Socio-Demographic Predictors of Family Planning Methods Choice in Kakamega County Teaching Referral Hospital

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Abstract: _Introduction: Contraceptive choice and adoption is fundamental in determining population growth, resource allocation and utilization, fertility and a key contributor towards meeting the sustainable development goal number three worldwide._ _Objective: To determine socio-demographic Predictors of family planning methods Choice in Kakamega County Teaching Referral Hospital (K.C.T.R.H)._ _Materials and Methods: Data was collected using structured and semi structured questionnaires which were self-administered. Cross-sectional survey design was adopted where a sample size of 380 women who were admitted or visited FP clinic at Kakamega County Teaching Referral Hospital (K.C.T.R.H) participated. Simple random (systematic) sampling technique was used. Data was analysed using the SPSS version 20. For descriptive statistics; analysis of frequency, central tendency and dispersion such as mean and standard deviations were calculated to describe demographic characteristics._ _Results: Data showed that marital status, age, parity and religion were key predictors of family planning method choice. 65% of the respondents were married, 80% of the respondents were of the age bracket of 25-49 and 51% were Protestants. Respondents of parity status of six children or more were 66%. The media and health facilities were confirmed to be means of information exchange on FP and influence on utilization. A minority of 1% had read books and other written literature as the source of their information on FP._ _Conclusion: Socio demographic predictors have a significant role in influencing the choice of family planning method utilized. This means that a positive change in either of these variables will have a positive effect on contraceptive preference and choice leading to greater uptake of FP methods and generally increase in the Contraceptive Prevalence Rate (CPR) of Kakamega County._

Keywords: Contraceptive prevalence Rate, social demographic predictors, Parity

1. Background of the study

Contraceptive choice and adoption is fundamental in determining population growth, resource allocation &utilization, fertility and a key contributor towards meeting the sustainable development goals worldwide (Ramroop, 2018). United Nations General Assembly commitments highlight the new sustainable development agenda two targets (Target 3.7 and Target 5.6) relevant for family planning (United Nations, 2015). Target 3.7 states that, "by 2030, ensure universal access to sexual and reproductive health-care services, including family planning, information and education, and the integration of reproductive health into national strategies and programmes".

Kenya Demographic health survey 2014 findings indicated Eighteen percent of currently married women had an unmet need for family planning services, with 9 percent in need of spacing and 8 percent in need of limiting. The contraceptive Prevalence rate national average stands at fifty eight percent with twenty five counties operating below the national average (Ministry of Health, 2015).

Woman's ability to space and limit the number of pregnancies has a direct impact on her health and wellbeing as well as on the outcome of each pregnancy. Family planning is voluntary and available methods of family planning can be customized to individual needs with a range of methods that are acceptable to all and effective if used correctly. Family planning prevents about one third of pregnancy related deaths as well as 44% of neonatal deaths (WHO, 2019).

Globally family planning began around 1936 it was first known as sex hygiene and birth regulation. India became the first country in the world to establish family planning program in the world in 1952 under her first Prime Minister Jawaharlal Nehru with a goal to reduce rapid population growth by the beginning of the 21st century and it was oriented towards sterilization (Jeffry Hays, 2018).

In Kenya research indicates that Kenya National family planning program made progress between 1989 and 1998 according to Kenya Demographic Health Survey (KDHS-I and KDHS-III, 2014). The percentage of currently married women using contraceptive methods increased from 17.9% in 1989 to 31.5% in 1998, for all women the increase was from 15% to 23.6%. With family planning policies and programs put in place in 2004 it has really improved over the years. Findings of other studies done in Sub-Saharan Africa (Ahmed et al., 2019 and Cleland et al., 2019) revealed that use of family planning helps in reducing maternal death by 40%, infant mortality by 10% and child mortality by 21%. Report shows that fertility rate in Kakamega County was high at 5 per woman in spite a decline at a national level from 4.6% to 3.9% from 2008 to 2014 respectively (Ministry of Health, 2015)

Study conducted in Bangladesh indicated that contraceptive use decreases with age, indicating older women were more reluctant to use contraceptives than their younger counterparts (Iqramul Haq, 2017). Education has equally played a significant role with regard to contraceptives use. In study carried by Yago-Simón et al demonstrated that lower level of education was associated

with heightened risk of unintended pregnancies with further emphasis to low uptake (Yago Simón & Tomás-Aznar, 2014).

(Gloria, 2014) Conducted a study on factors affecting choice of family planning services using a theoretical framework for evaluating family planning programs of contraceptives. Family planning is considered to be a function of individual factors, societal factors, external development assistance as well as the existing political and administrative systems in a country. The individual factors indirectly affect contraceptive practice through demand for family planning services, value and demand for children (Jane T. Bertrand, 1995).

Similarly, individual and societal factors, such as number of living children, age, personal beliefs, the level of education and socioeconomic status, fertility preference and attitudes towards family planning methods influences demand for family planning. Other factor that determine demand for family planning services include; national policies and development programs. (Korhan Kahraman, 2012).

Numerous studies have demonstrated that reproductive age women have varying contraceptive needs occasioned by a number of reasons; side effects, daily intake (Alemu Kebede, 2019) .Studies indicate substantial number of women opt for long reversible contraception like implants, Intra Uterine Devices as opposed to oral contraceptives (Takele, 2012).

Research Objectives

To determine socio-demographic Predictors of family planning methods Choice in Kakamega County Teaching Referral Hospital.

2. Research Methodology

Research Design

The study was conducted using a cross-sectional survey design to determine the Socio-demographic Predictors of family planning methods Choice in Kakamega County Teaching Referral Hospital among reproductive age women (15 to 49yrs).

Study Area

The study was carried out at the family planning clinic and Post-natal ward in K.C.T.R.H. It is the main county referral hospital; located a half a kilometer from the Kakamega - Kisumu highway in Kakamega, Kenya. It serves three County hospitals and seven sub county hospitals providing acute care and surgical services to patients, primary care and community services. It offers a complete range of medical services and its medical faculty has a National reputation for cutting edge research. It is a 500-bed capacity hospital. The scale and complexity of the hospital makes it a particularly appropriate study setting central sub-county. It serves the residents of Kakamega County as well as residents from the neighboring counties; both Western and Rift valley regions of Kenya.
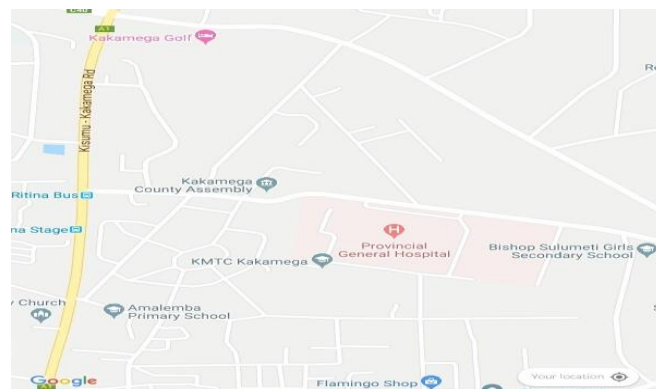
Study area map
Source: Google maps

Study Population

Reproductive age women attending family planning clinic and in post-natal ward at Kakamega County Teaching Referral Hospital (15-49years) will be involved in this study.

Sample size determination

The sample size was determined using the Fischer's formula:

$$N = \frac{z^2 pq}{d^2}$$

Where:
-N is the desired sample size.
-z is the value from the standard; for a confidence level of 95%, z=1.96
-p is estimated proportion of the population with desired characteristics
-q is the proportion of population lacking the desired characteristics
-d is the desired margin of error; in this case d= 0.05.

Thus,

$N = 1.96^2(0.5)(0.5) \div 0.05^2$

$= \dfrac{3.8416(0.25)}{0.0025}$

$= \dfrac{0.9604}{0.0025}$

= 384.16 (385 women)

Sampling Methods

Simple random (systematic) sampling technique was applied to avoid bias. Systematic sampling technique was used for its simplicity and convenience. A systematic sample was obtained by selecting a random start near the beginning of the population list and then taking every unit equally spaced thereafter. Every fourth client on the sampling frame was picked to participate in the study.

Study tools

The study used a semi structured questionnaire to collect the intended data.

Pretesting of study tools

The study randomly sampled ten women to fill in the questionnaires and their responses were used to assess the accuracy of the wording and structure of the questions. Their recommendations were considered in the revision of the questionnaire. The pilot study was conducted at Mukumu hospital that is located along Kisumu-Kakamega highway next to Khayega Market.

Data Collection Process

The researcher together with assistants administered the questionnaires to the participants who met the criterion. It was done for a period of two weeks. Data was then sorted out by numbering and checked for accuracy, completeness and consistency before analysis, encoding and entering to the computer.

Data Analysis, presentation and dissemination

Data was analysed using the SPSS version 20. For descriptive statistics, analysis of frequency, central tendency and dispersion such as mean and standard deviations were calculated to describe demographic characteristics. The answer patterns were obtained from respondents in sections and evaluated by calculating mean scores for each question.

In subsequent statistical analysis of association between demographics and knowledge, attitude and practices, demographic characteristics were entered as categorical variables (which were divided basing on demographic profile of the population under this study).

Results were presented in form of line/bar graphs, histogram and tables. The dissemination plan involved provision of feedback to suitable forums which include; local community members/opinion leaders, health care providers at the facility (K.C.T.R.H.), library and other relevant authorised stakeholders. Online publication also considered.

Ethical Considerations

Before commencement of the study, Clearance and approval was sought from the MMUST/K.C.T.R.H ethics and research committee and also from the administration of K.C.T.R.H. The general purpose, procedure and benefits of the study was explained to the eligible clients before they sign the informed consent form.

3. Research Findings

Table 1: Demographic Factors Influencing Contraceptive preference and choice among women attending MCH at KCTRH

	No of Respondent's	% Proportion
Marital status	Single	23
	Married	65
	Separated	13
Age	15-24	20
	25-49	80.2
No of children	1-2	5.3
	3-6	30
	Above 6	66

Table illustrates that majority of the respondents 65% were married while 12.8% had separated /divorced. Single women who had never been married at all comprised 23%. Use of contraceptives was found to vary across marital status with married women using the services most compared to single women due to high incidences of sexual activities compared to single women. Table indicates that majority of the respondents 80.2% were between 25-49 years of age with 19.8% being between the age of 15-24.The study also sought to find out the distribution of children within the respondents' families and the findings are as illustrated in Table. It was evident that majority of the women of reproductive age had more than 6 children in their families as reported by 65.7% majority of the respondents. 28.9% had 3 – 6 children in their families while a minority of 5.3% had children between 1 and 2.

Using the data derived from the above analysis, the research sought to test the following hypotheses;

Ho: Age does not have an influence on the contraceptive preference and choice among women of reproductive age.
H1: Age has an influence on the contraceptive preference and choice among women of reproductive age.

The Chi-square test at an alpha level of 0.05 yielded a value of 137.01 at six degrees of freedom and < 0.05. It was however unclear as to whether the standard asymptotic calculations yielded accurate results since 50% of the cross-tabulation cells had an expected count of less than five. The exact statistic yielded a < 0.05 lending support to the Chi-square results. Based on these results, the null hypothesis was rejected and thus concluded that there is a significant relationship between age and the contraceptive choice and preference among women attending K.C.T.R.H.

The study also hypothesized that parity did not play an important role in determining contraceptive choice and preference.

The following hypotheses were tested;

Ho: Parity does not influence the contraceptive preference and choice among women of reproductive age.

H1: Parity influences the contraceptive preference and choice among women of reproductive age

A Chi-square statistic was computed at the 0.05 level of significance to determine whether there was a correlation between parity and the contraceptive preference and choice of women. The test results $(X (1) = 0.861)$ revealed that there is a significant relationship between parity and contraceptive preference and choice among women attending K.C.T.R.H. The null hypothesis is therefore rejected.

Table 2: Social factors influencing contraceptive preference among Women of reproductive Age

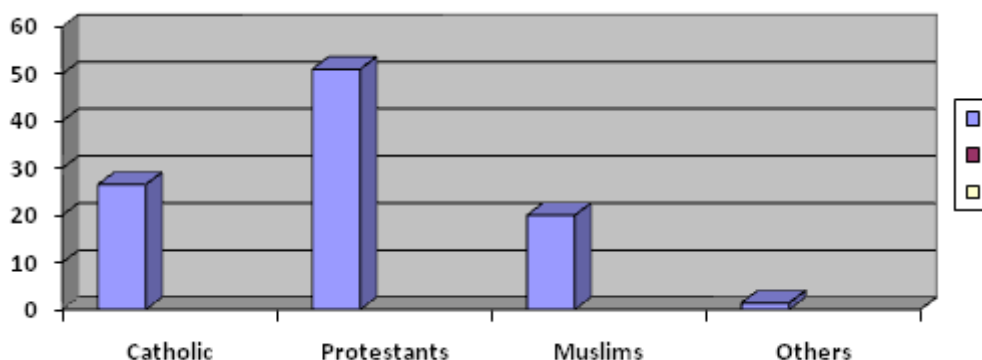| Religion	Frequency	%
Catholic	101	26.5
Protestants	194	51
Muslims	76	20
Others	9	1.4

Figure 1: A bar graph showing various religious groups against percentage of those who use contraceptives

Every community has its own religion. The religion of a community has a correlation with the way of life of that particular community. The study sought to find out the respondents religious beliefs /practices and the findings were as discussed in table.

From the above information on the table indicates most of the respondents are Protestants at 51%. Some of the protestants have strict rules to avoid FP services basically the populations under study are Christians. Catholics were at 26.5% though they don't encourage FP services. Muslims are at percentage of 20%, they don't encourage discussion of the FP methods with their spouses.

Table 3: Social factors

Spousal Communication	% Proportion
Yes	**36**
No	64
Husband's knowledge on FP method being use	
Yes	63.8
No	36
Spousal approval	
Yes	55
No	45

A majority of 63.8% of the respondents confirmed that their husbands knew the method of family planning that they were using. However, 36.2% of the respondents reported the contrary. 55.7% of WRA further reported that their spouses approved the methods they were using, and the reason for approval was mainly spacing of pregnancies while allowing the women to undertake other economic activities in view of the hard economic times. 44.3%

further reported that they spouses did not approve use of FP due their culture and other myths and misconceptions.

To examine the role of social factors on the contraceptive choice and preference of WRA, the researcher tested the following hypotheses using the Chi-square statistic at an alpha level of 0.05.

Ho: There is no significant relationship between husbands' approval and the contraceptive preference and choice among women of reproductive age.

H1: There is a significant relationship between husbands' approval and the contraceptive preference and choice among women of reproductive age.

Chi square results

In three out of four cases the results yielded a < 0.05 therefore the null hypothesis is rejected. In all cases the data sets contained cells with an expected count of less than five, therefore it was unclear as to whether the standard asymptotic calculations of the significance level had been met. The researcher therefore computed the Monte Carlo statistic at the 95% confidence interval in place of the exact statistic since the data sets were too large for the exact value to be calculated.

The researcher therefore concluded that of all social factors computed above, spousal approval is the only factor that had a significant influence on contraceptive preference and choice among WRA.

Table 4: Responses on discussion with research assistants

	Frequency	% proportion
Discussion		
Yes	190	50%
No	190	50%
Methods used by a research assistant.		
Implants	12	3%
Pills	42	11%
Injectable	250	66%
Condoms	76	20%

On the indicator social networks, data was analyzed according to discussion with friends and parental advice on family planning. Half of the WRA (50%) discussed FP methods that they used with their friends while 49.6% did not. Injectable took the largest share as the most preferred method of family planning among the top three friends of the respondents as reported by 66% of the WRA with condoms following with 20% of the respondents' proportion.

The pill and implants were utilized at 11% and 3.3% respectively. The relatively low uptake of these methods was attributed to side-effects for the pills and misconceptions for the Implants.

Table 5

Educational level	% proportion
Primary	67
Secondary	23
Tertiary	5
Never been to school	5
Total	**100%**

The analysis of findings in Table 5 above indicates that majority of the WRA in Kakamega (67%) had gone to Primary school only while a significant proportion of 23% proceeded to Secondary school. It was important to note that 5.3% of the respondents had never been to school while a minority of 4.7% had gone up to tertiary level of education**.**

Economic factors

Source of income.

Based on the fact that whether or not, we determined the percentage of clients who generated their income.

Table 6

	Frequency	% proportion
Source of income	Yes	57.6
	No	42.4
Total		100%

The results of Table 6 show that a significant proportion of 57.6% had a source of income while 42.4% had no primary source of income and relied on their spouses. 58% of the women of reproductive age generated their own income despite being very low. Majority of the respondents were mainly business women while a few were housewives.

4. Discussion

The indicators of demographic factors focused on age, and parity. The chi-square statistic revealed a significant relationship between age and contraceptive preference and choice among WRA with a majority (80.2%) of the respondents being in the age bracket 25-49years. This study finding is relatively high compared to various published data. For instance, regarding the data obtained from the USA, approximately 62% of women between the ages pf 15 and 44 were currently using contraception in 2006-2008 (Korhan Kahraman, 2012)Chi-square statistic revealed a weak association between the variables. These findings are in agreement with study conducted by Uppsala University (Rourke, 2015).

The study on religion demonstrated that the Protestants at a percentage of 51% were the majority in utilization of a family planning method. The Catholics were second with 26%.Religious teaching and preaching do influence family planning choice and utilization. (Noura Alomair, 2020) points out in their study that in most cases religious teaching and preaching influenced greatly contraceptive use and for this reason some of their members choose for themselves what seems good to them between contraceptive use and non-contraceptive use. Religious affiliation should be utilized to expose women of reproductive age to family planning information to upscale utilization.

The analysis on the effect of social factors focused on the influence of social networks, spousal communication and approval. The results revealed that spousal approval had the highest positive correlation compared to other indicators. The data also revealed that 55.7% of the WRA had spousal approval for the methods they were using; the reason for approval being spacing of children. These research findings are in tandem with findings by(Bawah, 2002) whose results from both the cross-sectional and longitudinal analysis suggest that husband–wife communication about family planning strongly predicts contraceptive use, even when other factors are controlled in the model.

5. Conclusions

Conclusions

In this study, it has been established that demographic factors, social factors and economic factors influence contraceptive preference and choice among WRA in Kakamega County. This means that a positive change in either of these variables will have a positive effect on contraceptive preference and choice leading to greater uptake of FP methods and generally increase in the CPR of Kakamega County. Socio-demographic factors are crucial to inform areas for consideration while implementing family planning programs and approaches to have successful programme roll out.

Research

The study recommends study on relationship between strengthening spousal communication and attainment of desired CPR. The researcher further recommends study on the relationship between socio-demographic variables and discontinuation of family planning method use.

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