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Abstract

Introduction: Women in most sub-Saharan countries bear children at younger ages, have larger families, and make much less use of family planning. Sub-Saharan Africa has the lowest rate of contraceptive use in the world. There are both modern and traditional methods of Family planning. Throughout history, the traditional family planning practices used to space children have been rich and varied.

Purpose: This work sets out to investigate the diverse traditional family planning methods used by women in the Bamenda Municipality and the determinants of their choices.

Methods: A mix of descriptive and exploratory research designs were used. The purposive sampling technique was used to identify 100, participants residing in Bamenda Municipality who were married/cohabiting, aged 21-49 years, and whose last child was ≤ 5 years old. The multinomial logit model, chi-square, frequencies, percentages, and charts were used for the analysis. An interview administered questionnaire was administered to women of childbearing age who were not on any modern contraceptive method.

Findings: Results showed that the local family planning methods used by women in the Bamenda Municipality were; withdrawal, lactational, calendar, cervical mucus, and douches methods. Other locally used products presumed by these women to help prevent conception were; bicarbonate, honey, thyme, parsley, herbs, lemon, cola drink, alakata pepper, alcohol, hot water, salt, vinegar, and whisky. Results further showed that age, age at first marriage, number of children, and the fear of side effects all significantly influenced women's choice of withdrawal and calendar method over other methods of family planning.

Conclusion: It can be concluded that, the most frequently used traditional contraceptive method by women in the Bamenda Municipality are; calendar (70%), withdrawal (58%), and lactational method (45%) whose choices over other methods especially over modern methods was mostly due to the fear of side effects of the modern method. It is recommended further research be carried out to investigate and establish the efficacy of the common products used by these women.

Keywords: *Traditional, Family Planning, Women, Bamenda and Cameroon*

Introduction

Family planning saves lives and can improve the health of women, children, and society as a whole. From Mason (2010), gaining control of one's reproductive choices and fertility has health benefits for both mother and child. In most developing countries, women are amongst the poorest of the poor and are forced to depend on their partners, their fertility, and their ability to stay in a relationship to maintain a sense of economic stability (USAID, 2005) as cited by Mason, 2010. Recognizing the importance of family planning, the Sustainable Development Goals (SDGs) have incorporated as targets the attainment of universal access to sexual and reproductive health and reproductive rights (Goal 3.7). Both modern and traditional contraceptive methods contribute to overall contraceptive use, but there is more emphasis given to the promotion of modern contraceptive methods because of their greater effectiveness in preventing unintended pregnancies (Polis *et al.* 2016) as cited by Marquez *et al.* (2017).

Compared to women elsewhere in the world, women in most sub-Saharan countries bear children at younger ages, have larger families, and make much less use of family planning. Sub-Saharan Africa has the lowest rate of contraceptive use in the world. Several factors have contributed to this low rate: difficulty in getting contraceptive supplies, not enough family planning clinics, a largely rural population, low socioeconomic levels, high rates of infant and child mortality, and the high value many cultures place on large family size (Manzila, 2000). There are both modern and traditional methods of Family planning. Throughout history, the traditional family planning practices used to space children have been rich and varied (Manzila, 2000).

Family planning/child spacing is defined as a conscious effort by a couple to limit or space the number of children they want to have through the use of contraceptive methods (Okonofua *et al.*, 2011). It is a way of living that is adopted voluntarily based on knowledge, attitude, and responsible decision-making by individuals or couples to pin the number, timing, and spacing of the children they want, with intention of promoting the health and welfare of the family group, and contribution toward the advancement of the society (Delano *et al.*, 1990). There are two major methods of family planning; traditional and modern methods.

Attempts to control the increase in population started from the early men. Evidence from medical history indicates that the older generation did space their children through traditional means (Alkema *et al.*, 2013) and the traditional methods of family planning had been handed down from generation to generation. Before the introduction of modern methods, Africans had methods of fertility regulation. African culture includes many myths, rituals, and the use of herbs in attempts to regulate women's fertility. Although many of these traditional methods of family planning have no harmful effects on a woman's health, some, however, do have dangerous or counterproductive effects (Mairiga *et al.*, 2010). This work, thus, sets out to investigate the diverse traditional family planning methods used by women in the Bamenda Municipality. It also looks for the determinants of the choice of family planning method used by women in the Bamenda Municipality

Literature on the traditional methods of family planning

Although many studies have been conducted on family planning methods, little is known about the utilization and determining factors of Traditional Methods of contraception (TMCs) among women of child-bearing age groups. As women's contraceptive choice and practice are a key element of quality care in a family planning service program, knowing utilization status and its determinants is crucial. Findings from this study would aim to contribute to the understanding of whether the TMCs have a role in child spacing and why women in this community prefer these methods. The withdrawal method and other traditional methods of contraception are still used in Turkey. Ninety-eight percent of women in Turkey know about modern family planning methods and where to find contraceptives. Only one in every three women uses the modern method while the rest uses the traditional methods they used before (Mine, 2002). The traditional methods of contraception include the lactational amenorrhea method (Malarcher, et al., 2016) coitus interruptus (withdrawal method), calendar method, or rhythm method (World Health Organisation, 2017) cervical mucus method, and abstinence (Vogelsong, 2017). Other forms of TMCs can be customs or beliefs which include some rituals and use of traditional medicine and herbs (Keller, 1996).

Manzila (2000) listed several traditional family planning methods used in Africa. He grouped the methods into 6:

1. Mechanical barriers methods made up of: Sponge and spongy substances; Lemon halves, shelled out and placed over the cervix (similar to cervical cap); Linen pads in the vagina; Crocodile or elephant dung; Condom-like materials: cecum and bladder of various animals, linen sheaths and receptacles shaped like condoms that are placed into the vagina.
2. Spermicidal materials: Lemon juice; cola drinks; vaginal pill made of tannic acid; pastes and gums of honey, natron, sodium bicarbonate, oils, and ground betelnut.
3. Douches of alum, white oak bark, hemlock bark, red rose leaves, raspberry leaves, roots, zinc sulfate, sodium bicarbonate, and coca-cola.
4. Removal of semen from the vagina by mechanical methods (such as wiping with a cloth or jumping up and down).
5. Pessaries or suppositories: Gold ball at the base of the "temple of love"; Block pessary with 4 concavities; Beeswax; Opium ball and Stones placed in the uterine cavity.
6. Systemic preparations: Cup of roots to make a woman sterile, such as worm fern roots; Sabine (*Juniperus sabina*) to prevent conception; Marjoram, thyme, parsley, and lavender teas, and Willow tea.

Traditional contraceptive methods include periodic abstinence or rhythm, withdrawal, and folkloric methods. Periodic abstinence or the calendar method (rhythm) has been widely used among Filipino couples (Verzosa et al. 1984, as cited by Marquez et al., 2017). Most contraceptive users rely on modern methods but over the past 10 years traditional method use has continued to comprise about a third of all contraceptive users in the country (Marquez et al., 2017) and while

most program efforts have focused on new acceptors of modern contraception, many Filipino women continue to rely on traditional methods.

The multinomial logistic regression analyses carried out by Marquez et al., (2017) in the Phillipines showed that among users of traditional rather than modern contraceptive methods, women in 2003 and 2008 were more likely to use rhythm over modern contraceptive methods compared with women in 2013, while withdrawal rather than modern contraceptive methods was preferred more by women in 2013 than in 2003.

Literature of the factors that influence the method of contraceptive used

Findings from a baseline survey conducted before the initiation of organized family planning efforts in one urban and one rural area of Bas Zaire revealed the widespread use of traditional methods and a surprisingly high level of knowledge of modern contraceptives. However, in the absence of a delivery system, the use of the latter was extremely limited (4-5 percent of currently married women). The data reflect a deep-seated motivation for birth spacing, which is achieved primarily through withdrawal and abstinence. Of the variables tested as possible correlates, only economic status was related to the use of both traditional and modern methods in the same direction. The use of a traditional method was largely determined by age of the youngest child and breastfeeding status. By contrast, the use of a modern method was highest among women over 30 with higher levels of education and parity, who were not currently breastfeeding (Bertrand *et al.*, 1985).

A study conducted by Apanga and Adam (2015) in the Talensi District of Ghana on the factors influencing the uptake of family planning services; showed that misconceptions about family planning methods and husbands' refusal to allow their wives to access family planning services were the major factor. The principal reasons reported for not using methods generally considered to be highly reliable were fear of health problems and side effects and the opposition of husbands to such methods. Most couples who practice withdrawal also feel that it is as effective as modern methods. These findings imply that a major focus of family planning efforts should be the education of women, of their partners, and healthcare and family planning providers concerning the benefits, risks, and failure rates of both traditional and modern contraceptive methods (Mine, 2002).

Consoler (2011) examined the determinants of contraceptive use among women ages 15–49 of childbearing age (WCA). The study constituted a sample size of 3,871 and 10,656 15 to 49-year-old women of childbearing from 1991 and 2004 Cameroon Demographic and Health Survey datasets respectively. Regression results confirmed that social, cultural, political, and legal determinants affect modern contraceptive use. Consoler (2011) also confirmed that modernization and human capital have influenced modern contraceptive use in Cameroon from 1991 to 2004. Unlike age at first marriage, income, place of residence, and education also influenced contraceptive use among women.

The results of Marquez *et al.*, (2017) identified several factors that are significant in predicting the use of either rhythm or withdrawal rather than modern contraceptive methods. Women in the lowest wealth quintile relative to those in the highest (wealthiest) quintile, as well as women who

want more children, relative to those who do not, are more likely to use either of the two traditional rather than modern contraceptive methods. According to these authors, external factors such as the gradual withdrawal of support of the United States government on the provision of contraceptive commodities also influenced the course of action taken by the government on the family planning program. Marquez *et al.* (2016) as also cited by Marquez *et al.* (2017) reported a study of urban poor women in Manila which found that traditional contraceptive methods particularly withdrawal, are preferred because of their absence of side effects, safety, agreeability with a partner, and ease of use. Furthermore, a review of qualitative studies on non-use of modern contraceptive methods among young women in developing countries by Williamson *et al.*, 2009 pointed to factors such as lack of knowledge and poor access to services, a common perception that modern family planning methods and services are only for married women, as well as the negative social norms around premarital sexual activity.

METHODOLOGY

This study used a mixed research design (Descriptive and Exploratory Research). The purposive sampling technique was used to identify participants. A total of 10 questionnaires were pre-tested, reviewed, and corrected for effective data collection. The proper version of the questionnaires after a review was printed and made ready for administration. Interviews were also used to complement the responses generated in the questionnaires. Those who qualified for inclusion in this study were married women and those cohabiting, aged 21-49 years and whose last child was ≤ 5 years old, residing in Bamenda Municipality. In addition, only women who practiced strictly traditional methods of family planning were included. Ethical considerations were done by obtaining verbal consent from all participants and only participants of age 21 and above with the right to consent were included in the study. A total of 100 samples were collected and analyzed using multinomial logit regression analysis, chi-square, percentages, charts, and frequencies in SPSS version 20.0

RESULTS

The results are presented in four parts. The descriptive statistics (Table 1); the frequency for variables used (Table 2); the chi-square results, percentages, and frequencies for contraceptive methods used by region of origin of the women (Table 3) and the multinomial logit results (Table 4) specifying the reasons for the choice of contraceptive use. Table 1 presents a summary of the nature, minimum value, maximum values, mean and standard deviation of the variables used in this study.

Table 1: Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
AGE AT 1ST MARRIAGE	100	17	36	23.58	3.970
AGE	100	1	3	2.38	.663
LEVEL OF EDUCATION	100	1	4	3.17	.842
HUSBAND'S LEVEL OF EDUCATION	100	1	4	3.29	.924
INCOME LEVEL	100	1	5	2.54	1.566
HUSBAND'S LEVEL	100	1	5	3.27	1.575
NUMBER OF CHILDREN	100	1	7	3.34	1.350

Source: Computed by authors using SPSS 20.0

Concerning age at first marriage, the lowest age of participants at first marriage was 17 years while the maximum age at first marriage was 36 years with a mean age of 23.58 and a standard deviation of 3.970. The age of respondents was (1) 21-30 years while the maximum age was (3) 41-49 years, . The least level of education was (1) no education whereas the maximum level of education was 4 (Tertiary education). This was same for husband's level of education. In terms of income, the minimum level of income of respondents was <50,000 fcfa while the maximum income level was >200,000 fcfa. The minimum level of respondents' husband education was <50,000fcfa while the maximum was > 200,000fcfa. The minimum number of children was 1 and the maximum was 7 when a mean number of 3.34 and a standard deviation of 1.350. The frequency table for variables used in the study is presented in table 2.

Table 2: Frequency table for variables used in the study

Variables	Frequency	Percentage
REGION OF ORGIN		
NORTH WEST	83	83.0%
SOUTH WEST	8	8.0%
WEST	9	9.0%
AGE		
21-30	10	10.0%
31-40	42	42.0%
41-49	48	48.0%
LEVEL OF EDUCATION		
NO EDUCATION	6	6.0%
PRIMARY	10	10.0%
SECONDARY	45	45.0%
TERTIARY	39	39.0%
HUSBAND'S LEVEL OF EDUCATION		
NO EDUCATION	5	5.0%
PRIMARY	17	17.0%
SECONDARY	22	22.0%
TERTIARY	56	56.0%

PROFESSION		
FARMER	11	11.0%
TECHNICIAN	16	16.0%
SERVICES	45	45.0%
OTHER	28	28.0%
RELIGION		
CATHOLIC	38	38.0%
PROTESTANT	45	45.0%
PENTECOSTAL	16	16.0%
MUSLIM	1	1.0%
INCOME LEVEL		
<50000	37	37.0%
51000-100,000	23	23.0%
101.000-150.000	10	10.0%
151.000-200.000	9	9.0%
ADOVE 200.000	21	21.0%
HUSBAND'S INCOME LEVEL		
>50000	18	18.0%
51000-100,000	23	23.0%
101.000-150.000	9	9.0%
151.000-200.000	14	14.0%
ADOVE 200.000	36	36.0%
N	100	

Table 2 shows that from a total sample size of 100 participants, a majority (83.0%) were from the North West Region. Concerning age, most respondents were of the 41-49 age group (48.0%) followed by those of the 31-40 age group (42.0%). Looking at Education, a cross-section of participants had attended secondary education (45.0%), followed by those who had attended tertiary education (39.0%). Furthermore, most participants' husbands had attended tertiary level of education (56.0%), closely followed by 22.0% of them who had attended secondary education. In addition, concerning the profession, most participants offered services (45.0%) while (16.0%) were Technicians and a few (11.0%) were Farmers. With religion, a majority of participants were Protestants (45.0%), closely followed by Catholics (38.0%) and 16.0% were Pentecostals. Furthermore, a cross-section of participants were below 50,000frs (<50,000frs) while 23.0% of them had their income level between 51,000frs -100,000frs and 21.0% had their income above 200,000frs. Husbands to most respondents earned income above 200,000frs (36.0%) while 23.0% earned between 51,000-100,000frs and 18.0% earned less than 50,000frs

Table 3: Traditional Family Planning Method by Region

Withdrawal	North West	South West	West	Total
No	32.0%	5.0%	5.0%	42.0%
Yes	51.0%	3.0%	4.0%	58.0%
χ^2	2.464		2	.292
Lactational				
No	46.0%	3.0%	6.0%	55.0%
Yes	37.0%	5.0%	3.0%	45.0%
χ^2	1.491		2	.475
Calendar				
No	28.0%	0.0%	2.0%	30.0%
Yes	55.0%	8.0%	7.0%	70.0%
χ^2	4.239		2	.120
Cervical Mucus				
No	71.0%	7.0%	9.0%	87.0%
Yes	12.0%	1.0%	0.0%	13.0%
χ^2	1.503		2	.472
Herbs				
No	80.0%	5.0%	9.0%	94.0%
Yes	3.0%	3.0%	0.0%	6.0%
χ^2	15.486		2	.000
Lemons				
No	77.0%	5.0%	9.0%	91.0%
Yes	6.0%	3.0%	0.0%	9.0%
χ^2	9.142		2	.010
Color Drinks				
No	80.0%	6.0%	7.0%	93.3%
Yes	3.0%	2.0%	2.0%	7.0%
χ^2	8.646		2	.013
Douches				
No	70.0%	8.0%	9.0%	87.0%
Yes	13.0%	0.0%	0.0%	13.0%
χ^2	3.061		2	.216
Bicarbonate				
No	79.0%	7.0%	9.0%	95.0%
Yes	4.0%	1.0%	0.0%	5.0%
χ^2	1.427		2	.490
Honey				
No	80.0%	8.0%	8.0%	96.0%
Yes	3.0%	0.0%	1.0%	4.0%
χ^2	1.551		2	.461

Thyme				
No	80.0%	8.0%	9.0%	97.0%
Yes	3.0%	0.0%	0.0%	3.0%
χ^2	.633		2	.729
Parsely				
No	82.0%	8.0%	9.0%	99.0%
Yes	1.0%	0.0%	0.0%	1.0%
χ^2	.207		2	.902
Others				
Non Response	69.0%	4.0%	7.0%	80.0%
ALAKATA	1.0%	0.0%	0.0%	1.0%
PEPPER				
ALCOHOL	0.0%	1.0%	0.0%	1.0%
BLACK	1.0%	0.0%	0.0%	1.0%
BEANS				
HOT WATER	1.0%	1.0%	1.0%	3.0%
SALT	8.0%	2.0%	1.0%	11.0%
VINEGAR	1.0%	0.0%	0.0%	1.0%
WHISKY	2.0%	0.0%	0.0%	2.0%

Source: Computed by authors

Results reveal that the use of Herbs, Lemon, and Colar Drink by women for contraception significantly depended on the respondent's region of origin of the women. This was not the case with other methods (withdrawal method, Lactational method, Calendar, Cervical Mucus, Douches, Bicarbonate, Honey, Thyme, and Parsely) as they did not significantly depend on the women's region of origin. It can also be observed from table 3 that among locally used products for contraceptives listed by respondents, salt was the most widely used among women of the North West Region. This can be seen in the figure.1

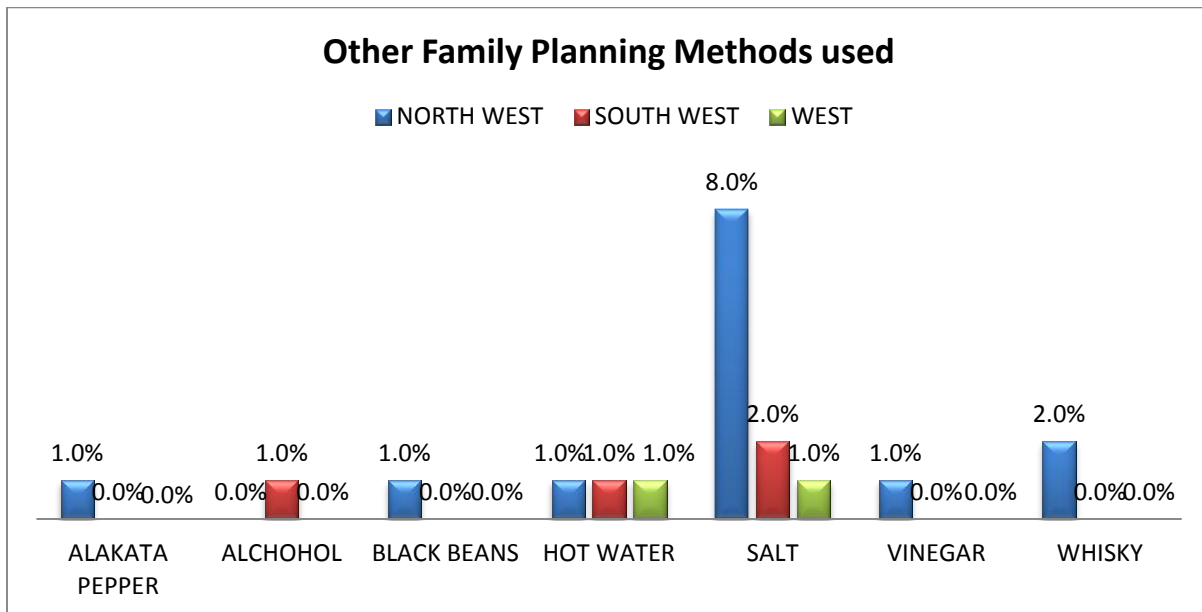


Figure 1: Local Family planning products

It can be seen in fig. 2 that a cross-section of women who used Traditional Family Planning methods, a cross-section of women (70.0%) used the Calendar method followed by those who used the Withdrawal method (58.0%) and the Lactational method (45.0%). Also, 13.0% used Cervical Mucus and Douches, 9.0% used Lemon, 7.0% Colar drink, 6.0% herbs, 5.0% Bicarbonate, 4.0% Honey, 3.0% Thyme, and 1.0% Parsely.

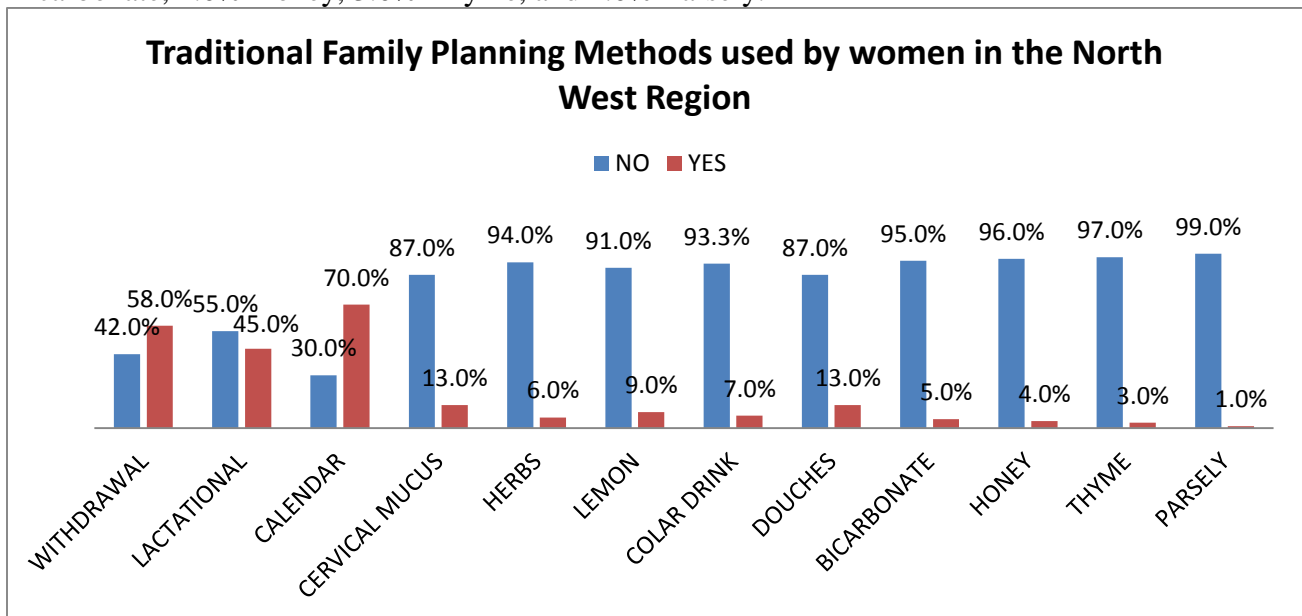


Figure 2: Traditional Family planning methods in the NWR

Table 3 further presents results of the multinomial analysis that accounts for the factors that influence the choice of withdrawal and calendar methods over other methods of contraceptive.

Table 4: Multinomial logistic regression result

Choice	variable	Coefficient	Standard error	P-value
Withdrawal family planning	Constant	-154.153	8543.994	0.986
	Age at first marriage	2.208	0.703	0.002
	Number of children	12.755	5.153	0.013
	30 and above Base(less than 30)	22.998	10.066	0.022
	Disagreed that side effects influence choice Base (agreed)	23.389	9.062	0.01
Calendar Method	Constant	-178.656	39.116	0.004
	Age at first marriage	1.911	0.647	0.003
	Number children	14.026	5.331	0.009
	30 and above Base(less than 30)	26.287	10.436	0.012
	Disagreed that side effect influences choice Base (agreed)	22.56	8.586	0.009

Source: Computed by authors using SPSS 20

The choice of family planning is in 3 categories: withdrawal, calendar, and other family planning methods. Other family planning methods are used as the reference to evaluate the withdrawal and calendar method based on some predictive indicators. Comparing withdrawal to other methods, results show that the coefficient for age at first marriage is positive which means that as the participant's age at first marriage increases, the multinomial log-odds of her preferring withdrawal method compared to other traditional family planning methods significantly increased by 2.208. The coefficient for the number of children is positive and significant, meaning that, as the number of children of the participant increases, the multinomial log-odds of her preferring or practicing withdrawal family planning method compared to others will increase by 12.755. Furthermore, age had a positive and significant coefficient implying that among the participants aged 30 and above compared to those below 30, the multinomial log-odds of practicing withdrawal family planning method compared to others will increase by 22.998. Among the participants, who disagreed that side effects influence their choice of traditional family planning, the coefficient was positive and significant implying that, as more of the participants disagreed than agreed that side effects

influenced their choice of family planning, the multinomial log-odds of them practicing withdrawal method compared to other methods increased by 23.389.

When considering the choice of calendar method for other methods, age at first marriage also had a positive significant coefficient meaning that as age at first marriage increases, the multinomial log-odds of practicing calendar method compared to other methods increases by 1.911. Participant's number of children had a positive and significant coefficient meaning that, as the number of children increased, the multinomial log-odds of practicing calendar method compared to other methods increased by 14.026. Also, the age group above 30 was positive and significant, implying that as the age of participants in this group increased, the multinomial log-odds of her practicing calendar method compared to other methods increased by 26.287. Among the participants who disagreed that side effects influence their choice of family planning, the multinomial log-odds of practicing calendar method compared to other methods significantly increased by 22.560.

CONCLUSION

This work set out to investigate the diverse traditional family planning methods used by women in the Bamenda Municipality and the determinants of their choices. Results showed that the local family planning methods used by women in the Bamenda Municipality were: withdrawal, lactational, calendar, and cervical mucus and douches methods. Other locally used products presumed by these women to help prevent conception were; bicarbonate, honey, thyme, parsley, herbs, lemon, cola drink, alakata pepper, alcohol, hot water, salt, vinegar, and whisky. The use of salt, herbs, lemon, and cola drink, statistically depended on the region of origin of the women while other methods did not. Results further showed that age, age at first marriage, number of children, and the fear of side effects all significantly influenced women's choice of withdrawal and calendar method over other methods of family planning. We, therefore, conclude that the most frequently used traditional contraceptive method by women in the Bamenda Municipality are; calendar (70%), withdrawal (58%), and lactational methods (45%). The preference of these choices over other methods, especially over modern methods, was mostly due to the fear of side effects.

RECOMMENDATIONS

Further research to investigate and establish the efficacy of the common products used by these women is recommended. Also further studies on how these traditional family planning methods are used with the application of interviews and focus group discussions can be done .

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