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THE UPTAKE OF MODERN CONTRACEPTIVES AMONG WOMEN OF REPRODUCTIVE AGE ATTENDING MATERNAL CHILD HEALTH AND FAMILY PLANNING (MCH/FP) CLINICS
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V. K. MUKTHAR, A. K. MARANGA, S. J. KULEI and R. K. CHEMOIWA

ABSTRACT

***Objective*: To determine the uptake and factors associated with the uptake of modern contraceptives among women of reproductive age (15-49 years) attending Maternal Child Health and Family Planning Clinics/Units in Rift Valley Provincial Hospital in Kenya.**
***Design*: A descriptive cross-sectional study.**
***Setting*: Rift Valley Provincial hospital which is a level five health facility situated in Nakuru County, Kenya.**
***Subjects*: Women of reproductive age (15-49 years) who were attending Maternal Child Health and Family Planning Clinics at the Rift Valley Provincial Hospital. The respondents were identified by systematic random sampling**
***Results*: Modern contraceptive uptake is over ninety percent (90.4,n=218). The factors that are significantly associated with uptake of modern contraceptives are perceived convenience to use modern contraceptives (OR 0.39, CI: 0.16 - 0.93, p value- 0.04), experience of unmet needs of contraception (OR 0.08, CI: 0.03 – 0.2, p value- 0.001), history of a modern contraception discontinuation (OR 5.5, CI: 1.7 – 9.2, p value- 0.036) and knowledge of modern contraceptives (OR 19.1, CI: 12.3 – 27.5, p value-0.001).**
***Conclusion*: This study concluded that uptake of modern contraceptive is relatively high in Nakuru, Kenya and there is need for programmes to focus more on the client of modern contraceptive and the attributes of the modern contraceptives in up-scaling the uptake of modern contraceptives.**

INTRODUCTION

Unplanned pregnancies arising from not using contraceptive remain as the greatest threat to women reproductive health (1). According to Mosher and Jones (2010) around 62% of the 62 million women aged 15–44 years in the United States of America are currently using a contraceptive method

The population of developed countries grows at a very slow pace as compared to that of sub-Saharan African countries which grow at a rate of 3.1% annually. At this rate, the populations of these countries are expected to hit a 1.5 billion mark by the year 2020 (2).

Also according to KDHS 2003, teenage pregnancy is highest in Rift valley Province followed by North Eastern province, Coast Province, Nyanza province respectively, where at least one-fourth of women aged between 15-49 years have began child bearing. Contraceptive use increases with level of education especially among married women. Utilisation of modern contraceptive methods among women with no education dropped from 16% in 1998 to 11% in 2003 excluding North Eastern province.

In spite many reproductive health challenges experienced by women in Kenya, they have limited access to reproductive health services including contraceptives (3).

In Kenya the high fertility rates and declining mortality have yielded a youthful population. Hence improving use of modern contraceptives is key to

improving the world's future economic and social well being.

Family planning is considered the great public health break through. However, the uptake of modern contraception is constrained by limited access and weak service delivery, and the burden of unintended pregnancies being the consequence (40). Non-utilisation of family planning methods is one of the most common factors that are contributing to high of fertility rates. In Africa, this is as a result of many factors including among others rumours and misconceptions.

Hence there is an unmet need for family planning, that is, one quarter of currently married women in Kenya have an unmet need for family planning which has remained unchanged since 1998, three fifths of the unmet need is comprised of women who want to wait two or more years before having their next child (spacers), this women can easily be counselled and helped to make an informed choice of a suitable family planning method (5).

According to CBS (2004), non-utilisation of family planning methods is one of the most common causes of high fertility rates. In Kenya particularly, fertility rates have been seen to relate to the level of social economic development and especially the education of women and their social status in society.

According to KDHS (2003), teenage pregnancy is highest in Rift valley Province followed by North Eastern province, Coast Province, Nyanza province respectively, where at least one-fourth of women aged between 15-49 years have began child bearing.

Though the national prevalence rate of contraceptive uptake is 32%, there is a knowledge gap as to why the prevalence rate in Rift Valley Province is as low as 17% (5). About 38% of women these discontinue use of family planning methods within 12 months of adopting them. The Central Bureau of Statistics (2003) estimated the Rift valley province fertility rates to be 5.8 % as compared to 2.7 % in Nairobi province.

Hence this study aimed at determining the uptake and factors associated with modern contraceptives by women of reproductive age (15-49 years) attending MCH/FP clinic at PGH Nakuru in Rift valley province of Kenya.

MATERIALS AND METHODS

Study Setting: The study was carried out at Rift Valley provincial General Hospital, Nakuru, situated in Milimani area of Nakuru District in Rift valley province of Kenya. It is a teaching and a referral health facility with the greatest catchment's area being Nakuru County. Nakuru county covers an area of 72.423 km^2 and has a population of 1,187, 000 according to the 1999 population census. The district neighbours Kericho and Bomet to the West, Laikipia and Koibatek to the North, Nyandarua to the East and Narok to the South. The hospital has a bed capacity of 700 and around four hundred (400) nurses as per August 2012.

Population and sample: The study population were all clients/ women of reproductive age (15-49 years) who attended MCH/FP Clinic at the Rift Valley Provincial Hospital during the study period. The average number of all women who attends MCH/FP Clinics on monthly basis are 1200 according to Hospital sources(April 2011) A sample of 261 respondents was determined using Fishers formula as cited by Mugenda and Mugenda(2003). From the anticipated population of 1200, systematic random sampling was employed to identify the study respondents whereby every fourth client qualified to be a respondent in this study subject to their informed consent.

Study Design: This was a descriptive cross sectional study where quantitative data were obtained from the respondents.

Study tools/Instruments: Quantitative methods of data collection were used. Data collection was done by use of a questionnaire that contained mainly structured questions and few unstructured questions. The questionnaires were researcher-administered

Variables

Dependent/Outcome variable: The dependent variable was uptake of modern contraceptive and was gauged from respondents having ever used any modern contraceptive or not.

Independent/Predictor variables: The independent variables are in three groups. First group independent variable are the socio-demographic characteristics such as age, marital status, level of education, their current number of children and their religion.
Second group of independent variable is 'the influence of significant others'. The significant others in this case means the other important or significant people in respondents life that are likely to influence the respondents health choices such as partner/spouse, peers and health providers. The study determined if these significant person influence the respondents uptake of contraceptive or not.

The third group of independent variable are the contraceptive factors. These are attributes of the contraceptives that could influence their uptake such as their perceived safety, convenience, affordability and accessibility.

Data analysis: The data were analysed using Statistical Package for Social Sciences (SPSS 11.5). Descriptive statistics was determined during data analysis. The

results will be presented in form of text, tables, pie charts and graphs.

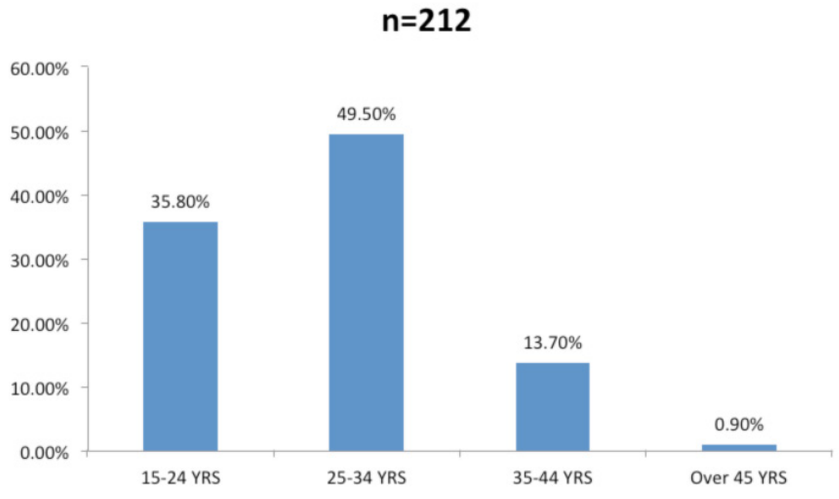
We fitted an unadjusted logistic regression model to assess whether there were any associations between the outcome variable (uptake of modern contraceptive) and the socio-demographic characteristics of the woman, contraceptive factors, and influence of significant others. In our multivariate analysis we fitted an adjusted binary logistic regression model to assess the effect of influence of significant others and contraceptive factors on the uptake of modern contraceptive controlling for confounders: namely women socio-demographic characteristics. All statistical testing are performed at 95% level of significance.

RESULTS

The respondents socio-demographics: The respondents response rate was 83.5%(261). The mean age of the respondents was 27.6 years ranging between 18-49 years. Most(85.3%, n=218) of the respondents were married while the rest were either single, widowed or divorced. As appertaining to the highest level of education by the respondents, 53.7% (n=218) were of post-secondary / tertiary education, while 35.3%(n=218) were of secondary education and the remaining 11.0% (n=218) were of primary education. Majority (97.3%, n=218) of the respondents were Christians while the remaining 2.7%(n=218) professed either or Islam faith or African Traditional Religion. The average no of children of the respondents was 2.1(std. Dev 0.99).

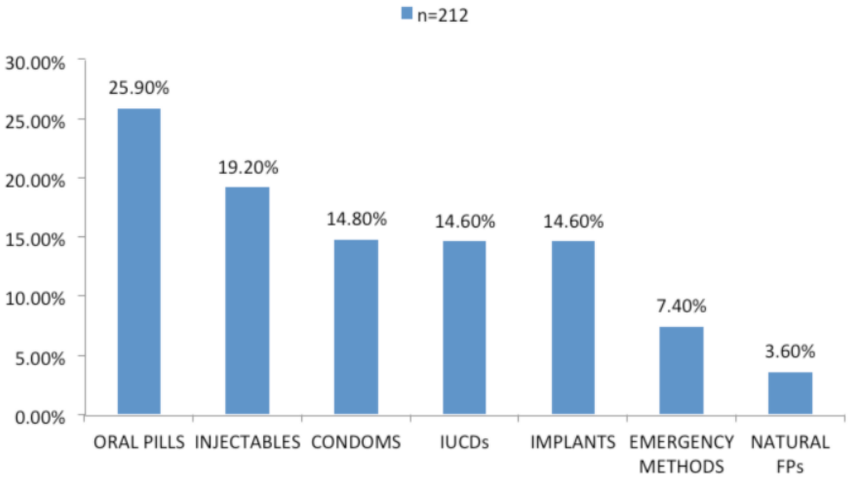
Knowledge of contraceptives: Ninety seven point two percent (n=218) knew at least four modern contraceptive are while 2.8%(n=218) could not enumerate at least four. On considering the percentages of respondents who knew contraceptives per age groups, it was highest in the 25-34 years age group and least in the over 45 years age group Figure 1.

Figure 1
Knowledge of contraceptives(%) by Age Groups



On multiple response question, the two most known modern contraceptive method were oral pills (25.9%, n=218) and the injectable contraceptive (19.2%, n=218) while the least known method was natural family planning methods (3.6%, n=218) Figure 2.

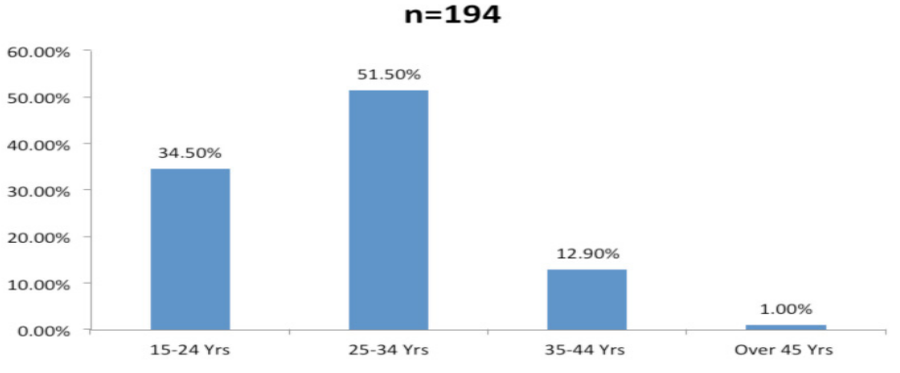
Figure 2
Knowledge of contraceptives(%) by Contraceptive Methods



On inquiring if the respondents considered Lactation amenorrhea a modern contraceptive, 14.7% (n=218) were in agreement while the rest did not consider it a modern contraceptive.

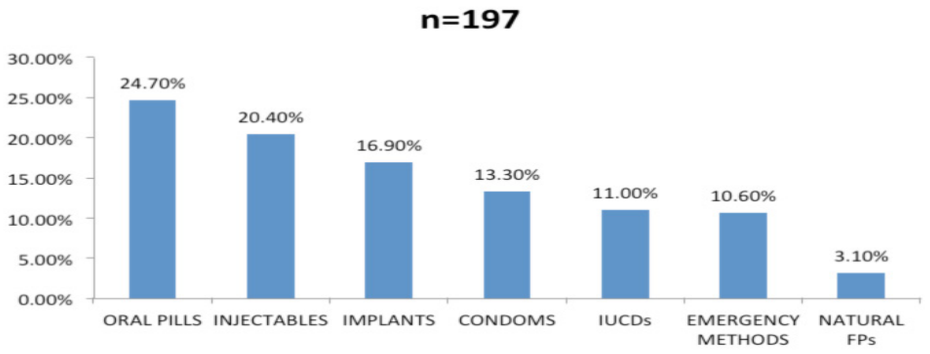
The uptake of modern contraceptives: Over ninety percent of the respondents (90.4%, n=218) have ever used some method of modern contraception while the remaining 9.6%(n=218) have never used any modern method of contraception. The uptake of modern contraceptives by age was highest in the 25-34 years and lowest in the over 45 years category Figure 3.

Figure 3
The Uptake of contraceptives(%) by Age Groups



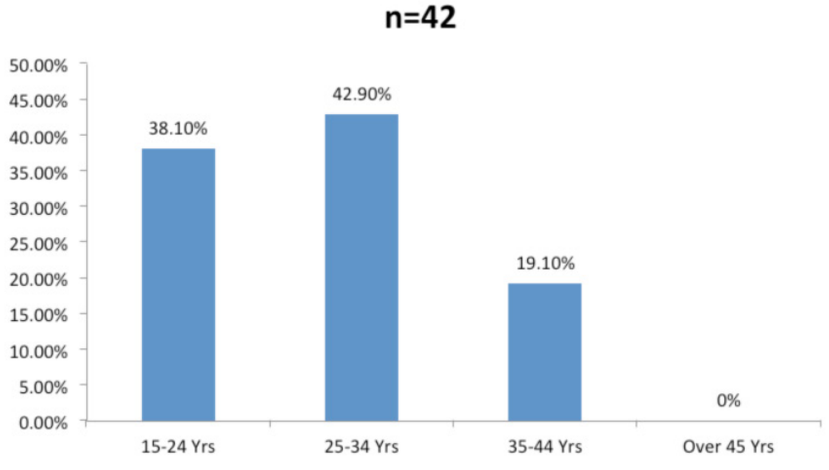
On multiple response question, the two most ever used modern contraceptive methods were oral pills (24.7%, n=197) and the injectable contraceptives (20.4%, n=197) while the least ever used method was natural family planning methods (8.0%, n=197) Figure 4.

Figure 4
The uptake of contraceptives(%) by contraceptive methods



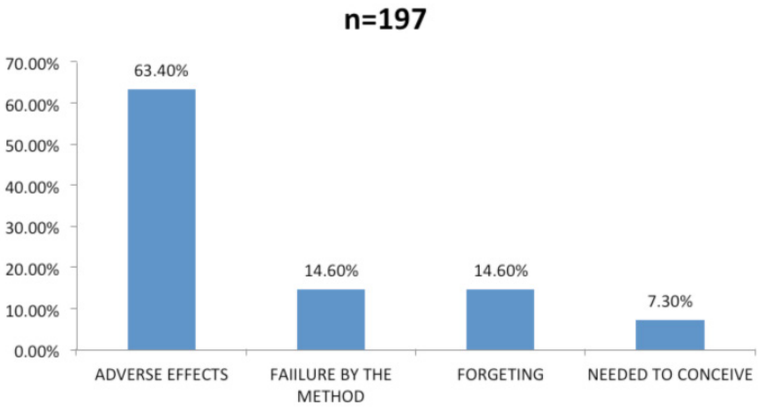
Unmet needs of contraception: Around nineteen percent (19.3%, n=218) have had some form unmet need of contraception for either spacing or limiting of children in their reproductive lives. Most (83.3%, n=42) of the unmet need of contraception for either spacing or limiting of children was reported by the married women while the remaining 16.7%(n=42) of the unmet need for contraception was reported by the unmarried women. Over thirty percent (33.3%, n=42) of the unmet need of contraception for either spacing or limiting of children was reported by those who had not discontinued a modern contraceptive method within the last twelve months preceding the study.The percentage of expressed unmet need for either spacing or limiting of children by age group Figure 5.

Figure 5
The Extent of Expressed Unmet Need for contraception(%) by Age Group



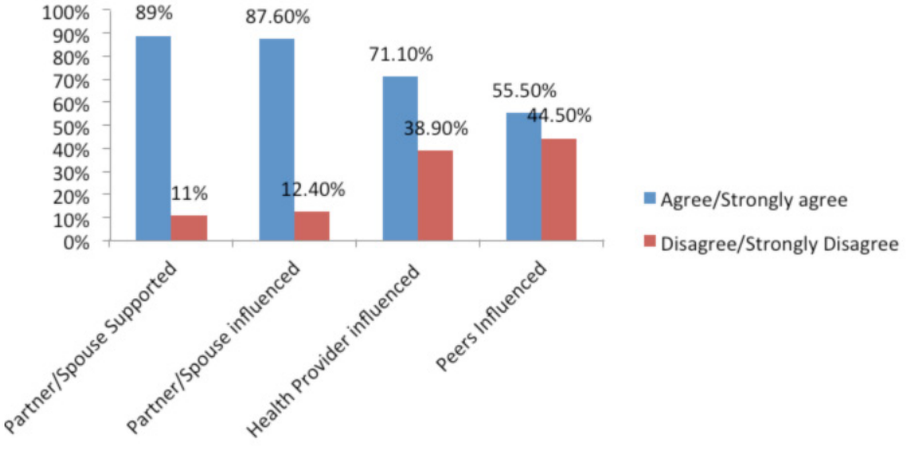
Adherence to modern contraception: Of all those who have ever used modern contraception, 19.3%(n=197) have had to voluntarily or involuntarily discontinue a method of modern contraception. On further probing of the reason for discontinuation by use of multiple response question, the leading reason was methods' adverse effects (63.4%, n=197) while the other reasons are summarised in Figure 6.

Figure 6
The Percentage of Respondents who Discontinued by the Attributed Reasons



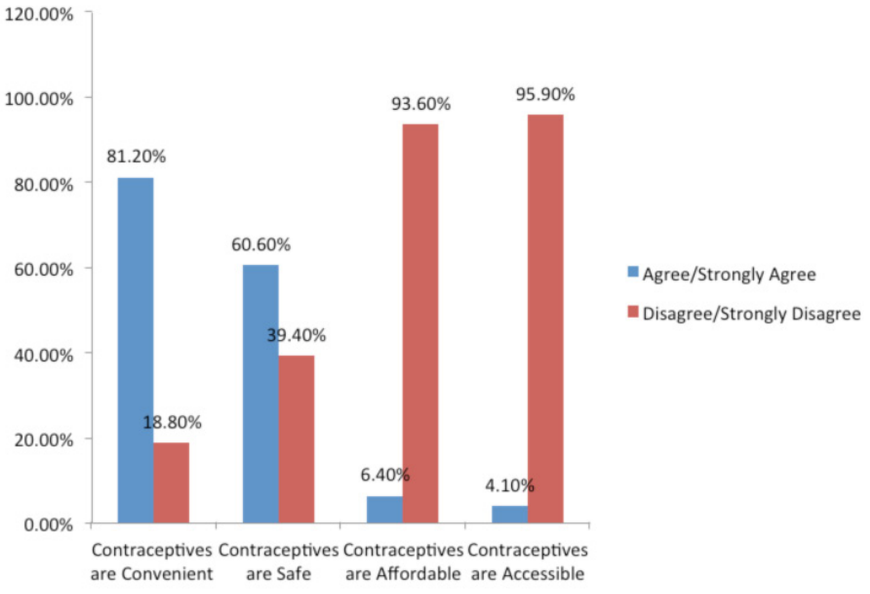
Factors influencing the uptake of modern contraceptives: By use of a Likert scale to check the respondents the level agreement or otherwise to the either being supported or influenced by the significant other on choice and uptake of modern contraceptives, over fifty percent (55.5%-89.0%, n=218) agreed to either being influenced or supported by the significant other as summarised Figure 7.

Figure 7
The Level of Agreement/Disagreement to 'Significant Others' Influence or Support



By use of a Likert scale to check the respondents the level agreement or otherwise, the study investigated the influence of the contraceptive factors in uptake of modern contraceptives. Majority of the respondents either agree or strongly agree that the modern contraceptives are safe (60.6%, n=218) and convenient(81.2%, n=218) while minority of respondents either agreed or strongly agreed that contraceptives are affordable (6.4%, n=218) and accessible (4.1%, n=218) to the users Figure 8.

Figure 8
The Level of Agreement/Disagreement to 'Contraceptives Factors attributes



Factors associated with the uptake of contraceptives Univariate logistic regression results for the outcome variable, the uptake of modern contraceptives by the socio-demographic characteristics are shown in the Table 1. The uptake of modern contraceptives is significantly associated with one socio-demographic characteristic namely their knowledge of modern contraceptives. On average the odds of uptake of modern contraceptives for those who are knowledgeable about modern contraceptives was about 19 times more that of those who were not knowledgeable about the modern contraceptives (OR 19.1, CI: 12.3 – 27.5, p value-0.001).

Table 1
The Association Between Uptake of Modern Contraceptives by Socio-Demographic Characteristics

Variable	Odds Ratios (Unadjusted) at 95% CI	Confidence intervals	P-value
Age			
1-34	1		
35-49	1.24	0.39-3.89	0.716
Marital status			
Single	1		
Married	1.19	0.37-3.78	0.771
education			
Up-to secondary			
Post secondary	1.74	0.54-5.60	0.353
Knowledge			
Yes	19.1	12.3-27.5	0.001
No	1		
No of children			
1-3	1		
≥4	1.04	0.42-2.55	0.932

Desired no of children			
1-3	1		
≥4	1.44	0.55-3.82	0.46
Faith			
Agree	1		
Disagree	1.2	0.5-2.8	0.70
Culture			
Agree	1		
Disagree	1.4	0.6-3.2	0.47

Univariate logistic regression results for the outcome variable, the uptake of modern contraceptives by the contraceptive factors are shown in the Table 2. The uptake of modern contraceptives is significantly associated with three contraceptives attributes namely their perceived convenience, unmet needs and discontinuation of modern contraceptives. On average the odds of uptake of modern contraceptives for those who don't agree that modern contraceptives are convenient to use was 61% less than for those who agree that modern contraceptives are convenient to use (OR 0.39, CI: 0.16 - 0.93, p value- 0.04). On average the odds of uptake of modern contraceptives for those who have never experienced some unmet need of family planning for either child spacing or limiting was 92% less than for those who have experienced some unmet needs of family planning (OR 0.08, CI: 0.03 – 0.2, p value- 0.001). On average the odds of uptake of modern contraceptives for those who have never discontinued a modern contraceptive was 5.5 times more than for those who have ever discontinued a modern contraceptives (OR 5.5, CI: 1.7 – 9.2, p value- 0.036).

Table 2

The Association Between Uptake of Modern Contraceptives by contraceptive factors

Variable	Odds Ratios (Unadjusted) at 95% CI	Confidence intervals	P Value
Unmet need			
Yes	1		
No	0.08	0.03-0.20	0.00
Discontinued			
Yes	1		
No	5.5	1.7-9.2	0.036
Affordability			
Agree	1		
Disagree	0.93	0.35-2.49	0.89
Accessibility			
Agree	1		
Disagree	093	0.3-2.6	0.89
Safety			
Agree	1		
Disagree	0.75	0.3-1.8	0.50
Convenience			
Agree	1		
Disagree	0.39	0.16-0.93	0.04

Univariate logistic regression results for the outcome variable, the uptake of modern contraceptives by the significant others' influence are shown in the Table 3. None of the significant others' influence was significantly associated with the uptake of the modern contraceptives.

Table 3
The association between uptake of modern contraceptives by significant other influence

Variable	Odds Ratios (Unadjusted) at 95% CI	Confidence intervals	P-value
Spousal influence			
Agree	1		
Disagree	0.7	0.3-1.6	0.41
Peers influence			
Agree	1		
Disagree	2.2	0.9-5.6	0.09
Health providers influence			
Agree	1		
Disagree	1.8	0.7-4.4	0.2

DISCUSSION

The uptake of modern contraceptives: Over ninety percent of the respondents (90.4%, n=218) have ever used some method of modern contraception while the remaining 9.6%(n=218) have never used any modern method of contraception. This was higher than the Kenyan figure of uptake of modern contraceptive of 53.6% (6). This could be attributed to the fact that the study was done in an urban setting while the national figure is the average of both urban and rural settings. The uptake of modern contraceptives in Africa is highly varied based on regions and lie between 70-85% (7,8) while the global uptake of modern contraceptive is estimated to be around 75% (9).

According to Magadi and Curtis (10) the use of long term methods is increasingly being up-taken by the urban women compared to rural women whereby the converse is true for the short term methods especially for the injectable contraceptives while according to KDHS(2008) the most popular modern contraceptives are the injectables at 22% and oral contraceptives at 9%. This study relatively corresponded with the KDHS(2008) findings that the two most popular are the oral contraceptives at around 25% and injectables at around 20%. This study contradicted the study by Magadi and Curtis which asserted that the urban women preferred the long-term methods than the short-term methods, like injectables and oral pills, this could be the attributed to preferences changes over time (10).

The uptake of modern contraceptives by age was highest in the 25-34 years and this is in agreement with the Kenya findings according to KDHS (2008) that the uptake of contraceptives is highest between 30-35 years. This the at the peak of reproductive life and fertility.

This study established that around nineteen percent have had some form unmet need of contraception for either spacing or limiting of children in their reproductive lives. This finding are a positive development and reflects to the gains made in reproductive health in Kenya compared to the unmet need in Sub-Saharan Africa(36%). This findings compares to and validates the Kenya unmet needs in urban areas of 20% according to KDHS(2008).

Factors influencing the uptake of modern contraceptives: The uptake of modern contraceptives is significantly associated with three contraceptives attributes namely their perceived convenience, unmet needs and discontinuation of modern contraceptives. This is in agreement with the findings by Kaona, *et al.* (7) and Kotb *et al.*, (11) which asserts that among the factors that influence the uptake of modern contraceptives include both real and perceived attributes of modern contraceptives such as perceived convenience of a method is crucial for the uptake and adherence to modern contraceptives.

Several studies (8,11-14) have attributed the uptake of modern contraceptives to the influence of significant others especially the spousal support and influence. However, this study did not find a significant association with the three significant other people considered in this study these are the spouses / partner influence, peers influence and health provider influence. This could be attributed to the greater independence of the modern women in the

urban settings with greater autonomy in decision making especially on matters of reproductive health.

CONCLUSION AND RECOMMENDATIONS

This study concluded that uptake of modern contraceptive is relatively high in Nakuru, Kenya. The study has shown that perceived convenience to use modern contraceptives, experience of unmet needs of contraception, history of a modern contraception discontinuation and knowledge of modern contraceptives are important predictors of uptake of modern contraceptives

It is imperative for program planners addressing uptake of modern contraceptives to reconsider their current approaches and focus on the client and the other than the other significant people who don't significantly predict the uptake of modern contraceptives. It is also important to equip the potential clients of modern contraceptive with adequate knowledge so that they can make an informed choice. This will go along way in fulfilling the fifth millennium development goal. There should be more interest in how the modern contraceptives presented to the clients so as to make them more convenient and easy to use.

This study recommends that a similar study should be carried out in the community that is (both urban and rural) and not in sentinel health facility so that the results can be generalised to the both rural and urban settings.

ACKNOWLEDGEMENT

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