



Effects of Women Education on the Use of Contraceptive Technology as a Measure of Human Population Growth Control in Mubi North Local Government Area of Adamawa State

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Received: July 12, 2019; **Published:** September 20, 2019

DOI: 10.31080/ASAG.2019.03.0657

Abstract

This study examined the effect of women education on the use of contraceptive technology in Mubi North Local Government Area of Adamawa state. A sample of three hundred women were selected using random sampling techniques for the research. Four research questions and two hypotheses were formulated to guide the study. The instrument titled 'Women Education Interview Battery' (WEIB) was used to collect the data. The instrument was subject to face and content validation and reliability indices of 0.976 and 0.984 were obtained using cronbach's alpha. Descriptive statistics of frequency counts and percentages were used to answer the research question for two sample kolmogorov smirnor test was used to test the hypotheses. Result revealed that the use of modern contraceptives is still very low among women regardless of their educational attainment because high percentage of respondents either use traditional method or do not use at all. Based on the findings, it was recommended that government through primary health care and NGOs should provide more educational opportunities for women through local extension and advocacy services delivery to foster the campaign for the need of contraceptive in the study area.

Keywords: Human Population; Contraceptive Technology; Women Education Interview Battery

Introduction

Background of the study

Possession of an education is thought to influence many forms of behaviour, including fertility behavior. On the one hand, there is a well-known direct relationship between a woman's educational attainment and her propensity to enter the labour force. On the other, there is a growing evidence of an inverse relationship between a woman's education and her fertility.

The empirical link between educational attainment, labour force participation, and fertility has been widely interpreted by economists to be the consequences of a causal mechanism in which education makes a woman's time more valuable by increasing her earning opportunities in the labour force [1]. It is thought that this shift in value causes the woman to reallocate her time from child-rearing activities to labour force activities. In effect, Carmen and Walter use the price of a woman's time to explain the widely observed inverse relationship between her educational attainment and the number of children she is likely to bear.

Clearly, there are many ways in which education might influence behaviour through economic and social factors. For example, it is probable that better educated women are likely to marry later, and that they will practice birth control as a result of their ability to read and understand family planning literature. There are other reasons to be wary of the use of education as a means to lower fertility, it is one thing to find that educated women have fewer chil-

dren than their less-educated contemporaries; it is another thing to expect that this difference will predict how much a nationwide increase in women's education will diminish national fertility.

Fertility and contraceptive use in developing countries are associated with various markers of socioeconomic status, most prominent of which is women education. The well documented link between female education and the use of contraception plays an important role in development of family planning policies in lower income countries.

In parts of Northern Nigeria, the area under study; Mubi North Local Government Area inclusive regard for women are generally low mainly due to low literacy level hence women's decision autonomy and movement autonomy are equally low. Women need permission by husbands or a senior family member for them to visit places outside home such as health centres, relatives homes, market, etc and decision making on children's healthcare, education, buying and selling properties, what to cook, etc are taken by husbands and others. Some women especially those in pudah are classified as women with no movement and decision autonomy while those outside this group are classified with low movement and decision autonomy. In line with this [2] states that women in some parts of the world have considerably lower social status and autonomy than men and this is associated with lower fertility control. Several reports showed a positive association between women autonomy and contraceptive use. Improving women's education have been seen one way to increase their status and autonomy [3].

Contraceptive usage is the most direct intervention for lowering fertility. The study of the effect of women education on the use of contraceptive is timely against the background of the Nigeria case where the rate of population growth is higher than the growth rate of food production. The total population of Adamawa State as recorded in the 1991 population census was 2,102,053. Mubi North Local Government Area constitute the second of the most populated Local Government Area in the state as the displayed a combined population density of 131.2 persons per square kilometer, second to Yola North and South Local Government Area with population density of 226.2 persons per square kilometer.

In other to arrest the danger inherent in high population growth rate, many countries such as Korea, Brazil, Columbia, China, India, Bangladesh and Malawi have successfully applied family planning as a panacea 4[. Nigeria has also adapted family planning as a strategy to curb the high rate of population growth that it is presently experiencing. However, the acceptance rate of this strategy or practice is still low, as revealed by [5-7]. Several studies have revealed that in spite of the effort made by the government in this direction, the adoption rate of modern birth control facilities and services or family planning in Nigeria remains largely insignificant [6,8,9].

Methodology

This study used a descriptive survey approach to determine the opinion of educated and non-educated women in Adamawa State concerning the relationship between women education and the use of contraceptive technology. The adoption of the survey approach is justified by the fact that survey research is a potentially useful technique in education and it is a valuable means of collecting data Fox (1969).

The population of this study consisted of all the educated and non-educated women with an estimated population of 33,850 women (Mubi North Population Unit in Mubi North Local Government Area of Adamawa State. The population of educated and non-educated women have been stratified into eleven wards: Muchala, Mijulu, Victim, Digil, Bahuli, Betso, Mayobani, Lokuwa, Sabon-Layi, Yelwa and Kolere.

To eliminate bias in the research and to draw sample that is representative of the population, a random sampling method was used to draw the sample. Out of the eleven wards, simple random technique was used to select five wards to form the sample of the study. These wards are Lokuwa, Sabon-Layi, Kolere, Yelwa, and Victim. From each of the five wards, random sampling procedure was used to select 60 women from each ward which composed of 30educated women and 30non-educated women giving a total of 300 women to make up a sample for the study.

The instrument titled “women education and interview battery” (WEIB) was adapted by the Researcher to collect relevant data for the study. A research instrument is a measurement device or tool used to collect, record or measure data, which are required to pro-

vide answers to research questions or test hypotheses. The instrument is considered the most suitable for collecting data for this study because the study requires primary data to be collected by survey approach. The questionnaire items were structured using the checklist format to find answers to related research questions formulated. There were 300 copies of the questionnaires produced and distributed based on the sample size chosen.

Analytical approach

Kolmogorov’s sinernor test was used to test the hypothesis of the result obtained from the study as expressed below:

$$KS^2 = \frac{1}{n} \sqrt{\frac{axb}{(a)(b)}} = P \text{ value}$$

n = The total number of sample

√ = Square root

a = Accumulate the frequency of sample

b = Cumulative frequency of sample

Results and Discussion

Contraceptive pills	Frequency	Percentage
Combined Pills	24	8%
Protestogen	05	1.67%
Injectable	40	13.33%
Vaginal Rings	09	3%
Implants	05	1.67%
Intrauterine Devices	05	1.67%
Male Vasectomy	-	-
Female Tubal Ligation	-	-
Male Condom	19	6.33%
Female Condom	07	2.33%
Spermicides	03	1%
Cervical Caps	-	-
Diaphragm	-	-
Lactational Amenorrhea	22	7.33%
Periodic Abstinence	23	7.67%
Withdrawal Method	40	13.33%
Traditional Method	53	17.67%
Any Method	05	1.67%
None	40	13.33%
Total	300	100%

Table 1: Frequencies and percentages of Female contraceptive usage.

The result of the study showed that 17.67% of the respondents used traditional birth control method which is the use of salt and water and herbs (dates, acacia mixed with honey). While 13.3% of them used the modern birth control method such as injectables. This was followed by the combined pills used by only 8% of the respondents. The most popular modern method was the injectable (13.33%). It comprises of DMPA, NET-ENO injections. These are hormonal methods that are being delivered by injections or orally

by mouth or placed in the private part. The table also revealed the adoption rate of condom among male as 5.67% much more greater than that of the female that has 1.67% only. This could be attributed to differences in the case of the usage of condom among both parties.

The finding however, showed the low usage of other modern contraceptives methods such as vagina ring with 3%, IUD with 2.3%, progestogen and implants as 1.67%. Spermicide was ranked lowest as it had only 1%. This ranked lowest as women may not be able to answer for their men probably because spermicides is restricted to men usage alone as revealed by [10].

The table also reported that there were no users of some modern contraceptives such as, male Vasectomy, Female Tubal Ligation and cervical cap. The lower part of the table from lactational amenorrhea to withdrawal method are all users of behavioral methods with increasing usage from 7.33% to 13.33%. However withdrawal method seem to tally with the hormonal method (injectables) with the same percentage of 13.33%. This could signify that if women are actually desiring to go for contraceptive usage, they prefer the injectable rather than oral pills, and rather than going through operations like tubal ligation and application of some technical methods such as wearing of diaphragms. Further proof of this fact can be observed from the usage of the traditional method which ranked the highest percentage of 17.67%. The high percentage usage of the traditional method could be attributed to the easiness that goes with its application as well as its cost. The educated women may likewise patronize the usage of salt and water as this reduces the phobia that accompany the usage of modern contraceptives. They may also go along with cost minimization.

It is also worth knowing to discover that the percentage of non-user ranked 13.33% which is next to the traditional method. This further signifies a higher percentage of non-users and very low contraceptive prevalent rate in the study area as traditional methods and non-users could be synonymous to non-contraceptive usage. The above findings could be attributed to the cultural attitude of the people as the woman's duty to reproduce creates apprehension in men that their wives may be unfaithful if they use contraceptives. The possibility that women may act independently is regarded as threat to the strong patriarchal tradition. Women fear that their husband's disapproval of family planning could lead to withholding the affection or sex even the dreaded divorce.

From the percentages of the respondents, it is evident that few women engage in the usage of contraceptives in reducing fertility rate.

The results of the study showed that the most considered benefits gained from the usage of contraceptive is the fact that contraceptive usage helps to prevent unwanted pregnancies. 86% of the respondents indicated this. It could be infer from these findings that the main purpose of contraceptive is to prevent unwanted pregnancy. Invariably, the other advantages are captured in this major one. Since 79% indicated that contraceptive helps to make

S/N	Items	Frequency	Percentage
10	They help to make the spacing of pregnancy easier.	238	79%
11	Using them help to postpone ovulation and menstruation.	229	76%
12	They help to prevent unwanted pregnancy.	257	86%
13	They help women to reduce infant mortality rate.	230	77%
14	Its usage makes women healthier before conception.	225	75%

Table 2: Frequency and the percentages of responses on the advantages in the usage of contraceptives.

the spacing of pregnancy easier, then the usage of contraceptive can be advanced or supported in controlling population in the study area as the spacing also limit the number of children a woman can have. 77% of the women indicated that contraceptive help the women to reduce infant mortality rate. This is another great advantage being derived from the usage of contraceptive. As the check in death of infancy discourages women from proliferation of children to fill in the gap for the loss ones and reduces the great risk of the women to death likewise this in turn also places a check on population growth.

76% of the women indicated that the usage of contraceptive help to postpone ovulation and menstruation, this could also infer the effectiveness of contraceptive usage as the process of fertilization of foetus could be hindered by the usage of contraceptive. This in turn widen the gap of children delivery as well as reduces the no of children per woman. 75% of the women indicated that the usage of contraceptive makes women healthier before conception. This is another great benefit of the usage which could encourage and motivate women to go for contraceptive in spacing children. This reduces the misconception being held by people about the perceived health reaction and the fear of unknown effects as most women cherish their health status quo before delivery and basically in marriage.

Hypothesis 1

There is no significant difference between educated and non-educated women in the use of contraceptives in Mubi North Local Government Area, Adamawa State.

Table 3 shows that the K-cal is 0.02 while K-critical value is 0.08 at P<0.05. Since K-cal value is less than the K-critical value we accept the hypothesis meaning that there is no significant difference between educated and non-educated women in their usage of contraceptives in the study area.

The results displayed in table 3 depict that the K-cal value is 0.05 < 0.08 of the K-S critical value at P<0.05. The null hypothesis is hereby retained meaning that there is no significant difference in the perceived advantages of contraceptive usage between educated

Item	Educated Women			Non-educated Women						
	Freg	Cumm. Freg.	Cumm. %	Freg.	Cumm. Freg.	Cumm. %	\bar{d}	k-cal	k-s critical	Decision
Education has helped reduce the desire to have many children	134	134	0.20	122	122	0.19	0.01			
Most women are not educated and are not aware of contraceptives	123	257	0.38	118	240	0.38	0			
Educated women are more prone to the usage of contraceptives	140	397	0.59	122	362	0.57	0.02	0.02	0.08	Accept
Education has helped to understand the danger of having many children.	132	529	0.78	135	497	0.78	0			
Education promotes the use of contraceptives among women	145	674	1	140	637	1	0			

Table 3: K-S Analysis of the usage of contraceptive between educated and non-educated women.

and non-educated women in Mubi North L.G.A. This indicates that both groups viewed that there are advantages in contraceptive usage in the study area as none of them perform more significantly than the other in their perception.

Kolmogorov Z test analysis on table 4 accepts the null hypothesis and concludes that there is no significant difference between educated and non-educated women in their perceived side effect of contraceptives usage in the study area as K- cal value is 0.06<0.08 of the K-S critical value at P<0.05.

Item	Educated women			Non-educated women				k-cal	k-s critical	Decision
	Freg	Cumm. Freg.	Cumm. %	Freg.	Cumm. Freg.	Cumm. %	\bar{d}			
Women see contraceptive as a cause of infertility in the later future.	128	128	0.21	120	120	0.19	0.02			
Contraceptives poses a limitation to having more children there by encouraging husbands to marry more wives.	120	248	0.41	114	234	0.37	0.04			
Women fear the usage of Contraceptives	130	378	0.63	128	362	0.57	0.06	0.06	0.08	Accept
Women see contraceptives a barrier to child bearing.	125	503	0.83	132	494	0.78	0.05			
Contraceptives are barriers to material benefits from spouses.	100	603	1	140	634	1				

Table 4: K-S Analysis of the perceived side effect of contraceptive usage between educated and non-educated women.

Hypothesis 5

There is no significant difference between educated and non-educated women in the usage of contraceptives as a means of population control in Mubi North Local Government Area.

The result of the analysis are presented in table 5.

Result on table 5 indicates that the Kolmogorov calculated value is 0.02 which is less than the K-critical value of 0.07 at P<0.05. Therefore the null hypothesis is accepted which implies that there is no significant difference between educated and non-educated women in the usage of contraceptives as a means of population control in Mubi North Local Government Area.

Conclusion

Based on the results of the finding, it is quite obvious that education has little or no effects on the use of contraceptive technology among women, which influence the measure of population growth. The research work has confirmed poor response to family planning products, this has in turn contributed to low and poor contraceptive usage as poor level of training in contraceptive services and ineffective conveyance of relevant information to clients by health personnel are quite glaring. Other factors inhibiting the usage of contraceptives were fear of side effects, lack of knowledge about contraceptive usage, lack of spousal consent and low literacy level of the women. The results of this study therefore concluded that the use of modern contraceptive is still very low among women re-

Item	Educated Women			Non-educated women			k-cal	k-s critical	Decision
	Freg	Cumm. Freg.	Cumm. %	Freg.	Cumm. Freg.	Cumm. %			
Women have access to safe and effective contraceptives in the study area.	124	124	0.15	96	96	0.13	0.02		
Contraceptives help women to have the number of children they can take care of.	136	260	0.37	120	216	0.30	0.01		
Use of contraceptives and family planning help to control the number and spacing of children in the community.	128	388	0.48	112	328	0.46	0.02	0.02	0.07
Women understand that contraceptives help in controlling population	144	672	0.83	130	583	0.81	0.02		

Table 6: K-S Analysis of contraceptive usage as a means of population control.

regardless of their educational attainment. Western education therefore had not helped to influence the women as per the adoption and the usage of contraceptives.

Recommendations

Based on the findings and conclusion drawn above, the researcher has the following recommendation:

1. Government and NGOs should provide more educational opportunities in the study area for the purpose of teaching birth control methods which will boost the usage of contraceptives and government should provide policies to lower fertility level in women as well as reduce population growth.
2. Government should provide ready access to safe and effective means of contraceptives through primary health centers and strong family planning facilities.
3. The federal, state and local governments should plan programs that will improve discussions at the family level on fertility-related issues that will likely improve the level of usage of contraceptives. Also, emphasis should be placed on the dynamics of childbearing and on parental aspirations for the children. With reference to the economic conditions and demands in modern society.
4. There should be a social crusade by the local government to foster the campaign for the need for contraceptive usage in communities under Mubi North Local Government Area as it will improve the usage of contraceptives in the said area.
5. Educated women in the study area who can learn about and use contraceptives more effectively should be further expose to seminars and conferences that will enlighten them to have appreciable awareness regarding family method and likewise influence the reproductive behavior of the uneducated women.

Bibliography

1. Susan H. Fertility and Education. What do we really know? Baltimore, Maryland: John Hopkins University Press (1977).

2. Mason KO. "The status of women: Conceptual and Methodological Issues in Demographic Studies". *Sociological Forum* 1 (1986): 284-300.
3. Jejeebhoy S. "Women education, autonomy and reproductive behaviour: experience from developing countries". Oxford: Clarendon press (1995).
4. Moni N. "Family Planning Success Stories in Bangladesh and India". Policy Research Working Paper. World Bank, Washington DC (1992): 1041.
5. Federal Office of Statistics. "Reports on Family Planning Survey, Abuja" (1994).
6. Federal Office of Statistics. "The Statistics Profile of Nigerian Women" (1997).
7. Federal Office of Statistics. General household survey, 1997/1998 national survey report. F.O.S: Abuja (2000).
8. Haub C and Yangishila M. "Environment and population". Washington DC. Population Bureau (1992).
9. Population Reference Bureau. Demographic profile: women of the world 2002. Washington DC (2002).
10. World Health Organization. Medical Eligibility Criteria for Contraceptive Use, 4th ed., Geneva: (2010).

Volume 3 Issue 10 October 2019

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