher proportions using the pill and condoms might be attributed to the fact that the more educated the woman the better her skills to negotiate condom use with her partner.

On the overall, the mostly used method by all married women is injectables as about 55 percent of all contracepting married women use this method. This is followed by female sterilization that is used by close to 21 percent of all married women. This is an indication that there is poor method mix among contracepting married women in Malawi as over close to three quarters of all contracepting women use these two methods only.

Table 3.3: Percentage distribution of method choice by background characteristics

	Pill	IUD	Injections	Male Condom	Female condom	Female sterilization	Male sterilization	Periodic abstinence	Withdrawal	Norplant	Other	Total	Number
Age group													
15-19	6.03	0.00	70.98	13.79	0.29	0.00	0.00	0.00	6.61	1.15	1.15	100	348
20-24	4.16	0.29	74.46	8.03	0.22	1.29	0.00	1.51	5.09	3.23	1.72	100	1394
25-29	6.92	0.46	69.05	6.24	0.23	5.32	0.06	1.37	4.18	5.03	1.14	100	1748
30-34	6.67	0.73	54.77	4.55	0.15	18.99	0.15	1.54	4.99	4.84	2.64	100	1364
35-39	6.02	0.55	39.14	4.47	0.27	35.31	0.55	1.64	6.02	2.92	3.10	100	1096
40-44	3.69	0.00	26.10	3.69	0.28	53.76	0.00	2.98	2.98	1.13	5.39	100	705
45-49	1.53	0.38	14.69	3.24	0.19	66.60	0.00	1.91	4.58	0.38	6.49	100	524
Place of residence													
Rural	5.20	0.37	55.49	5.99	0.26	20.56	0.13	1.34	5.02	2.72	2.90	100	6172
Urban	6.95	0.70	50.05	5.26	0.00	21.45	0.10	3.18	3.57	7.65	1.09	100	1007
Level of education													
No education	5.29	0.63	50.49	3.05	0.09	30.76	0.09	1.35	2.60	1.61	4.04	100	1115
Primary	4.84	0.31	55.48	5.93	0.29	20.71	0.12	1.30	5.39	2.90	2.74	100	4858
Secondary+	8.04	0.66	55.64	8.37	0.08	11.28	0.17	3.07	4.56	7.13	1.00	100	1206
Wealth quintile													
Poorest	6.57	0.71	60.78	4.61	0.27	15.08	0.18	1.15	5.15	2.04	3.46	100	1127
Poorer	4.95	0.28	59.58	5.23	0.14	17.98	0.07	1.81	4.74	1.74	3.48	100	1435
Middle	4.53	0.26	58.86	5.95	0.26	18.31	0.19	0.84	5.69	2.52	2.59	100	1546
Richer	4.89	0.19	51.46	6.99	0.25	24.65	0.00	1.02	4.45	3.49	2.60	100	1574
Richest	6.61	0.73	44.69	6.28	0.20	25.78	0.20	3.14	4.14	6.88	1.34	100	1497
Number of living children													
None	12.50	0.00	22.92	35.42	0.00	10.42	0.00	6.25	10.42	2.08	0.00	100	48
1-3 children	5.78	0.34	66.74	7.96	0.28	6.93	0.06	1.56	4.75	4.10	1.51	100	3581
4-5 children	5.89	0.46	50.80	3.93	0.23	26.75	0.18	1.55	4.34	3.29	2.60	100	2191
6+ children	3.61	0.59	30.54	2.58	0.07	47.53	0.22	1.62	5.59	1.84	5.81	100	1359
Husband lives in the house													
No	5.69	0.44	55.77	5.55	0.44	20.29	0.00	1.61	4.23	3.94	2.04	100	685
Yes	5.37	0.42	54.66	5.94	0.20	20.74	0.14	1.59	4.87	3.37	2.71	100	6467
Missing	18.52	0.00	44.44	3.70	0.00	18.52	0.00	3.70	7.41	0.00	3.70	100	27
Currently working													
No	5.20	0.46	57.27	5.55	0.15	18.55	0.11	1.15	5.93	3.18	2.45	100	2614
Yes	5.58	0.40	53.25	6.10	0.26	21.94	0.13	1.87	4.15	3.56	2.77	100	4554
Missing	9.09	0.00	63.64	0.00	0.00	9.09	0.00	0.00	18.18	0.00	0.00	100	11
Total	5.45	0.42	54.73	5.89	0.22	20.69	0.13	1.6	4.82	3.41	2.65	100	7179

3.4 Determinants of contraceptive method choice

The study carried an analysis to find out the factors that are strongly associated with use of four main contraceptive methods i.e. condoms, pills, injectables and female sterilization. These methods were regressed over a number of independent factors such as age, type of residence, education level, wealth quintile, number of living children, and employment status. The results are presented in Table 3.4.

The results show that age is not a predictor of condom use while it is a predictor for pills, injectables and female sterilization. The results also show that use of female sterilization increases with age and for injectables it decreases with age thereby affirming our observation in section 3.3. For example, the odds that a woman age 20-24 will be sterilized are about 99 percent lower than a woman age 45-49 on the other hand, the odds of being sterilized are 53 percent lower for a woman age 40-44 than a woman age 45-49. Additionally, the odds of using injectables are 24 times higher for a woman age 20-24 than the odds for a woman age 45-49.

While education appears not to be a predictor of contraceptive method choice, there is a significant difference between women with secondary or more education and women with no education when one considers female sterilization only. A woman with secondary or more education is 30 percent less likely to undergo female sterilization than a woman with no education. This confirms our earlier observation in section 3.3 on proportion of women undergoing female sterilization by age.

As expected, the number of living children the woman has is a predictor of three methods; condoms, pills, and injectables. For example married women with no children are more likely to use condoms and pills than older married women. However, the odds of using injectables among women with at least one child are eight times higher (OR=8.1; $p=0.00$) than the odds among women without children. As for choice of female sterilization, the variations are not significant when we consider number of living children.

The results further show that place of residence or whether one is working or not does not influence a contraceptive method choice.

Table 3.4: Predicted probability of method choice

	Model 1 (condom**)		Model 2 (pill)		Model 3 (injectables)		Model 4 (female Sterilization)		
	Odds ratio	P>z	Odds ratio	P>z	Odds ratio	P>z	Odds ratio	P>z	
Age group									
15-19	1.593	0.158	3.307	0.009	18.644	0.000	na		
20-24	1.081	0.796	2.345	0.039	22.499	0.000	0.006	0.000	
25-29	1.010	0.974	3.953	0.000	14.569	0.000	0.024	0.000	
30-34	1.035	0.908	4.134	0.000	7.384	0.000	0.093	0.000	
35-39	1.354	0.301	4.081	0.000	3.767	0.000	0.205	0.000	
40-44	1.216	0.541	2.499	0.026	2.027	0.000	0.470	0.000	
45-49*	1.000		1.000		1.000		1.000		
Region									
North*	1.000		1.000		1.000		1.000		
Centre	0.268	0.000	0.813	0.320	2.141	0.000	0.917	0.561	
South	0.189	0.000	0.928	0.675	2.695	0.000	0.676	0.004	
Place of residence									
Rural*			1.000		1.000				
Urban			1.167	0.348	0.850	0.081			
Level of education									
No education*	1.000		1.000		1.000		1.000		
Primary	1.103	0.612	0.866	0.371	0.970	0.718	1.025	0.799	
Secondary+	1.018	0.934	1.306	0.207	0.928	0.531	0.700	0.023	
Religion									
Christian			2.597	0.004	0.686	0.009	1.180	0.363	
Muslim*			1.000		1.000		1.000		
Other/no religion			4.194	0.021	0.731	0.382	1.046	0.915	
Wealth quintile									
Poorest*			1.000		1.000		1.000		
Poorer			0.771	0.134	0.978	0.820	1.291	0.054	
Middle			0.649	0.014	0.970	0.757	1.315	0.035	
Richer			0.636	0.010	0.788	0.015	1.729	0.000	
Richest			0.712	0.085	0.637	0.000	2.021	0.000	
Number of living children									
None*	1.000		1.000		1.000		1.000		
1-3 children	0.089	0.000	0.368	0.031	8.153	0.000	0.691	0.579	
4-5 children	0.040	0.000	0.361	0.034	8.433	0.000	0.925	0.907	
6+ children	0.024	0.000	0.307	0.020	7.838	0.000	1.041	0.952	
Ethnicity									
Chewa*	1.000		1.000		1.000		1.000		
Tumbuka	2.051	0.002	1.444	0.124	0.804	0.102	1.004	0.979	
Lomwe	2.155	0.001	0.971	0.890	0.962	0.723	1.018	0.902	
Yao	2.520	0.000	1.697	0.076	0.990	0.950	0.631	0.027	
Ngoni	1.445	0.104	1.695	0.003	0.774	0.009	0.890	0.343	
Others	2.129	0.000	1.625	0.011	0.904	0.341	0.729	0.020	
Currently working									
No*					1.000		1.000		
Yes					0.972	0.646	0.938	0.421	

*reference category; **includes both male and female condoms; na = not available

4 Conclusion and Discussion

Although there has been a steady increase in the use of family planning methods over the years, the levels are still low for young women who have just got married and are under intense social and cultural pressure to prove their fertility.

Age and fertility related issues came out as strong determinants for both contraceptive use and method choice among married women. For younger women without a child, this might be attributed to the desire to have at least a child as immediate as they may wish hence using short term methods that do not delay return to ovulation. Older women with more than one child would not want to have more children because their fertility has already been proven hence their use of permanent methods. This means that childbearing is at the core of the marriage even if it involves young married women. While contraceptive prevalence has increased over the years, the fertility rate remains high because of the poor method mix among women which is driven by the desire to have children among married women. The promotion of contraceptive use among married women will need to take into consideration the value that culture puts on childbearing and the number of children a woman brings forth into the world if the total fertility rate is to be reduced.

The study has also shown that husbands/partners are very critical in women's decision to use contraceptives and a particular method. Where the husband lives in the house the woman is more likely to use contraceptives than when he is absent. It entails that the contraceptive use and method choice might have been influenced by the husband. Thus, in order to enhance contraceptive use among young married women, it is very critical to fully involve their partners. This will entail appreciation of the benefits of contraceptive use at that early age in the reproductive career. Our findings should lead to further research on the role of husbands on scaling up the contraceptive use and method choice among married women.

However, it is of interest to note that the study has found education, type of residence, and employment status not to be significantly associated with method choice. This might be attributed to the fact that the country's overall contraceptive method mix is poor such that the majority of women, regardless of education level or place of residence or work status opt for injectables due to their ease of access and use.

Acknowledgements:

Qualitative data used in this study were collected using funds from small College grants awarded by Chancellor College.

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Appendix A: Main reported reasons for non-use of contraceptive methods by background characteristics (Percentage distribution)

	Not having sex		Infrequent sex		Menopausal		Health concerns		Postpartum amenorrhea		Breast feeding		Fear of side effects		Respondent opposed		Partner opposed		Interferes with body processes		Others	
	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes
Age group																						
15-19	5.9	9.5	6.6	3.4	6.8	0.4	6.8	2.6	6.1	12.9	4.8	10.7	6.9	3.9	6.5	5.9	6.5	5.2	6.5	5.0	6.8	4.3
20-24	20.5	27.8	21.7	18.8	22.7	2.7	22.1	14.8	21.2	26.9	17.8	31.0	21.9	19.2	21.7	18.6	21.4	22.7	21.8	15.6	22.3	16.9
25-29	20.5	25.9	21.6	16.0	22.5	1.6	21.5	18.7	20.8	30.1	18.8	27.6	21.5	19.6	21.5	17.4	21.2	21.5	21.3	19.1	21.2	21.1
30-34	16.0	16.2	16.0	16.0	16.8	3.1	15.7	19.5	16.2	11.8	16.2	15.3	15.5	18.7	15.9	16.8	15.9	18.0	15.8	19.1	15.7	17.8
35-39	13.5	9.3	12.9	13.3	13.4	5.4	12.5	17.7	13.2	8.6	14.0	10.2	12.1	18.1	12.9	14.0	12.7	18.6	12.8	16.1	12.5	15.5
40-44	10.8	7.6	9.9	17.1	9.7	20.9	9.8	15.8	10.6	5.4	12.9	3.9	10.0	12.2	10.1	14.0	10.5	7.6	10.1	15.1	10.6	9.3
45-49	12.8	3.6	11.3	15.4	8.1	65.9	11.7	10.8	11.9	4.3	15.5	1.3	12.2	8.4	11.5	13.4	11.8	6.4	11.7	10.1	11.0	15.0
Place of residence																						
Urban	9.7	11.1	9.8	10.9	9.9	9.3	9.5	13.7	9.7	14.0	10.6	8.0	9.9	9.4	10.2	6.2	9.9	9.3	9.6	15.6	9.6	11.2
Rural	90.3	89.0	90.2	89.1	90.1	90.7	90.5	86.3	90.3	86.0	89.5	92.0	90.1	90.6	89.9	93.8	90.1	90.7	90.4	84.4	90.4	88.8
Level of education																						
No education	23.7	13.6	21.7	30.7	21.3	38.0	22.3	22.7	22.4	20.4	24.1	17.7	22.1	23.7	22.2	24.5	22.3	23.8	22.5	19.6	22.1	23.9
Primary	66.0	65.3	66.6	56.3	66.4	58.9	66.3	62.3	66.0	64.0	64.3	70.2	65.7	67.2	65.7	68.3	65.9	67.4	65.9	66.3	66.0	65.4
Secondary+	10.3	21.1	11.7	13.0	12.3	3.1	11.4	15.0	11.6	15.6	11.6	12.1	12.2	9.1	12.1	7.1	11.9	8.7	11.6	14.1	11.9	10.7
Wealth quintile																						
Poorest	21.7	14.9	20.7	21.2	20.9	19.0	20.8	20.6	20.7	22.0	19.6	23.7	21.0	19.3	20.4	25.8	20.7	23.3	21.0	15.6	20.8	20.5
Poorer	22.5	20.2	22.3	21.2	22.3	20.9	22.1	23.2	22.2	21.5	21.4	24.3	22.3	22.0	22.0	24.8	22.2	23.3	22.4	17.6	22.3	21.7
Middle	22.2	24.0	22.6	19.1	22.3	24.4	22.5	21.1	22.5	21.0	22.3	22.8	21.9	25.2	22.8	18.0	22.2	26.2	22.4	22.6	22.7	20.8
Richer	19.4	23.1	20.0	18.4	19.7	22.1	20.3	15.6	19.9	18.8	20.8	17.4	19.8	20.4	19.9	19.3	20.1	14.5	19.7	24.6	19.5	22.3
Richest	14.3	17.8	14.4	20.1	14.8	13.6	14.3	19.5	14.7	16.7	15.9	11.8	15.1	13.1	15.0	12.1	14.8	12.8	14.5	19.6	14.8	14.7
Number of living children																						
None	1.4	0.2	1.2	2.4	1.2	2.3	1.3	1.3	1.3	0.5	1.7	0.1	1.2	1.6	1.2	2.2	1.3	1.2	1.2	2.0	1.3	1.2
1-3 children	49.9	62.0	52.0	45.4	53.2	26.4	51.9	48.0	50.9	65.1	48.7	59.0	52.3	47.1	51.9	46.9	51.8	45.9	51.8	47.2	51.8	50.2
4-5 children	28.1	23.8	27.5	28.0	27.4	29.8	27.5	28.0	27.6	25.3	27.9	26.6	26.9	31.1	27.6	26.4	27.3	32.0	27.5	28.6	27.4	28.4
6+ children	20.6	14.0	19.3	24.2	18.3	41.5	19.4	22.7	20.1	9.1	21.7	14.3	19.6	20.3	19.3	24.5	19.6	20.9	19.6	22.1	19.6	20.2
Husband lives in the house																						
No	84.9	45.3	81.1	58.7	78.9	90.3	78.8	88.1	79.3	85.5	78.4	82.8	78.2	87.5	79.3	83.9	79.4	84.3	79.0	91.5	79.0	83.0
Yes	14.6	54.6	18.4	41.0	20.6	9.7	20.8	11.6	20.2	14.5	21.3	16.5	21.4	11.8	20.3	15.8	20.1	15.7	20.5	8.0	20.6	16.6
Missing	0.5	0.2	0.5	0.3	0.5	0.0	0.5	0.3	0.7	0.0	0.4	0.7	0.4	0.8	0.5	0.3	0.5	0.0	0.4	0.5	0.4	0.5
Currently working																						
No	42.1	45.3	42.7	39.6	43.0	34.5	43.3	34.8	42.5	43.0	40.8	47.2	42.6	42.0	42.0	49.4	42.4	46.5	42.7	39.2	43.0	39.8
Yes	57.7	54.8	57.0	60.4	56.7	65.5	56.5	64.9	57.3	57.0	59.0	52.7	57.2	57.7	57.8	50.6	57.4	53.5	57.1	60.8	56.9	59.4
Missing	0.2	0.0	0.2	0.0	0.2	0.0	0.2	0.3	0.2	0.0	0.2	0.2	0.2	0.3	0.2	0.0	0.2	0.0	0.2	0.0	0.1	0.8
Total	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Number of women	3743	579	4029	293	4064	258	3943	379	4136	186	3128	1194	3675	647	4000	322	4150	172	4123	199	3677	645