

## Research Article

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## Article detail

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## Enhancing fertility preference through contraception in Southern Highlands of Tanzania

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**Abstract:** The paper assesses the contribution of contraceptives in achieving fertility preference in parity progression. The study employed mixed research methods in data collection for triangulation purposes. To achieve the intended goal, the study collected the primary and the secondary data. On the one hand, a household survey was administered to 286 male and female respondents; on the other hand, the qualitative data were collected from 67 respondents through in-depth interviews and focus group discussions. The findings revealed that the majority (88.1%) of respondents used contraceptives to achieve fertility preference. The findings also show that out of 252(88%) respondents who reported having ever used contraceptives only 190(75.4%) were still using contraceptives. The rest 62

(24.6%) reported that they stopped using contraceptives due to the need for children and fear of side effects. Both modern and traditional contraceptives played a central role in helping couples and noncouples to achieve fertility preference. Therefore, couples and noncouples need to use contraceptives properly to meet their desired fertility preference.

**Keywords** – Contraceptive, Family planning methods, Fertility preference, Fertility, Unwanted pregnancy

### 1. INTRODUCTION

Globally, there is a high unmet need for contraception. It is estimated that 40% of pregnancies are unintended worldwide. This is contributed by improper or nonuse of contraceptives. The unintended pregnancies have a side effect on the health of a child, maternal and family health, and wealth (Preethy et al., 2022). Maternal mortality affects the economic growth of a respective area (Nnadi et al., 2022). This calls for contraceptive use to overcome the likelihood of maternal mortality which is caused by unintended pregnancies. Contraceptive use is determined by availability, accessibility, confidentiality, and the cost of health services. Normally the lack of education and poverty account for low use of contraceptives (Vailaya & Vailaya, 2020). Worldwide, among 1.9 billion women of reproductive age, about 874 million use a modern method of family planning while about 92 million use traditional methods of family planning (Preethy et al., 2022). Generally, the number of contraceptive use has doubled worldwide since 1990 (from 167 million). However, some women want to delay or avoid pregnancy but they are not using contraceptives. These are considered to have unmet needs for family planning (United Nations Department of Economic and Social Affairs, Population Division, 2022).

The measures within fertility preference such as the need to have a child and the need to space children are applied to describe a place of preference for the use of contraceptives (Westoff, 2000; Odusina et al., 2020). Recent

studies by Johnson et al. (2017), Ocalan et al. (2018) and Odusina et al. (2020) revealed that there is a gap between the preferred and actual birth that is the size and interval of children. Moreover, these studies documented that couples have births that they did not plan to have at a particular time. Couples were having an unintended number of children partly due to no use or improper use of contraceptives or both (Sanga, 2015; Odusina et al., 2020). Improper use of contraceptives or no use of contraceptives causes an undesired number of children in couples or individuals. Likewise, couples or individuals who are using contraceptives properly achieve the fertility of their preference.

Moreover, improper use of contraceptives causes unintended pregnancy. Thereafter, the couple fails to get the desired number of children (Johnson et al., 2017). The literature documented that an unintended pregnancy falls into two categories: mistimed or unwanted. The mistimed pregnancy occurs in women who are willing to conceive shortly (Mochache et al., 2018). while unwanted pregnancies are those that are not wanted by individuals at all. In this case, using contraceptives helps individuals achieve their intended fertility preferences (Safari et al., 2019). The tendency to conceive unintentionally, especially when a woman still breastfeeds forces early weaning of the child. This practice risks the health and life of a respective child. Furthermore, having an unintended number of children causes different problems in the family. These problems include failure to provide quality basic services including better education, balanced diet, clothing, and health to members of the household. It is well known that contraceptives are there to enable couples to meet the fertility of their preference. Unfortunately, still there are cases of unintended pregnancies. Therefore, this paper aims to examine the contribution of family planning methods in achieving fertility preference.

## 2. LITERATURE SURVEY

Globally, the trend in fertility preferences indicates that there is an increase in the desire to limit childbearing for most couples and non-couples (Population Reference Bureau, 2000; Odusina et al., 2020). Couples use contraceptives to achieve the desire to limit fertility (Yussuf et al., 2020). Msokwe et al. (2022) also observed that about two-thirds of the studied population used modern contraceptives, whereas one-third used traditional contraceptives such as tree roots and menstrual cycle. This implies that fertility preferences and contraceptive use are inseparable. In this case, couples who want to achieve the fertility of their preference are subjected to contraception. Therefore, contraceptives are there to help individuals to achieve fertility preference. It should be noted that the increase in contraceptive prevalence has been influenced by an increase in the demand for limiting fertility (Westoff, 2000, Odusina et al., 2020). Moreover, women who acquire a formal education and live in cities tend to have a higher desire for limiting fertility than women who inhabit rural areas (Öcalan et al., 2018). This is because women with formal education and living in urban areas have high exposure to programmes advocating the need for contraception. The literature indicates that in both developed and developing countries, fertility preferences are associated with childbearing behaviour (Hayford & Agadjanian, 2012).

Furthermore, when contraceptives are used properly have a high chance of helping individuals to decide freely and responsibly on all matters related to fertility. The study by Sanga (2015) found that contraceptives help couples and other individuals decide when and how many children to have. Changes in lifestyle and the improvement in health facilities have stimulated an increase in the use of contraceptives. The increase in maternal and infant mortality also influenced the option of contraception (Ahmed et al., 2012; Bhutta et al., 2014; Rutstein & Winter, 2015). The increase in the trend of using contraceptives also has been motivated by improvements in the learning environment and economic growth. This is the case, especially for girls of childbearing age (Canning & Schultz, 2012; Schultz & Joshi, 2013; Yussuf et al., 2020). In most cases, fertility preference enables couples and noncouples to make decisions about fertility-related issues. The fertility-related issues include time for conceiving, childbearing interval, and the preferred number of children. However, there is a situation in which women fail to achieve fertility of their preference despite the high prevalence of traditional and modern family planning methods (Sanga, 2015). This distorts the real meaning of having contraceptives.

## 2.1. Theoretical foundation of the study

The Theory of Planned Behavior (TpB) by Icek Ajzen (1985) built the foundation of this study. The TpB is one of the social-psychological models that are employed in studying human behavior and practices. This theory also is applied in examining processes that are involved in decision-making within the context of the macro-level (Pourmand et al., 2020). The TpB is centered on explaining the process involved in the formation of intentions. It also establishes the association between intention and behaviour. The central argument of the TpB is that the intention to act is affected by several factors namely attitudes towards a behaviour, perceived behavioural control, and subjective norms (Ajzen, 2011). The term Intention is defined as commitment to a course which usually leads to instrumental behaviors like option to contraception. This is different from the term desire which implies wishes that are sometimes based on emotions rather than reality (Westoff, 1990). In this case, the intention is considered the immediate antecedent of behaviour. The TpB has been applied in studying the association between fertility preference and contraceptive use. The theory also has been applied to find out how attitudes, beliefs, and perceptions influenced the option to use a given method of family planning.

## 3. PROBLEM STATEMENT

Proper use of contraceptives enables couples to control fertility. Through contraceptive use the couples plan fertility-related matters such as at what time to have a child, how many children should they bear, and at what interval between the first parity and another. Unfortunately, there is a growing tendency for women to carry a pregnancy without their will despite the full supply of both traditional and modern contraceptives. Unplanned pregnancies, if at all happen when a woman is still breastfeeding can cause weaning of the child before the required time and such an act risks the life of a child. Moreover, having several children which was not expected to some extent causes problems in the family such as failure to provide quality services (food, education, health, and clothing) to members of the household. Normally couples plan to have a certain number of children that they will be able to take care of smoothly. There are contradictions concerning couples not achieving the fertility preference of their choice if they plan before they decide to have a child/children. Hence, this study aimed to examine the contribution of contraceptives in achieving achieve fertility of their preference.

## 4. RESEARCH METHODOLOGY

The data for this study was collected from five villages of Lupila Ward. The Lupila Ward is one of the wards of Makete District. Specifically, the villages that were involved in the study are Lupila, Malanduku, Ludilu, Igumbilo, and Ukange (Figure 1). The data were collected in all these five villages (URT, 2011). The selection of the ward for data collection was guided by the fact that Sanga (2015) found and documented that in the respective wards, there were several cases of couples failing to achieve fertility of their preference even though there was a full supply of contraceptives. The ward also was selected for study because it had a higher rate of rural-urban migration of men than women (Lihawa & Mbonile, 1996). This kind of migration influenced the use of contraceptives positively and negatively. The ward was predominantly occupied by *Kinga* ethnic groups. Most of the occupants engaged in farming activities with few involved in business activities (Sanga, 2021).

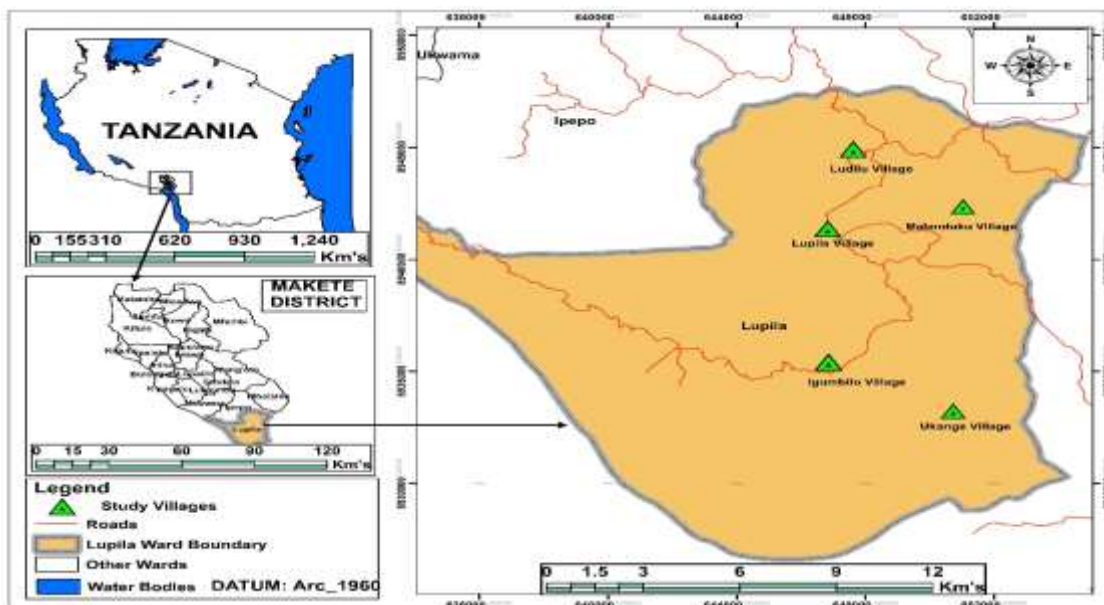


Figure 1: The Map of Lupila Ward Indicating Study Villages  
 Researcher’s GIS skills, 2022

In this paper, both secondary and primary data were involved. The secondary data were collected through a review of literature related to fertility and contraceptive use. Primary data were collected by employing different methods. The main method of data collection was the household surveys. The other methods were Focus Group Discussions (FGDs), and in-depth interviews. Mixed methods were employed for triangulation purposes (Creswell, 2009; Creswell, 2014; Creswell & Clark, 2018). This was the case because no method of data collection was sufficient to capture information on fertility and contraceptive use. The quantitative data were collected through a household survey that involved 286 respondents based on Yomane (1967) and Cramer et al., (2001) as follows:-

$$n = \frac{Z_{\alpha}^2 Pq}{e^2}$$

These respondents were selected through a systematic sampling technique. To establish a uniform proportion of sampled households, the sampling interval was established by dividing the total number of households. In selecting a starting point, numbers 1-10 were written on the paper and mixed up. From the mixed papers, one paper was chosen randomly to obtain the first household. Again, every 10<sup>th</sup> head of the household was selected from the village register to minimise human biases in selecting respondents for the study. This study involved both males aged 20-65 and females aged 15-49 who were either cohabiting or married. This choice was guided by the justification provided by Bongaarts (1978) that the age at first birth to girls starts at 15 years old.

The collection of qualitative data involved 67 key informants. The in-depth interviews and FGDs were employed to collect the qualitative data. To avoid the participants pairing, each FGD comprised five participants. For the effectiveness of the discussion female and male participants formed their separate groups. To collect the relevant data, only married individuals were involved in the discussion to harness their experience related to contraceptive use. The researcher organised and moderated. The FGD was chosen because of its high flexibility and

high face trustworthiness. The method also provides a wide range of data in a single meeting. Lastly, the method was chosen because it helped participants remember things that they might have forgotten (Dawson, 2002). Couples with long-lived experiences were selected through snowball. In each village, one FGD was conducted. Therefore, in total five FGDs were conducted. Each group constituted nine to seven respondents including a researcher. Groups with odd numbers work better than even numbers as it was difficult for them to pair during the discussion (Dawson, 2002). The discussion was tape-recorded after the consent of the respondents was sought.

An in-depth interview was chosen because when employed in the study provides a better understanding of opinions, values, attitudes, and feelings (Tracy, 2013). Key informants for in-depth interviews were purposively selected. In total 22 key informants were interviewed and tap recorded. The convergent parallel mixed method design was applied in the study. This design allowed both qualitative and quantitative data to be collected concurrently. The rationale for selecting this design is that it served time and was appropriate for the mixed research approach (Creswell, 2014). The analysis of quantitative data was made possible under the support of Statistical Package for Social Sciences (SPSS) Version 20. This software enabled the researcher to produce tables, and figures, and to conduct cross-tabulations to measure the relationship between variables. Finally, the data obtained through FGDs and in-depth interviews were analysed thematically and presented through narrations. The main themes for qualitative data were the side effects of modern contraceptives, criteria for the use of contraception, preference for modern over traditional contraceptives, and cases of unplanned pregnancies.

## 5. DATA ANALYSIS AND DISCUSSIONS

### 5.1 The use of contraceptives in the study area

To determine if contraceptives were used in the study area, the respondents were asked a question that demanded them to disclose if they ever used any contraceptive. This question enabled the researcher to know the extent to which respondents were involved in taking contraceptives. Household survey indicated that the majority (88.1%) of respondents ever used contraceptives and only 11.9 % never used contraceptives (Table 1). This finding implies that in the study area, there was a high rate of contraceptive use. People adhere to the rules of the religion which prohibits the use of modern contraceptives. In this case, religious faith contributes to limiting the use of contraceptives

Table1: Respondents Ever Used Contraceptives

Responses	Ever used contraceptives					
	Male		Female		Total	
	No.	%	No.	%	No.	%
Ever used contraceptives	110	88	142	88.2	252	88.1
Never used contraceptives	15	12	19	11.8	34	11.9
<b>Total</b>	<b>125</b>	<b>100</b>	<b>161</b>	<b>100</b>	<b>286</b>	<b>100</b>

Source: Field survey, 2022

The findings presented in Table 1 indicate a slight gender difference for ever user of contraceptives since male users were 88% and female users were 88.2%. The second question was asked to determine if the previous users of contraceptives were still using contraceptives. Concerning the continuation of using contraceptives, the findings revealed that out of 252 (88%) respondents who reported having ever used contraceptives only 190 (75.4%) were still using contraceptives. The rest 62(24.6%) reported that they were not using contraceptives because they wanted to conceive. As such, the main reason for stopping the use of contraceptives was the need for a child. In this case,

the findings imply that discontinuation of using contraceptives is associated with the desire to conceive. This was supported by one of the key informants who said, "I do not use any contraceptive because I want a child. I will continue with contraceptives after bearing a child". Likewise, Safari et al. (2019) documented that in rural northwest Tanzania, women discontinued contraception because they desired to have a child. After bearing a child, they resumed the use of contraceptives to maintain the birth interval.

Moreover, the previous users of contraceptives stopped using contraceptives due to several reasons. Findings obtained through household surveys revealed that 36% of ever user of contraceptives stopped using such methods because their children were still young (Figure 2). In support of this, participants of FGDs at Lupila village revealed that according to *Kinga's* traditions, it is strictly prohibited to have sex while a child is still young. It is believed that having sex at such a moment can affect the health of the child even though one will use a contraceptive. This means that contraceptives were no longer used because there was no involvement in sexual intercourse. Because of this, one of the FGD participants at Malanduku village had this to say:

*I do not know my husband (this implies no sexual intercourse) for two months since I gave birth to this child. It is against our traditions to have sex when a child is still young. After the birth of a child, we observe celibacy for at least six months. This is achieved through having separate rooms for my husband and me (FGD Participant/Malanduku/January, 2022).*

The preceding narration from a breastfeeding woman indicates that in the study area, there were customary laws that were associated with fertility. These laws influenced the use of contraceptives.

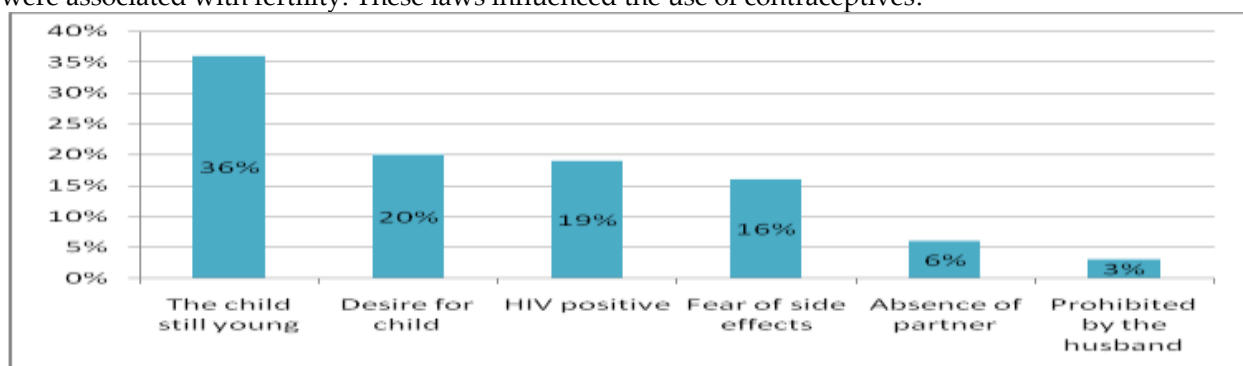


Figure 2: Distribution of Respondents Based on Reasons for Not Using Contraceptives

Source: Field survey, 2022

Figure 2 indicates that the other reason for discontinuation of using contraceptives was associated child being young. This was reported by 36% of the respondents. According to the traditions of the people of the southern highlands of Tanzania, it is forbidden to have sex while the child is still young. Furthermore, findings presented in Figure 2 indicate that 20% of the interviewed respondents were not using contraceptives because they desired to have a child. A similar case was reported by Safari et al. (Safari et al., 2019). Figure 2 also indicates that about 19% of respondents reported that they were not using contraceptives because they were HIV positive. Even though the reason was given by a few respondents, it was insisted on during FGDs at Igumbilo village. Participants of the discussion revealed that those with Human Immunodeficiency Virus (HIV) voluntarily decided to abstain. They did this because it was believed that having sex increased the rate of dying early. The findings do not support Safari et al. (2019), who found and documented that HIV status was not statistically associated with discontinuation in contraceptive use. Other (16%) respondents reported not using contraceptives due to fear of side effects. This was seconded by one health provider of Lupila Health Centre who said:

*Most of the women stopped using contraceptives following overbreeding. Scientifically, it has been proved that hormonal contraceptives cause overbreeding. This is normal due to hormonal imbalances caused by some of the modern contraceptives such as Pills, Norplant, and Intrauterine devices (Key Informant /Lupila/January, 2022).*

The above narration indicates that modern contraceptives have side effects on users. This causes some of them to stop contraception. This corroborates Oyedokun (2004) who found that couples in Ife, Nigeria were not using contraceptives due to fear of side effects. Likewise, Sanga (2015) found that in Makete District some women stopped using contraceptives due to side effects such as being overweight and overbreeding. In contrast, Safari et al. (2019) documented that in rural Tanzania women discontinued using contraceptives due to a high failure rate. There were cases in which some of the women conceived despite the use of contraceptives. This case poses a doubt on the effectiveness of individuals in using contraceptives. The failure rate of contraceptives might have been caused by improper use of a given method of family planning.

Other respondents stopped using contraceptives because their partners were not there. This reason was given by 6% of respondents who ever used contraceptives. This implies that they were not having sex because their husbands or wives were not living in the village. FGDs at Ukange village revealed that most of the men were living in town. This caused faithful women to abstain from sexual intercourse. The study by Safari et al. (2019) revealed that some couples were not using contraceptives because they had infrequent sex. The remaining 3% of the interviewed respondents reported that their partners did not prefer the use of contraceptives. Most of these were men who prohibited their wives from using contraceptives fearing being prostitutes. The findings support that of Mochache et al. (2018), who found that the Digo community residing in Kwale, Kenya were not using contraceptives because the husbands prohibited their partners from being involved in the use of family planning methods. Similar findings were reported by Sichona (1995), in his study on men’s involvement in reproductive health conducted in Mbozi District. Sichona found that most men had a negative attitude towards contraceptives. This influenced them to prevent their partners and daughters from using modern family planning methods. Furthermore, his results show that men believed that a woman who was using a contraceptive was perceived to be a prostitute.

### 5.2 Contraceptives mostly preferred and the reasons for their preference

Contraceptives are of two categories namely modern and traditional and each category is further divided into different types. Under modern contraceptives, the most preferred one was the male condom which was preferred by 74(29.1%) of the respondents (Table 2). Male respondents who reported using condoms were more (37.8%) than women (22.4%). This method was said to be simple to use because it does not need the assistance of a physician. Another reason is that it prevents users from both sexually transmitted diseases and unintended pregnancies. The last reason is that it has no side effects on the user’s health compared to other modern methods.

**Table 2:** Distribution of the most preferred methods of family planning  
Source: Field survey, 2022

Contraceptive method	Male		Female		Total	
	No.	%	No.	%	No.	%
Implant	7	6.3	13	9.1	20	7.9
Injection	13	11.3	41	28.7	54	21.2
Female condom	0	0	5	3.5	5	2.0
Male condom	42	37.8	32	22.4	74	29.1
Calendar	6	5.4	3	2.1	9	3.5
Pills	16	14.4	22	15.4	38	15
IUD	3	2.7	8	5.6	11	4.3
Folk method	3	2.7	1	0.7	4	1.6
Abstinence	16	14.4	13	9.1	29	11.4
Withdrawal	4	3.6	4	2.8	8	3.1
Don’t want any	1	0.9	1	0.7	2	0.8
<b>Total</b>	<b>111</b>	<b>100</b>	<b>143</b>	<b>100</b>	<b>254</b>	<b>100</b>

Furthermore, FGDs revealed that condoms were used more than other methods because they had a double role. First, it prevented the spread of HIV, and second, it prevented unintended pregnancy. Likewise, Antonio et al. (2018); Msokwe et al. (2022) documented that modern contraceptives such as condoms were preferred because they prevented pregnancy and sexually transmitted diseases. This finding is contrary to what was reported by Safari et al. (2019), who found and documented that injection was mostly preferred by the users of modern contraceptives while condoms were preferred by a few. The other most preferred method is an injection, whereby 54 (21.2%) respondents reported preferring it as shown in Table 2. The reasons behind preferring it include long stay without changing and absence of health problems. Women were the majority with 41 (28.7%) who preferred it compared to men where the corresponding figure is 13 (11.3%). Furthermore, the next method preferred is the pill which was preferred by 38(15%) respondents out of 254.

Table 2 indicates that other methods were not much preferred by the users because they needed the assistance of a physician, for example, IUD and Implant. Moreover, the findings obtained through the household survey revealed that abstinence was highly (11.4%) used among traditional contraceptives. This is said to be the safest method in terms of health; also it assures a user 100% guarantee for limiting fertility. In a nutshell, the respondents preferred modern contraceptives over traditional ones due to the high failure rate of traditional methods of family planning. Regarding this observation, one of the elders at Ludilu village insisted:

*Youths cannot use traditional contraceptives due to the nature of the lifestyle they have. Those days we managed to use these contraceptives because we observed all the ethics and our husbands travelled and stayed in town for a long time before they came back. It was common for our husbands to leave the village after we gave birth to a child. Worse enough youths of today need sex all the time (FGD Participant/Lupila/January, 2022).*

The narration by the elder implies that youths are not capable of using traditional contraceptives due to lifestyle changes. This was the reason for the failure of traditional contraceptives whenever it was applied. As such, people opted to use modern contraceptives which assured them to achieve fertility preference.

### 5.3 The Decision about fertility preference and method of contraception

Fertility preference is an issue to be discussed by both partners. For example, the timing for having a child and the preferred number of children are to be discussed by partners. However, this is quite different from some of the partners where the decision is made by a single partner. Moreover, couples need to talk together about the method of contraception they should use, but some couples do not discuss whether they should use contraceptives or not and what type of contraceptives they should use. The findings obtained through the household survey indicated that 97% of respondents were discussing matters of contraceptive use with their partners. They also discussed issues of fertility preference which is the number of children to have and at what time to bear such children. The findings imply that both wife and husband were responsible for the decision-making on issues of fertility and contraceptive use. The study by Odusina et al. (2020) found that men desired more children than women. This created conflicts in deciding how many children they should have.

The findings also revealed that 2% of respondents reported that women decided on the issues of fertility preference. In support of this, FGDs at Igumbilo village revealed that there were cases in which women decided on matters related to fertility. This was the case with drunkard men. In addition, 1% of respondents reported that issues of fertility preference were decided by men, this also occurs rarely. This situation is in contrast with what was reported by Koc (2000) who found that decisions on matters related to fertility and fertility control were primarily made by men. Likewise, Kamuyango and Hou (2020) found out that women married to men with low formal education were the victims of low use of contraceptives because of prohibitions from their partners. This implies that there was no discussion on matters that demanded a discussion before a decision was made. Furthermore, findings from the study area showed that couples discussed what method to be used for contraception purposes. Few respondents responded that they did not discuss the contraception method to be

used, this comprised 10% of the respondents. The results also indicate that most (90%) of couples discussed the kind of method of contraception to be used. This result is contrary to what was reported by Oyedokun (2004) in his study about awareness and utilisation of modern contraceptives where he found that few women were involved in discussing issues related to family planning with their partners.

#### 5.4 The Relationship between the age of the respondent and the desired number of children

There are circumstances in which the age of the respondent influences the decision on the preferred number of children. In achieving the desired number of children individuals opt to use a given method of family planning. The findings indicated that 70 (93.3%) respondents of the age group 15-24 reported preferring 1-2 children, and 65(54.6%) respondents of the age group 35+ preferred 5+ children (Table 3). The findings imply that respondents preferred few number of children. In this case, contraceptives were to be used to facilitate the achievement of the preferred number of children. Likewise, the study by Vailaya and Vailaya (2020) found that most women preferred 2 children. They used family planning methods to achieve and maintain the preferred number of children.

**Table 3:** The age of the respondent with the number of children preferred

Age		The Preferred Number of Children			Total
		1-2	3-4	5+	
15-24	Row %	93.3%	5.3%	1.3%	100%
25-34	Row %	45.7%	42.4%	12%	100%
35+	Row %	13.4%	31.9%	54.6%	100%
<b>Total</b>	Row %	44.8%	28.3%	26.9%	100%

$$\chi^2 = 146.4 \quad p=0.000$$

Source: Field survey, 2022

Moreover, Table 3 shows that 42(45.7%) respondents of the age group 25-34 reported preferring 1-2 children, 39(42.4%) respondents of the same age group (25-34) preferred 3-4 children, the same number of children 3-4 was preferred by 38(31.9%) respondents of the age group 35+. Only one respondent of the age group 15-24 preferred 5+ children. Based on the findings, there was a statistically significant relationship between the age of the respondents and the number of children being preferred as suggested by the chi-square test (p=0.000). The findings imply that people are not preferring many children as it was in the past four decades. This has a negative implication on population growth. The key informants at Lupila village emphasised that:

*In our family, we were born twelve and I was the tenth child. If my parents could decide to have few children it means I would not have been born. By the way, some of us have died. Others still survive. This is the benefit of having many children; it should be noted that children help in farming activities and increase crop outputs (Key Informant/Lupila/January, 2022).*

The foregoing voice indicates that those who preferred many children had both social and economic reasons. In most cases, children serve as the source of labour for the households. Nowadays, people prefer few children due to economic hardship. This is the reason why few respondents aged 15-24 reported having more than 5+ children as indicated in Table 3. The study by Adhikari (2010) revealed that women in Nepal preferred three to five children. Furthermore, it insisted that the number of children an individual could have was determined by age at first marriage.

### 5.5 The interval of child-bearing preferred by the couples

One of the intentions of using contraceptives is to have the preferred interval of childbearing. It is very important to have a well-defined interval so that a child is breastfed for a long time to get all the required nutrients from her/his mother. The study by Mochache et al. (2018) revealed that women used contraceptives to stop and delay future birth. Likewise, Antonio and Ortega (2018) documented that contraceptives decreased adolescent childbearing. Without using contraceptives, a woman can conceive unwillingly leading to weaning a child before the required time. This can in turn expose the child to some risk of getting diseases due to weak antibodies.

Sex-wise, more (57.6%) men preferred three years than women (44.7%). During FGDs participants of the discussion reported that an interval of more than two years enables a mother to regain her health, also reducing the incidences of abortion. The informant at Ludilu village said: *“I remember in 2010 I aborted because I conceived within six months after birth. I was about to die after that abortion”*. Likewise, Aleni et al. (2020) pointed out the risks associated with short birth intervals: death of the mother and child, poor lactation, poor health, and low birth weight. About 20.3% of the respondents preferred four years (Figure 3). This interval was preferred much more (21.7%) by women than men (18.4%). Lastly, 18.5 % preferred five years. Out of 286 respondents, only 30(10.5%) respondents preferred two years.

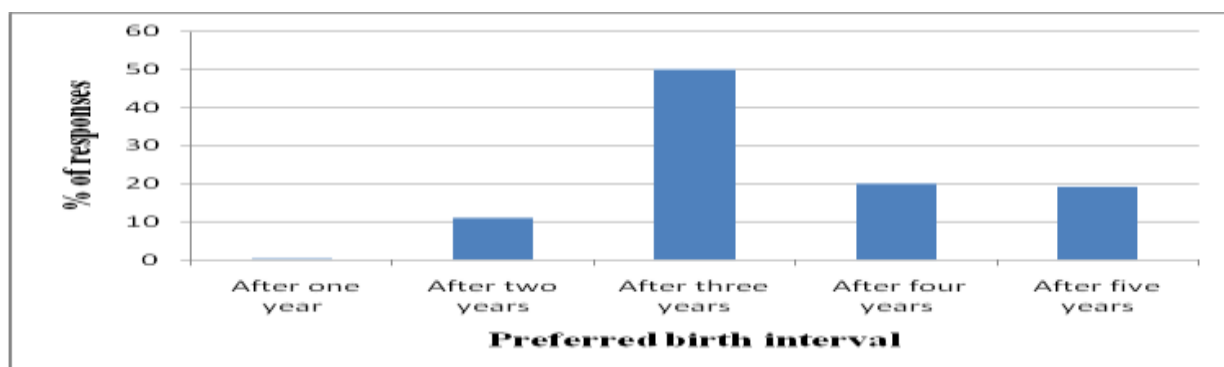


Figure 3: The Interval of childbearing Preferred by the Couples

Source: Field survey, 2022

Figure 3 shows that the most preferred interval of birth spacing was above three years. Below two years were preferred by a few respondents.

### 5.6 The contribution of contraceptives in achieving fertility preference

For an individual to meet their fertility preference there is no doubt that they should use contraceptives properly, whether modern or traditional. Likewise, the study by Kamuyango and Hou (2020) revealed that married women used contraceptives to achieve the fertility of their preference. This indicates that contraceptives enhance achieving fertility preference. Through, FGDs it was revealed that women who failed to achieve the preferred fertility were not using any contraceptive. Most of them had child spacing and sizes that they did not plan before. Safari et al. (2019) documented that sexually active women used contraceptives to avoid getting pregnant. It was insisted that contraceptive use was highly experienced by women with primary education and above. Correspondingly, Yussuf et al. (2020) found that in Tanzania individuals with secondary education used contraceptives more than those with no such education. This implies that education influenced the use of contraceptives.

Findings obtained through FGDs revealed that the use of family planning methods helped couples space children and have the required number of children. It was insisted that those who were not using contraceptives ended up having unintended pregnancies which caused them to abort. Given this particular matter, the interviewed respondents insisted:

*You see this child I conceived unintentionally. I was not using modern contraceptives instead I used traditional methods of limiting fertility. Unfortunately, my husband wanted sex on the risk day; I tried to deny but he forced me to have sex. Such situations happened several times. Currently, I have decided to use modern (IUD) contraceptives which are more effective in limiting fertility (FGD Participant/Malanduku/January, 2022).*

The preceding narration indicates that modern contraceptives help women to decide on issues related to fertility. Failure to use contraceptives exposes an individual to unwanted or mistimed pregnancies. Similarly, Li et al. (2020) documented that women and adolescents who were not using contraceptives had an unmet need for fertility. Moreover, for those who were using contraceptives but failed to meet the fertility of their preference, this was due to improper use of contraceptives. To determine how contraceptives helped individuals achieve the fertility of their preference, several questions about the need to have another child and the need to limit fertility were asked. These aspects are analysed below to determine the extent to which contraceptives helped individuals to achieve their fertility preferences.

### 5.7 Need to have another child

To collect the data concerning the need for another child, the respondents were asked if they wanted another child. The question as to whether one needed another child/children was special for those who were already having parity. This is because it is illogical to ask someone who has no child a question related to the addition of another child. Responses to this question especially the negative answer that they needed no more children/children paved the way to ask how they prevented themselves from getting other children/children. Based on this question 150 (52.4%) respondents responded that they needed another child/children (Table 4).

**Table 4:** Distribution of respondents by need for a child/children

Responses	Need another child/children		
	Male	Female	Total
Need another child	63(50.4%)	87(54%)	150 (52.4%)
Do not need another child	62(49.6%)	74(46%)	136 (47.6%)
<b>Total</b>	125	161	286 (100%)

$\chi^2 = 0.373 \quad p=0.541$

Source: Field survey, 2022

Findings presented in Table 4 show that more women than men (54 % versus 50.4%) responded that they needed another child/ children. This implies that still they needed more children. This is because they did not reach the intended number of children.

The respondents who responded that they did not need any more child/children comprised 47.6 % whereby a higher proportion were men who constituted 49.6% compared to women who were only 46%. When they were asked what they did to enable them to remain without increasing another child, most of the respondents reported that they used contraceptives. Findings show that 89% of respondents reported that they used contraceptives to avoid pregnancy. This implied that contraceptives to a greater extent enabled individuals to plan for the number of children they wanted. This was seconded by participants of FGDs in which it was revealed that both modern and traditional contraceptives help to plan issues related to fertility. Likewise, the Population Reference Bureau (2000) emphasizes that the primary goal of insisting on the use of family planning methods is to provide the freedom to

individuals to have a preferred number of children and to achieve the preferred spacing of births. Similarly, the study by Atake (2019) found that woman empowerment was necessary to enable women to plan on issues of fertility. In that case, the author argues that limiting the number of children was possible through women's empowerment and contraceptive use.

Eight respondents (5.9%) responded that they did nothing to prevent getting other children/children. These women were ready for anything about fertility. It means that they did not want to interrupt the will of God. The findings are second to those of Pimentel et al. (2020) who found and documented that children are gifts from God so there is no need to avoid pregnancy. This caused women to end up having large numbers of children. Correspondingly, Pimentel et al. (2020) documented that the Digo community residing in Kwale, Kenya had an attitude that getting a child was up to God. It means God was responsible for deciding on the fertility of a respective person.

Respondents who reported that having children was the will of God, men constituted 3.2%, while women comprised 8.1%. This implies respondents in this category were against the use of contraceptives. This is because according to them the use of contraceptives is against the will of God. Six respondents (4.4%) reported that they did not know how to prevent themselves from getting other children/children. This implied that they were not aware of family planning. There is no significant gender difference in the need for another child/children as suggested by the chi-square test ( $P=0.541$ ). This has been revealed due to establishing the relationship between gender and the need for another child/children.

## 6 RESEARCH IMPLICATIONS

Contraceptives play a significant role in enhancing fertility preference among couples and noncouples. It should be understood that both modern and traditional contraceptives are important in enhancing fertility preference. Moreover, there is a significant increase in the use of contraceptives among married individuals. This is the case because of the need to control childbearing. Furthermore, the majority prefer having a low number of children ranging from one to three children. This may end up creating low population growth in a respective area.

## 7 CONTRIBUTIONS TO SCIENTIFIC COMMUNITY AND FUTURE RESEARCH

This paper is anticipated to raise awareness of the significance of having a manageable number of children among couples. This will end up increasing the use of contraceptives to enhance fertility preference, hence lowering a massive population growth that affects the provision of health and other basic social services. The paper also is expected to contribute to the existing body of knowledge on matters related to fertility preference and contraceptive use in Tanzania. This would be achieved by unveiling novel areas of fertility preference and contraceptive use which may have not been explored widely, hence inspiring further studies. Moreover, the paper would contribute to it contributes to informing policymakers of the need to improve the availability and accessibility of contraceptives in different areas, especially in rural contexts.

## 8 CONCLUSION

Proper use of contraceptives enabled individuals and couples to achieve the desired fertility preference. Achieving the preferred number of children and the birth interval was made possible through using different methods of family planning. In limiting fertility, modern family planning methods were highly preferred over traditional contraceptives. Moreover, fear of the side effects of modern contraceptives hindered the use of contraceptives by some individuals. Through this, some individuals opted not to use any modern contraceptives. The option of not using any contraceptive led to unintended pregnancies and the associated problems. Religious faith was responsible for the option of not using any contraceptive. It was the case due to the belief that it is against the will of God to prevent pregnancies. Improper use of contraceptives was responsible for unwanted and mistimed pregnancies. Contraceptives enabled individuals to decide freely in all matters related to fertility. In a nutshell,

contraceptives contributed immensely to achieving fertility preference. However, hormonal contraceptives have some side effects on the health of the users. To maintain the proper use of contraceptives it is important to insist on effective contraceptive use. It is also imperative for the government to introduce programmes that involve elders aiming at educating youths on how to use traditional contraceptives which are believed to be safe for users. It is also imperative for non-governmental organizations and the government to provide education on the proper use of contraceptives. This will reduce the failure rate of family planning methods in limiting fertility.

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