Socio-economic and Socio-cultural Factors Influencing Contraceptive Uptake among Women of Reproductive Age at Kahe Ward in Moshi, Kilimanjaro - Tanzania

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Abstract

Globally 214 million women of reproductive age who want to avoid pregnancy are not using modern contraceptive methods. The government of Tanzania in collaboration with other stakeholders put in places various strategies and policies to increase uptake of family planning services. These are aimed at increasing contraceptive prevalence rate (CPR), reduction in both total fertility rate (TFR) and unmet need for family planning services. Despite the various strategies and policies, total fertility rate still remains high at 4.6 percent; Kahe Ward has a low CPR of 26.5%. The purpose of the study was to examining the socio-economic and social cultural factors influencing contraceptive uptake among women of reproductive age at Kahe Ward in Moshi District-Tanzania. Sample sizes of 421 women were interviewed through systematic sampling of the households. Data was collected from the women using a structured questionnaire and Key informant Interview. The data was analyzed using SPSS Version 23. Both descriptive and inferential statistics for different variables was computed. Chi-square was used to show the associations between variables. The study concluded that the contraceptive uptake was 56.3% which is higher than national level of 38.4%. Middle-aged women (in the age range 20 to 29) were found to use modern contraception than the older women. Married women were found to practice contraceptive uptake than the others.

Key Words: Socio-Economic and Cultural Factors, Contraceptive Uptake, Reproductive Age

1. Introduction

Family planning services play an important role in managing fertility; utilization of contraceptive in the United States is virtually universal among women of reproductive age: at least one contraceptive method had been used by over 98 percent of all women who had ever had intercourse. In 2010, 90 percent had ever had a partner who used the male condom, 82 percent had ever used the oral contraceptive pill, and 56 percent have had a partner who used withdrawal (Lindh, 2011).

Generally, there has been an impressive increase in contraceptive prevalence in the entire world (Miano, 2014). Even in the Least Developed Countries (LDC), the fertility rate declined from 6.55 births per woman in the early 1950s to 4.53 in 2010 (Hukin, 2012). However, at the regional level, the progress in the efficiency of family planning program and in the range of contraceptive method used has been different. In fact, in 2013, investigations by Bhandari, Shresth, & Thakuri, (2013) revealed that Africa and sub-Saharan Africa had the lowest contraceptive prevalence at 31 percent and 26 per cent, respectively, as compared to 75 percent in Latin America and the Caribbean, and 65 percent in Asia (Baidoo, 2013). Thus, the statistics show that the use of modern methods in Africa and sub-Saharan Africa continues to be about one-third of the levels in the other two developing regions (Boamah, 2012).

Differential in contraceptive prevalence is also distinguished at the sub-regional levels within each major area. For example, Northern and Southern Africa regions have much higher prevalence of all methods or of modern methods of contraception compared to any other African region (Heisler & Van Eron, 2012). Comparatively, utilization of modern methods of contraception is very low in Middle and Western Africa, 8 per cent and 11 per cent, respectively, in 2013 (Lemba, 2014).

The number of people in need of health and education, among other public goods is large and increasing which in turn requires large amounts of resources, personnel and infrastructure. This is likely to be an impediment towards the realization of the reduction of child mortality, improvement of maternal health, achievement of universal primary education, environmental sustainability and combating HIV/AIDS, malaria and other diseases. Therefore, the countries in Sub Saharan Africa (SSA)
including Tanzania have concentrated efforts on contraception prevention and utilization of contraceptive methods (Tanzania Bureau of Statistics, 2010).

2. Research Problem

When human reproduction if left unchecked, it results into high birth rates, bringing about large family size with the negative effects on the health of the respective mothers and children. Moreover, there are negative effects for the individual, the family, the community and the society at large because of economic overload in covering the extra request. Uncontrolled births can devastate a country's advancement yearnings and keep its kin from getting a charge out of an enhanced way of life.

The total fertility rate in Tanzania has remained consistently high and stands at 5.2 children per woman (TDHS, 2015). According to MoHCDGEC, (2015), 27% of women are using modern methods of contraceptives, the CPR among all women of 15-49 years is at 29% and 9% and among married women age 15-49 years is at 34%. There are significant urban-rural disparities and these have been on rise in the region, where higher fertility rates have been documented among the rural women (Miano, 2014).

This study will be done at Kahe ward, which has a CPR of 32.9%, which is among the lowest in Moshi district. The factors relate to the low levels of utilization of contraceptives methods and the contributing factors are not well documented (Kilimajaro Reproductive and Child health, 2015). Therefore, this research intends to identify barriers to contraceptive uptake among women of reproductive age at Kahe Ward.

3. Objective of the Study

The study aimed at examining the socio-economic and socio-cultural factors that influence contraceptive uptake among women of reproductive age at Kahe Ward in Moshi District, Tanzania.

4. Research Hypothesis

There is no statistically significant association between socio-economic and socio-cultural factors and contraceptive uptake among women of reproductive age at Kahe Ward in Moshi District, Tanzania.

5. Justification

Little research has been conducted on the subject in this ward. Better understanding of barriers influencing utilization of contraceptives is fundamental for realizing increased contraceptive use and the country’s realization of its desired impact of contraceptive practice on unwanted fertility.

Conducting a study on barriers influencing utilization of contraceptive services was particularly pertinent for health care providers, program planners, policy makers and researchers as references for future study. Positive attitudes on contraceptive and practices related to it could contribute to current efforts geared to the development of programs that are relevant to meet their need of contraceptive/ family planning measures in Moshi district. The study will play part in contribution to the knowledge expansion in the area of contraceptive use and factors that hinders to their utilization.

Furthermore, it will provide awareness and information’s on community matter that addresses issues, for example, undesirable pregnancy and contraceptive. It’s visualized that this will energize social modernization, particularly contraceptive utilization, and thus supports a manageable family size in this way diminishing the population expansion issue. Neighborhood community could likewise utilize the finding of this study in nursing training to underscore the sociocultural aspects of contraceptive practices by their society.

The study area was conducted in Kahe ward, Moshi district, Tanzania, for the reason that the Wards depicted one of the highest total fertility rates in comparison to other Wards in Moshi district.

6. Review of Study Variables

6.1 Socio-Economic Influencing Contraceptive Uptake

6.1.1 Education

According to a study conducted among women of reproductive age group in Zimbabwe by Sileo, (2014), found that modern contraceptive use and fertility regulation have significant association with increased educational attainment, although at low level of education (less than 6 years) there was no clear association between education and use of modern contraception. It was reported
among women who have completed primary school (seven years of education) that the powerful effect of education becomes apparent. Similarly, women who have completed secondary school and above were about twice as likely to use modern contraceptive methods as women who didn’t complete primary school (Nalwadda, 2012).

According to Nalwadda, (2012) in a study done in Uganda, there was a positive and independent association between formal education and utilization of contraceptive. The study further reported that there were higher odds ratio on utilization of contraceptive among secondary educated women who reside in urban areas than women with no formal education. In rural areas, there is more striking education effect; in comparison with women without formal education, ten times odd and five times odds of contraceptive utilization was achieved among women who had secondary schooling or higher and least some primary schooling respectively (Sileo, 2014). A study in Turkey found that educational level of women did not seem to affect the contraceptive preference of women (Karaçam, 2016).

In Ethiopia, the situation is not exceptional from the above-mentioned facts. A study conducted in Southern Ethiopia reported broad association of literacy with current and intended use of contraception (Asiimwe et al., 2013). A study conducted in Gondar town showed that there was a positive trend of association in contraceptive use with increased educational status. The study showed that the relative percentage of contraceptive use increases from 33.7% to 41% among primary and secondary schooling and 52.5% among higher educated women (Zaggi, 2014). Another study conducted on urban youth in Ethiopia indicated that contraceptive use was 4.9% in those with no education, 13.1% in low education and 82% among higher education (Taye et al., 2015).

There is an association between childbearing and education. Forty percent of women with no education will have had a child by the age of 20. For those with primary schooling, the figure drops to 30 percent and for those with a secondary education; it drops to 8 percent, that is, one-fifth of their uneducated peers (Jalango, 2013). Women with no education have the highest fertility rate at 5.8 births per woman while those with secondary education or higher have the lowest at 3.5 births per woman 11. Education plays an important role in the acceptance and use of contraception. It is often assumed that better educated couples, being more exposed to family planning information are more likely to practice contraception than others. Moreover better educated women tend to have fewer children and try to give better education to their children than do their lesser educated counterparts (Lindh, 2011). Education has a positive effect on the use of contraception. Increase in the level of education was associated with greater use of contraception methods. Better-educated women were more likely to practice contraception and to use modern methods (Bader, 2015). Data from the countries where the Demographic and Health Surveys have been conducted demonstrate the positive relationship between education and the use of family planning (Muanda, et al., 2016). Ochako, et al., (2017) analyzed the world fertility survey that was collected from 25 countries and found a positive relationship between women’s education and the contraceptive method practices, and that education was associated with increased awareness, acceptability and use of contraception. A study in Iran found that educational level of women did not seem to affect the contraceptive preference of women (Sarvestani, et al., 2017).

Many studies have documented the relationship of female education to the decline in fertility; it was recognized that education is the primary factor contributing to rise in contraceptive use. For example Giwa, (2015) explained that education of women is seen as vehicle by which people learn about the family, which may lead to demand for fewer children. Consequently, it will contribute to the use of contraceptive to prevent or to space childbirth. Isabella, (2013) also explained that education might affect fertility control including the following; education facilitates the acquisition of information about family planning; it increases husband-wife communication and increases couple income potential and thus making a wide range of contraceptive methods affordable. Furthermore, Piotrow et al., (2013) explained that women’s education is linked to rise in the age at marriage and reduce the probability of ever marrying. Education is also positively related to more favourable attitudes towards birth control and greater knowledge of contraception.

Nakirijja, et al., (2019) explained that education might affect the distribution of authority within households, whereby women may increase their authority with husbands, with effect on fertility preference and use of family planning. Similarly, Osmani, et al., (2015) emphasized that education could increase knowledge of fertility, increase socioeconomic status, and change attitudes. Moreover, Nakirijja, et al., (2019) found that the differential of contraceptive practice rate is greater between women who have no education and those who have attended primary school. Substantial differences are also found in the prevalence of contraceptive use between women with some primary education and those with some secondary school or higher education. In Kenya, education has been shown to be an important determinant of contraceptive use. Central and Nairobi regions, which have the highest contraceptive prevalence, have the lowest proportion of females with no education at about 1 in every 10 compared to Coast and North Eastern regions which have the lowest contraceptive prevalence but the highest proportion of females with no education at one-third and over two-thirds of the females respectively (Wanjiku, 2013).

A study conducted by Baidoo, (2013) emphasized that education could increase knowledge of fertility, increase socioeconomic status, and change attitudes. Moreover, Tamang, et al., (2017) found that the differential of contraceptive practice rate is greater between women with no formal education and those who have attended primary school. The finding also found substantial differences in the utilization of contraceptive between women with secondary education and with primary education. In Kenya,
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6.1.2 Occupation

In consideration, employment status is an important determinant of contraceptive utilization among women. Employment, especially where a woman has to work outside the home is viewed as an index of commitment to and involvement in non-familial roles (Sarvestani et al., 2017). Furthermore, women work outside the home regularly prefer a small family size (Nalwadda, 2012). According to study by Lindh, (2011) in Indonesia, it was found that higher acceptance rate of contraceptive utilization was achieved among employed women. Another Indonesian study that concentrated just on the women status and utilization of contraception and found that employed women had a somewhat more elevated utilization rate than non-working women. However, the distinction was not huge, despite the fact that women perceived advantages from uptake of contraceptives (Bader, 2015).

The work status of women is often considered to be an important determinant of contraceptive use. Employment, especially where a woman has to work outside the home is viewed as an index of commitment to and involvement in non-familial roles. It has also been observed that female employment outside home often leads to a desire for small families and thereby increasing the acceptance rate of contraceptives (H. Swamy, Bhanu, et al., 2017). A study in Indonesia by Giwa, (2015) found that proportion of women who were working had a higher acceptance rate of contraceptive use. Another study done in Indonesia focused only on the woman’s status and family planning and found that working women had a slightly higher level of contraceptive use than non-working women. However, the difference was not significant, although women did perceive benefits from practicing family planning (Sarvestani et al., 2017). Ravindran, (2014) conducted another study in India which revealed that women’s work give women autonomy that led to limit and space birth and contraceptive use. The probabilities of contraceptive use were higher among self-employed women and women who were employees than those women who were not employed. The type of occupation a woman has was also found to be an important determinant of contraceptive use. Lower fertility was found to be a characteristic of women in professional and technical occupation and women with higher opportunities. A large number of studies have looked at women's work activity and their contraceptive and fertility behavior in developing countries (Hukin, 2012; Karaca, 2016; Nakirijja et al., 2019; Ravindran, 2014). In many cases, these studies do not find evidence of significant relationships between work and fertility, and there is conflicting evidence with regard to the relationship between employment and contraceptive behavior. However, as Apana & Adam, (2015) has noted, many studies consider rural women as well as urban women, and fail to distinguish between formal-sector and informal-sector employment.

In a study conducted by Bhandari (2013) in India which revealed that women employment status gives them self-sufficiency that prompted a wide space birth and family planning utilization. The probabilities of family planning utilization were higher among independently employed women and women who were workers than those unemployed women. The type of occupation a woman has was also found to be an important determinant of contraceptive use. Lower fertility was found to be a characteristic of women in professional and technical occupation and women with higher opportunities.

6.1.3 The Quality of Family Planning Services and Contraceptive Use

Improvement in family planning programs calls for expansion of the choice of the method used, providing adequate information, increase in technical competence of providers, increasing interpersonal relations between providers and clients and incorporating adequate client support and follow up. This is because failure to use existing services is attributed to lack of quality (Magesa, 2014). Investigations by the Government of Kenya, Republic of Kenya (2012) observed that contraceptive services in Western Kenya are free and are about 93 percent available; however, the demand for the products and services was low. Modern methods like emergency pills expire in hospitals since nobody comes for them especially in rural areas. It is realized that high birth rate, high fertility and large unmet need of family planning is most experienced in Western Kenya. Therefore, the Government through the Ministry of Health has taken the initiatives of providing contraceptive services majorly free of charge to help control birth rate in order to achieve the 2030 vision of two (2) children per woman (Mutombo et al., 2014).

Another study in Kisii, Kenya by Jalango, (2013) reveals that opening the choice of contraceptive methods increased overall contraceptive prevalence and the opportunity for individual couples to obtain a method that suits their needs. Hackert, (2014) also note that contraceptive method choice in developing countries confirmed that prevalence is highest in countries where access to a wide range of methods is uniformly high. Nalwadda, (2012) found that exposure to mass media at the community was significantly associated with family planning behaviours in Uganda. The authors hypothesized that mass media facilitates greater inter-personal communication and allows for increased dissemination of information (Nalwadda, 2012). United Nations, (2015) recommended that family planning programs should offer a variety of safe, effective, acceptable and affordable contraceptive methods to help women avoid unwanted pregnancies, sexually transmitted diseases and to help them achieve their childbearing
goals. Boamah, (2012) suggest that health-care consultants should provide advice in accordance with international norms and ethics.

6.2 Socio-Cultural Factors Influencing Contraceptive Uptake

6.2.1 Religion

The roles of religion and culture as a fertility determinant have been a subject of considerable discussion in fertility literatures. Every social group has a characteristics culture, complex of belief, attitudes, values and social controls. The religious and cultural background of a given community has powerful effect on health seeking behavior in general and contraceptive use in particular. Globally, Catholic Church is the strongest contraceptive opposition and highly prohibit artificial contraception utilization in the1930s followed by Muslim religion (Myo, 2016).

Several studies have demonstrated that religion have a significant role in the use of contraceptive methods. A study by Myo, (2016) in Indonesia showed that religion played a major role in method use and choice. Islam was strongly correlated with the probability of choosing Injectable type of contraceptive compared to other modern methods. Swamy et al., (2017) has described the success of Indonesia family planning program, with a rapid decline of TFR. One important factor was religion and the success was attributed to the fact that Islamic leaders were consulted before program implementation.

One important observation from research is that involving religious leaders in policy development has improved acceptance and understanding of family planning programs. A study in Bangladesh indicated the association between the practice of contraception and religion operates at the community level, but not at the individual level. A religious woman is not less likely to practice, but a woman living in a religious community is (Marquez, et al., 2017).

Throughout Sub-Saharan Africa, traditional religious beliefs and practices are embedded in lineage and descent systems that structure society and sustain high fertility (Ndayizigie, 2017). A Southern remote community in Ethiopia study in 2009 reported that women were forced to give birth to a large number of children, this is due to male dominance in that culture and this was significant deterrent in the fertility control choices by women (McCaslin, 2015). According to the 2010 Ethiopia demographic and health survey (DHS) reported majority of women revealed that in most cases religious leaders oppose utilization of family planning. Religion and ethnicity were the determinant factors to the contraceptive utilization (Taye 2015).

Indongo, (2015) also observe that religious systems that associate pronatalism as divine blessing and infertility as a curse could motivate reversals in fertility preferences. A shift towards large fertility preferences among Muslims in Kenya was observed by Miano, (2014); Ochako et al., (2017) and Wanjiku, (2013), Piotrow et al., (2013) note a rise in certain Pentecostal movements, especially among young people and the link with doctrines opposed to modern contraceptive use in Zimbabwe. In Swaziland, some Muslim women did not accept the birth that occurs as fatalism even though religious beliefs emphasize the spiritual importance of progeny; to them it signifies humility (Nageeb et al., 2018). The religious barriers are evident in Africa where 20 percent of the population is Catholic whose doctrines emphasize that all sexual acts must be open to procreation. Thus, any artificial method of contraception is opposed. The worst affected are the permanent methods such as tubal ligation for women and vasectomy for men. The church only accepts the natural forms of birth control like natural family planning methods such as periodic abstinence outlined by the late Pope John Paul Vi in his 1968 encyclical Humanae Vitae, which affirms the traditional teaching of the Roman Catholic Church regarding contraception and other reproductive issues. Between one-quarter and one-half of women in sub-Saharan Africa report that their religion negatively impacts their contraceptive use (Mccaslin, 2015).

The relationship between religion and contraceptive use was observed in Kinshasa, Democratic Republic of Congo by Muanda et al., (2016). All Non-Catholic religious groups had slightly higher rates of contraceptive prevalence compared with Catholics. Women who indicated no religious membership reported a definitely lower likelihood of practicing contraception. On the other hand, the effect of religion on contraceptive use was also observed in a study in Greater Freetown, Sierra Leone, by Gabriela, (2015). They found higher contraceptive prevalence rate among women affiliated with Catholics or another Christian religion than among those affiliated with Islam (28 percent, 24 percent and 13 percent respectively). The lower use of contraceptives among Islam women was positively associated with the desire for more children.

The opposing idea regarding culture and religion with respect to modern contraceptive use is that contraceptive utilization programs represent a cultural intrusion in to the undertakings of developing nations. They found higher contraceptive prevalence rate among women affiliated with Catholics or another Christian religion than among those affiliated with Muslim (28 percent, 24 percent and 13 percent respectively). The lower use of contraceptives among Muslim women was positively associated with the desire for more children (Asimwe 2013).

6.2.2 The Impact of Son Preference on Contraceptive Use
Customs emphasize the importance of childbearing in most African countries; Tanzania included (Hukin, 2012). These societies do not identify with family planning and even though they vary greatly in culture, son preference is a common feature (Magesa, 2014). A boy child is considered as a woman’s “seat” to mean that a woman’s remains a visitor in her husband’s home until she has a son. This is according to the Yoruba of Nigeria. These custom illuminates the lack of worth accorded to adult women (Boamah, 2012). This happens because of the social obligations expected of men, like being an heir to the father for progression purposes and family’s status and impact. A couple with only girls end up giving birth to many children with the hope of luckily getting a boy leading to large and unplanned families (Heisler & Van Eron, 2012).

Therefore, son preference has been found to be a leading factor influencing contraceptive use especially for newly married women (Ndajiyizigye, 2017). In Bangladesh, desiring a boy as a first born among couples and 60 % of women with a son were more likely to utilize contraceptives than those who did not (Mañena-Netshikweta, 2012). In Nepal as well, son preference is closely tied to women’s fertility aspirations (Tamang et al., 2017). Tamang et al., (2017) conducted ethnographic work with Hindu women in one semi-urban village and concluded that son preference remains strong in Nepali culture. According to Brunson, women have internalized the expectations of their society, community and family, and still feel a strong pressure to produce sons.

6.2.3 Spouses’ Perceptions on Contraception Use

Gadisa, (2014), Myo, (2016) and Wanjiku, (2013) observed that inter-spousal communication dictates whether or not to use family planning, the method to use, at the point when to begin and the quantity of and timing of kids as well as enabling husbands and wives to know each other’s attitudes towards family planning and use of contraceptives. It also allows spouses to say their concerns about reproductive health matters like STDs, side effect of a method and unintended pregnancies (Yidana, et al., 2015). Many obstacles prevent women and men from talking about reproductive issues, contraceptive and sexuality and an intricate web of social and social components hamper such exchanges (Isabella, 2013). Participation of male in reproductive health and contraceptive utilization, men must be involved and in order to achieve this inter-spousal communication is considered to play a big role (Yidana 2015). Involvement of males does not only allude to utilization techniques, it additionally incorporates support of female strategy utilize, which proposes that spouses ought to discuss family arranging issues with their wives (Magesa, 2014). Spousal contraception communication has been described as a means that will make possible couples to disclose their fertility preferences to each other and make use of contraceptives as a result. The misconception that wives seem to have of their husbands’ family planning approval is one area that spousal communication is expected to improve (Tamang 2017).

Although, inter spousal communication could be considered as a reflection of culture, it can be affected by the level of knowledge and education status of the couples. Spousal communication is a result of power asymmetry between men and women, which is usually ascribed by the culture in which they are living in (Bhandari 2013). However, spousal communication could be improved through planned information, education and communication (IEC) programs. This was seen in population-based study, which was carried out in three waves to assess the impact of radio drama serial project in Nepal (Tamang 2017). Results of the test indicated that on the baseline study in 2014, use of contraceptive was highest among couples in which the husband made FP decisions (55%), followed by those FP decision made jointly (47 %), and lowest among women made decision by themselves (45%) (Zaggi, 2014).

A study in Bangladesh indicated that there was a significant association of use with decisions made jointly by husbands and wives (35.6 %) than decision made only by husbands (17.4 %). In this particular study husband wife communication about family planning decision-making has net significant effect on current use. Couples who discussed family size matters were about two times more likely to be current users of contraceptives, than those who didn’t discuss family planning methods among themselves (Lemba, 2014).

6.2.4 Polygamy and contraceptive use

A report by Ouma, (2014) and Yidana et al., (2015) shows that in West and East Africa, more than 20 percent of married women are in polygamous marriages. Even if the KDHS (2014) statistics indicate that polygamy has decreased in Kenya, polygamy in Nyanza still prevails and has implications on sexual activity and fertility (KNBS and ICF Macro, 2014). The KDHS (2014) statistics indicate that among men, polygamy in Nyanza as compared to that in Central Province is at 15.4 percent and 0.5 percent respectively, indicating that Nyanza Province is leading in polygamy relations.

A study in Kenya showed that high and low fertility areas correspond with particular ethnic groups where polygamy is characterized by high fertility areas (Miano, 2014). This emerges since the many wives may compete in giving birth resulting to high population growth rate. The scenario is evident among the Luo, Mijikenda and the Kamba communities. Wives symbolized wealth – both in terms of the man’s ability to provide bride wealth for several women, and increased labour provided by women and children that enhances the family wealth while ensuring a continued lineage. As a result, more wives translated into increased social status (Wanjiku, 2013). The reasons for this are inadequate exposure to contraceptives and early marriages. Nonetheless, the contraceptive use was substantially lower among women in polygamous marriages than among those in monogamous ones in

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Malawi (Kopp et al., 2017). The study suggests that characteristics of polygamous couples have caused polygamous women to be more resistant to birth control use than monogamous women. The polygamous women tended to be married to older men who had not gone to primary school and who desired more children than monogamous husbands. Among polygamous couples, monogamous couples or both, contraceptive use was negatively associated with age and positively associated with level of education and number of living children. While the study was not designed to elucidate the reasons for this, the investigators speculate that the ability of women in polygamous marriages to share responsibilities (including childcare) with their co-wives softens the impact of having an unplanned birth, and thus may reduce women’s motivation to practice contraception (Marquez et al., 2017).

The reviewed literature indicates that women in polygamous unions record higher fertility than in monogamous unions. This revelation helps in the study in explaining how types of marriage affect utilization of contraceptives.

### 6.2.5 Misconceptions and Fears of Side Effects Associated with Use of Contraceptives

There have been myths about misconceptions and fears of side effects especially the IUDs performance from excessive bleeding, weight gain to added cancer risk. News of any complications arising from incompetence in handling the devices can spread easily, produce undesired effects among potential adopters, and indeed keep them way (Hackert, 2014). The side effects noted by Nakirijja, et al., (2019) include nausea, vomiting, and weight gain. A Bangladesh study highlighted that women discontinued using injectables and had wrong information about side effects and their significance due to lack of counseling (Ndaziyizigye, 2017). In Morocco, it was also noted that misinformation and fear of side effects reduced access to contraceptives (Indongo, 2015). Fear of side effects can be overcome through good communications and information, especially through community based distribution (CBD) program (Ouma, 2014).

Myths suggesting that the use of contraceptives lead to cancer or infertility can lead to discontinuation of use of contraceptives (Myo, 2016). A study in Ethiopia shows that another reason for discontinuation of use of contraceptives is the disturbance caused by menstrual cycle (Asiimwe et al., 2013). Miano (2014) study in Kenya show that discontinuation rate rose from 28 percent in 2008 to 33 percent in 2013 and was linked to side effects associated with hormonal methods like pills and injectables. Nakirijja, et al., (2019) however, discovered that oral contraceptives could protect a woman against pelvic inflammatory disease, ovarian and endometrial cancers, fibroids of uterus and benign breast disease. Contraceptives also help decrease problems associated to menstrual cycle such as pain and cramps (common during adolescence), dysfunctional uterine bleeding, functional ovarian cyst, premenstrual tension syndrome and anaemia caused by heavy menstruation. Shane also observes that consistent and correct use of condoms can prevent infection from sexually transmitted diseases including ectopic pregnancy, chronic pelvic pain, infertility (in both sexes), cervical dysplasia and cervical cancer. Most of all, it has continued to benefit any sexually active person who may be at risk of acquiring HIV / AIDS or other STIs. Marquez et al., (2017), note that health providers should demystify misinformation about contraceptives and instead provide factual information about risks, potential side effects, and incorporate it in family planning strategy that meet each client’s personal needs. Educational and enlighten programs should also focus on providing specific knowledge, with special attention to correcting common misconceptions about the methods.

### 6.2.6 Exposure to Family Planning Information from Mass Media

The study by Nakirijja, et al., (2019) shows that about 45 percent of people practicing family planning were exposed to media. The results also suggest that having a radio set is potentially associated with practice of family planning methods. Zaggi, (2014) in their study in Ilorin, Nigeria, noted that the mass media such as radio, television and newspaper were the greatest single role in providing knowledge on family planning to women and increasing current use of contraception. Radio and television are two important mass media for disseminating family planning information in Bangladesh (Hijazi, 2013). However, accessibility and exposure to family planning information through radio and television is still limited. The similar finding was found by Jato that women in Pakistan, India and Bangladesh who watched television regularly and exposed to explicit family planning messages use contraception (Bader, 2015). They also conducted bivariate analysis to study the association between social and demographic characteristics, family planning communications campaigns and contraceptive behavior. They found that the more types of media those women were exposed, the more likely they practice contraception.

### 7. Research Methodology

The study adopted an analytical cross-sectional design due to time and cost of carrying out the study. The study utilized both a quantitative design through the use of an interviewer administered questionnaires and qualitative design through key informant interview.

This study focused on women of age 18-49 years, (whom can give consent) at Kahe Ward in Moshi district, Tanzania. Yamane sample calculation was a way to determine the sample size for a study. It is the most ideal method to use.

The Yamane sample size states that:
Where
\[ ny = \frac{N}{1 + (Ne^2)} \]

\( ny \) is Yamane sample size,
\( N \) is underlying population size and
\( e \) is determined from the confidence from your study. That is, \( e=0.05 \) at 95%.

\[ ny = \frac{8601}{1+(8601(0.05^2))} \]

=383 (minimum sample size)

A 10% of 383 was added, therefore, a minimum of 423 respondents was used so as to cater for cases which could be lost due to natural attritions, lost questionnaires or those not filled due to unknown reasons.

The study adopted a multistage sampling technique, random sampling among the Tanzania Regions was employed to select one region with Kilimajaro Region was selected, then stratified sampling to select the local government council, Moshi District Council was selected. A simple random sampling technique was employed among 32 wards in Moshi to select Kahe ward, thereafter, a cluster random sampling to create the sample frame among the community members in six villages. Proportionate stratification was used to select the sample size among the individuals. In proportionate stratification, a random sample from each stratum was taken in a number proportional to the stratum's size when compared to the population. These strata subsets are then pooled to form a random sample (Kothari, 2004). Stratified random sampling is a useful method when the population is heterogeneous. The entire heterogeneous population is divided into a number of homogenous groups, known as strata and then units are sampled at random from each stratum. The technique of drawing this stratified sample is known as stratified sampling (ibid).

The number of respondents recruited per village are indicated below:

| Selected village | Women of reproductive age | Respondents |
|------------------|---------------------------|-------------|
| Rau river        | 1745                      | 86          |
| Kisakisingeni    | 1811                      | 89          |
| Ngasinyi         | 1342                      | 67          |
| Mwangaria        | 1223                      | 60          |
| Mawala           | 1191                      | 58          |
| Ngasini          | 1289                      | 63          |
| **Total**        | **8601**                  | **423**     |

The number of the respondents in each village was allocated proportionally using the number of the women of reproductive age. The selected number of women of reproductive age was sampled conveniently in each household through systematic sampling technique.

The study was conducted at household visits, the invitation to participate in the study was done in collaboration with respective their culture. The introduction was conducted. The Informed Consent forms (ICF) were distributed to all study participants to be signed. They were also signed by the research assistant (or PI) prior to commencement of the interview. Interviews were conducted in the separate place from other household members with assurance of confidentiality. Afterwards the completed questionnaires were collected and kept in the proper place. Two research assistants were recruited and trained on the aim of the study and the meaning of questions. They were further taught on how to complete the questionnaires and how to provide assistance to study participants when required. In case a household had more than one over 18 year’s women a random sampling was done in order to pick one participant. The principal investigator and research assistants read out the question as it is from the questionnaire (where applicable) to the participant and then document the findings. All participants were given a number that was used for coding questionnaires and to ensure that respondents won’t be selected twice, the code in both informed consent form and questionnaire was crosschecked and participant’s responses reviewed and verified on completion.
Data was cleaned and analyzed using SPSS version 23.0, computation was done by both inferential and descriptive statistics for various variables and figures; bar charts and frequency tables were used for data presentation. Descriptive statistics such as frequencies, standard deviation and mean was used to summarize, organize and simplify the data collected. Chi square and p-value was computed to see whether any relationship existed between the two variables under question. P-value < 0.05 was considered statistically significant. Bivariate analysis was used to assess the strength of an association between dependent variable and list of independent variables and test significance of the association was tested. Qualitative data generated from key informants inform of notes (responses) from the participant's was cleaned and coded manually based on themes developed from responses (thematic analysis) in accordance with the research objectives and reported in narrative form and additionally used to reinforce quantitative data.

8. Results

8.1 Socio-Economic Factors Influencing Contraceptive Uptake

Assessment of socio-economic factors influencing contraceptives indicates that respondents’ level of education (p=0.015) and their monthly income (p=0.001) influenced contraceptive uptake (were significantly associated). Interestingly partner employment status and monthly income were not associated with contraceptive uptake at p=0.088 and p=0.076 respectively.

### Table 1 Analysis of Socio-Economic with Contraceptive Uptake

| Variables                        | Use contraceptive | Statistic          |
|----------------------------------|--------------------|--------------------|
|                                  | Yes (n=236)        | No (n=183)         |                    |
| **Respondents Education level**  |                    |                    |                    |
| No formal education              | 3(100.0%)          | 0(0.0%)            | \(\chi^2 = 12.417\) |
| Not completed primary education  | 34(66.7%)          | 17(33.3%)          | df 4               |
| Completed primary education      | 148(55.4%)         | 119(44.6%)         | \(p=0.015\)        |
| Completed secondary education    | 44(48.4%)          | 47(51.6%)          |                    |
| Completed college education      | 7(100.0%)          | 0(0.0%)            |                    |
| **Respondents Employment status**|                    |                    |                    |
| Student                          | 1(25.0%)           | 3(75.0%)           | \(\chi^2 = 3.118\) |
| Unemployed                       | 29(54.7%)          | 24(45.3%)          | df 3               |
| Employed                         | 72(52.9%)          | 64(47.1%)          | \(p=0.374\)        |
| Self-employed                    | 134(59.3%)         | 92(40.7%)          |                    |
| **Husband/partner employment status**|                  |                    | \(\chi^2 = 6.550\) |
| Student                          | 0(0.0%)            | 3(100.0%)          | df 3               |
| Unemployed                       | 6(75.0%)           | 2(25.0%)           | \(p=0.088\)        |
| Employed                         | 82(52.5%)          | 74(47.5%)          |                    |
| Self-employed                    | 147(58.8%)         | 103(41.2%)         |                    |
| **Respondents Monthly income (USD)**|                  |                    | \(\chi^2 = 17.821\) |
| Less than USD 21                 | 130(64.5%)         | 71(35.5%)          | df 4               |
| USD 21-43                        | 40(44.4%)          | 50(55.6%)          | \(p=0.001\)        |
| USD 43-65                        | 32(54.2%)          | 27(45.8%)          |                    |
| USD 65-87                        | 22(41.5%)          | 31(58.5%)          |                    |
| Above USD 87                     | 12(25.0%)          | 4(25.0%)           |                    |
| **Husband/partner Monthly income (USD)**|                  |                    | \(\chi^2 = 8.448\) |
| Less than USD 21                 | 46(70.8%)          | 19(29.2%)          | df 4               |
| USD 21-43                        | 46(54.8%)          | 38(45.2%)          | \(p=0.076\)        |
| USD 43-65                        | 55(58.5%)          | 39(41.5%)          |                    |
| USD 65-87                        | 57(52.3%)          | 52(47.7%)          |                    |
| Above USD 87                     | 30(69.8%)          | 13(30.2%)          |                    |

8.2 Cultural Factors Influencing Contraceptive Uptake
Most of the respondents whose partner supported use of contraceptive 127(65.1%) and discuss contraceptive together 152(67.6%) used contraceptive, but there was strong association with contraceptive uptake p=0.0001 and p=0.001 respectively as shown in table 2.

Table 2 Cultural Factors Influencing Contraceptive Uptake

| Variables                        | Use contraceptive | Statistic |
|----------------------------------|-------------------|-----------|
|                                  | Yes (n=236)       | No (n=183) |
| Cultural influences              |                   |           |
| None                             | 110(74.8%)        | 37(25.2%) |
| Spouse does not approve          | 20(55.6%)         | 16(44.4%) |
| It is against religion teaching  | 105(45.7%)        | 125(54.3%)|
| Afraid of side effects           | 0(0.0%)           | 3(100.0%) |
| I do not know where to access them | 0(0.0%)       | 2(100.0%) |
| Already breastfeeding            | 1(100.0%)         | 0(0.0%)   |
|                                  | χ² =4.179 df 5 p=0.052 |         |
| Husband/partner support use of contraceptives |          |           |
| Yes                              | 127(65.1%)        | 68(34.9%) |
| No                               | 67(54.5%)         | 56(45.5%) |
| I don’t know                     | 42(41.6%)         | 59(58.4%) |
|                                  | χ² =23.404 df 2 p=0.0001 |         |
| Discuss contraceptive with partner |          |           |
| Yes                              | 152(67.6%)        | 73(32.4%) |
| No                               | 65(46.1%)         | 76(53.9%) |
| No response                      | 19(35.8%)         | 34(64.2%) |
|                                  | χ² =21.288 df 2 p=0.0001 |         |
| Decision maker of Contraceptive  |          |           |
| Husband/partner                  | 113(54.1%)        | 96(45.9%) |
| My self                          | 44(36.4%)         | 77(63.6%) |
| Husband and myself jointly       | 73(92.4%)         | 6(7.6%)   |
| No response                      | 6(60.0%)          | 4(40.0%)  |
|                                  | χ² =9.707 df 3 p=0.008 |         |

Key informants narrated that there are two different situations often happen between the spouses in households. In one situation, a husband refuses to allow his wife to use contraceptives and the wife bears many closely spaced children or seeks contraceptives secretly. Alternatively, the wife doesn’t want to space or to limit the births, but the husband does want to use family planning. Both of these situations cause conflicts between the spouses and may result in threat of removal of financial support from women, who depend on their husbands’ monetary incomes.

One KII narrated a case where a woman shared her experience on how she has hidden her use of family planning from her husband: "She never told her husband. It was a secret between a nurse working in this health center and her. One day he saw pills she had put somewhere and asked her: „Where did you get these pills from?“ And she replied that she doesn’t know. She never told him. She was the one to get tired [of closely spaced pregnancies], it was her problem; She didn’t tell him.” (KII 2)

9. Discussion

9.1 Contraceptive Methods Utilization
The study revealed that 56.3% of women in at Kahe ward use contraceptive methods. This is inconsistent with the national average 38.4% (TDHS, 2015). Findings also indicated that 61% of women in marital relations were utilizing contraceptives compared to other modern methods. This study found that IUCD was least used. Those women who had at least primary education were more likely to practice contraception than Muslims but this difference was not maintained when potential confounders controlled in the logistic regression analysis which wasn’t the case in this study. This could be attributed with the high proportion of Christians participated in the study regardless of their ethnicity. This study also showed significant difference in contraceptive utilization between in marital union and not in marital union. A study conducted in Namibia also identified a significant difference between single and married women (Hackert, 2011). This difference could be attributed to the culture of the local community that prohibits sexual relation for such group of women.

### 9.2 Socio-Economic Factors Influencing the Use of Contraceptive Methods

This study identified that those women with relatively good monthly income and those with a certain level of education were more likely to use contraception than the others. However, the difference was significantly associated with contraceptive uptake, Ravindran, (2014), who conducted the study in India, revealed that women’s work gives women autonomy that led to limit and space birth and contraceptive use. However, there was no relationship between contraceptive use and whether a woman was working or not. This could be partly explained by the fact that very few women could be classified as currently not working at the time of the survey.

The homogeneity of women in terms of working status could not therefore allow for any statistical significance to be detected. Source of information on contraceptive methods was not significantly associated with contraceptive use acceptance. Findings revealed that a big portion of users in this study relied on information from health facilities or reproductive health clinic. Further findings revealed the importance of getting information to potential users of contraceptive methods. Forty-three percent of non-users did get information on contraceptive methods from health care providers. Findings also indicated that big portion (71%) non-users would prefer female service providers.

Different studies in various parts of the world were found that higher household income significantly increases the likelihood of practicing different types of modern contraceptive method (Azmat, 2013; Sarvestani, et al., 2017). The possible explanation to the influence of family income on modern contraception is that having good income could widen the social interaction of women with a variety of institutions and parties, which in turn increase the information access to family planning services.

In this study, it was observed that the use of contraceptives was across all level of education. These findings are inconsistent with other studies in Tanzania (Hackert, 2014) which showed strong association between education level and contraceptive use. This is also unsupported by the findings of TDHS, (2015) where only 22% of women with no education were using modern methods of contraception as compared to 57% of women with at least some secondary education. With formal education it is easier to make informed choices because of wide understanding of issues, including health as compared with ones without formal education. With education it is easy to put information delivered by health workers in the right context.

The result of this study showed that education has a positive influence in contraception utilization. Those women who had at least primary education and secondary or above had good propensity to modern contraceptive practice same as those with no formal education. Our finding shares the conclusion made by different researchers that educated women use modern contraception and desire less children than as well as illiterate once (Heisler & Van Eron, 2012). It seems that once a woman enters the school system, her attitudes towards family planning and fertility changes. In general education has a positive impact on fertility, since literacy improves access to information and therefore instrumental to informed fertility choices. Additionally, reliance on
scientific explanations to make sense of the world and greater awareness on alternative lifestyles could be achieved through education. Education increases women competence to interact with complex institutions, maximize their ability to benefit from a range of services and provides a sense of trust on science and technology, which is not indispensable from daily use of modern contraception.

Education was found to be associated with contraceptive use in this community. According to Mutombo et al., (2014), women with no education have the highest fertility rate at 5.8 births per woman while those with secondary education or higher have the lowest at 3.5 births per woman. Studies carried out in other parts of the world also found a positive relationship between education and contraceptive use (Asimwe, Ndugga, & Mushomi, 2013; Giwa, 2015; Hukin, 2012). It has been postulated that education facilitates the acquisition of information about family planning; it increases husband-wife communication and increases couple income potential, making a wide range of contraceptive methods affordable. Furthermore, Mutombo et al., (2014) explained that women’s education is linked to rise in the age at marriage and reduce the probability of ever marrying. Education is also positively related to more favorable attitudes towards birth control and great knowledge of contraception. Similarly, Piotrow et al., (2013) emphasized that education could increase knowledge of fertility, increase socioeconomic status, and change attitudes.

However, in North Eastern region of Kenya, there was no association between education and contraceptive use (Anguko, 2014). This could be due to the fact that women in this community are generally illiterate. The data shows that over 76% of the women have no education. This means that there are no education differentials among women in this community that could bring about any significant effect. Other factors investigated such as residence, socioeconomic status and whether respondent was currently working were only significant in the unadjusted model but the statistical significance disappeared in the adjusted model. This could possibly be explained by the fact that most women live in the rural areas and the community consists of pastoralists and so very few live in the towns long enough to interact with modern methods of family planning through available means. There are also no marked differences in socioeconomic status among the women since over 66% of the women fall under the lowest socioeconomic quintile. Other studies have shown that women’s occupation is positively associated with contraceptive use (Jalango, 2013; Nakirijja et al., 2019; Sarvestani et al., 2017). A study in Philippines by Marquez et al., (2017) found that proportion of women who were working had a higher acceptance rate of contraceptive use. Another study done in Ghana focused only on the woman’s status and family planning found that working women had a slightly higher level of contraceptive use than non-working women (Apanga & Adam, 2015).

9.3 Socio-cultural Factors Influencing the Use of Contraceptive Methods

Husband/partner support has been documented as key in acceptance of contraceptive use. Findings in this study are consistent with other studies elsewhere (Yang, 2013). About 65% of users of contraceptive methods indicated to have husband/partner support. Thirty-five percent of non-users also indicated partner support is important in the use of contraceptive methods.

Traditional and cultural beliefs were mentioned to influence the use of contraceptive methods. This is consistent with other studies (Wanjiku, 2013; Ouma, 2014). Large portion of non-users (76%) indicated that traditional and cultural beliefs would influence the use of contraceptives. This was supported by service providers who mentioned wrong cultural believes as a hindrance in the utilization of contraceptive methods.

The result of this study suggest that contraception is more practiced when the decision on FP is made by both couples jointly & when couples are discussing on the issues of FP together. Different studies conducted in Kenya, Uganda and Tanzania (Ouma, 2014; Isabella, 2013; Sileo, 2014) identified high proportion of couples reported having discussed the subject with their partners in the past 12 months. In a study conducted in North and South Gondar (Ethiopia), 62% of the couples reported having discussed about modern contraception (Gadisa, 2014). Another study in Jimma and North Shoa also described that inter-spousal communication on desired family size and spousal approval of FP practiced by any women was much higher among registered users than non-users (Gadisa, 2014).

Virtually all women included in this study were found to have had information on family planning service. The diversity of the sources of information was also documented as in any other studies. A survey conducted in six countries of Africa showed that in four of five countries, the odds of knowing a modern contraceptive method were significantly higher among women who had been regularly exposed to radio than those who had not, and women who heard family planning messages on the radio were significantly more likely to use a method than those who had not (Tafesse, 2015). A study conducted in Butajira reported similar findings (Indongo, 2011).

Although respondents were generally supportive of FP we found a statistically significant difference among the two study groups regarding some of their attitude towards family planning. Particularly on the responses given to the attitude questions like to many children compensate the infant mortality rate. Modern contraception affect maternal health, birth spacing is important to maternal and child health, modern contraception causes infertility, and FP enables couple to feel responsibility showed significant difference between the two study groups (Hukin, 2012).

10. Conclusions and Recommendations
This study was conducted among women of reproductive age group to assess factors influencing contraception uptake and come up with the following conclusion. The contraceptive uptake was 56.3% which is higher than national level of 38.4%. Middle-aged women (in the age range 20 to 29) were found to use modern contraception than the older women Married women were found to practice contraceptive uptake than the others.

It was recommended that the government and other stakeholders should broaden micro finance institutions rural banks that will impact economic activities to improve family income.

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