

# Traditional Fertility Regulation Methods among Remote Ethiopian Communities: The Case of Hamer District

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## Abstract

**Objective:** To assess the prevalence and practice of fertility regulation methods among remote Ethiopian communities of the Hamer District, Southern Ethiopia.

**Materials and methods:** Community-based cross sectional study was conducted in Hamer District of South Regional State of Ethiopia. The study populations were women of reproductive age group residing in the District and purposively identified key informants. Stratified Simple random sampling procedure was carried out to reach at the 382 women included in the survey. The Data was collected using structured questionnaire and analyzed using SPSS computer software.

**Results:** The study revealed that there exist various traditional as well as modern fertility regulation methods in the area (particularly the former). Traditional Methods including the use of herbs called 'Ditha' and 'Dohe'; the application of different materials on the uterus; infanticide & Abortion were among the risky methods that are widely practiced in the area currently. On the other hand; methods like Post Partum Abstinence and natural methods were among the methods with unknown efficacy despite extensive practice. For women who are deep to the District (rural) and are illiterate; the awareness, knowledge and practice of these methods is by far less than many figures in the country; on the other hand, the same was high for the urban women even when compared with some regional and national figures.

**Conclusion:** it was possible to conclude that various types of traditionally known useful and harmful (risky) fertility regulation methods exist in the area. These findings imply the importance of strengthening the IEC/BCC and introduction of reliable modern family planning methods as well as establishing reproductive health services, and possibly establishment of abortion care in the area is a timely activity to end with the problems.

**Keywords :** Traditional, Fertility Regulation, Remote Community, Hamer District

## Introduction

Changes in the size, rate of growth and distribution of human populations have a broad impact on the

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environment and on development prospects. A variety of demographic changes in different areas provide new challenges and opportunities. Among these, fertility is the one and highest in the poorest countries and among the poorest people in these countries. Failures in health, education and other services especially for women, contribute to poverty in these countries. Maternal mortality is high and

rates of contraceptive use are low often less than 15 percent of all couples (1).

Family planning programs have contributed to reproductive revolution in developing countries. In each region of the developing world except Sub-Saharan Africa, fertility has fallen by at least one child per woman in the last two decades. As fertility falls, so do infant, child, and maternal mortality. Developing countries produce most of the 90 million people added to the world population every year, which is the largest increase in human history (2).

In developing countries, women continue to die because they lack access to contraception. Each pregnancy multiplies a woman's chance of dying from complications of pregnancy or childbirth. Maternal mortality rates are particularly high for young and poor women, those who have least access to contraceptive services. One in three deaths related to pregnancy and childbirth could be avoided if all women had access to contraceptive services (3- 5).

Man has always relied on resources within his environment to survive since his creation. Plants, animals and minerals constitute the major natural resources used by man for promotive, preventive, curative and rehabilitative health care (6). Modern family planning methods are widely believed to influence fertility worldwide (7).nonetheless; traditional methods have also been used in fertility regulation in African societies with their own contributions. The social, cultural and traditional beliefs and practices that are embedded in the social system also have an impact on decisions related to fertility (8).

Most developing countries are endowed with vast resources of medicinal and aromatic plants. These plants have been used over the millennia for human welfare in between man and his environment continues even today as a large proportion of people in developing countries still live in rural areas. It is estimated that between 80 – 85% of the population of sub-Saharan Africa receives its health education and health care from practitioners of traditional medicine (6, 7). Fertility patterns observed in developing countries in general and in Ethiopia in particular may be attributed to the traditional attitudes and cultural values held by communities and the need for large number of children (9).

Traditional methods were reported to constitute a considerable proportion of all Contraceptive methods in both urban and rural Ethiopia. These methods include premarital and postpartum sexual

abstinences, withdrawal, and the use of herbs. However, much is not known about the nature of these traditional contraceptive methods. Besides, the socio-cultural factors that affect decisions in fertility and fertility regulation as well as perceptions and attitude of the people living in remote rural areas of Ethiopia on fertility regulation are poorly understood.

Such an endeavor is crucial for establishing reproductive health services and supportive researches, particularly in remote parts of the country. Therefore, this study assesses the gaps in understanding the nature of traditional fertility regulation methods in remotest part of Ethiopia. The object of the study was to assess the practice and factors affecting the practice of traditional fertility regulation methods.

## Materials and methods

The study was conducted in Hamer District of the South Ommo Zone, which is located some 100Kms from the Zonal town Jinka and 875 Km from Addis Ababa. The total population of Hamer District is around 48,290; of these, 43,896 (90.9%) of them reside in rural villages while the remaining 4,394 (9.1%) are inhabitants of 2 small towns. The peoples live on cattle rearing and small scale farming (10). The study was conducted from March to April 15, 2008.

The study employed Community based cross-sectional study design with both quantitative and qualitative components; Study population for the study were randomly selected women in the reproductive age bracket (15-49 years) residing in the District and purposively selected key informants selected by a snow ball sampling technique were used too.

Quantitative data were collected using pre-tested and standardized Amharic version interviewer-administered questionnaire which were adapted from other research instrument (11). While the qualitative data using a semi-structured questionnaire. Saturation and redundancy of information, though indeterminate measures were used to limit the questions as well as the number of the respondents of this part of the study. Data was analyzed using SPSS version 12.0 for windows. Qualitative data was analyzed manually using the thematic analysis method and was interpreted accordingly.

## Results

In this study a total of 424 women in the reproductive age bracket were attempted to be interviewed yet response was obtained from 382 of them yielding a

response rate of 90.1% of the participants. Almost half 184 (48.2%) of the respondents were in the age group of 26-35 years, with a mean age of  $28 \pm 7.3$  years SD. A large number of the study groups 320(83.3%) especially rural women 318(92.2%) were illiterates, only 8(2.1%) of the women were educated above a high school.

As to the religion, marital status and occupation of the respondents; majority of the rural women (95.4%) were traditional religion followers while 73% of the urban women were Orthodox Christians by religion followed by Muslims 13%. A large proportion of study

groups (69.1%) were married by marital status followed by singles 79(20.7%) and widowed 27(7.1%). Regarding the respondents' occupation most (80.4%) were pastoralists, while only 4.2% of these were government employees (Table 1).

Reproductive Characteristics Of Study Groups: In this study it was learned that, almost half 45.5% of the women who were married know that their husbands do have another wife other than them i.e. they are in polygamous relation ship, the median number of co-wives being 2. The main reason mentioned for so was cultural influence by majority (93.4%) of those who

**Table 1:** Socio-demographic characteristics of respondents by category, Hamer District , South Ethiopia, March 2008.

Characteristics	Rural women N = 345 No (%)	Urban women N = 37 No (%)	Total N = 382 No (%)
<b>Age</b>			
15- 19	75(21.7)	7(18.9)	82(21.5)
20-24	49(14.2)	8(21.6)	57(14.9)
25-29	93(27)	12(11.4)	105(27.5)
30-34	73(21.1)	6(16.2)	79(20.7)
35-40	41(11.9)	3(8.1)	44(11.5)
40+	14(4.1)	1(2.7)	15(3.9)
<b>Marital Status</b>			
Married	241(69.9)	23(62.2)	264(69.1)
Unmarried	68(19.7)	11(29.9)	79(20.7)
Divorced	2(0.6)	2(5.4)	4(1)
Widowed	26(7.5)	1(2.7)	27(7.1)
Separated	8(2.3)	0(0)	8(2.1)
<b>Religion</b>			
Muslim	0(0)	5(13.5)	5(1.3)
Orthodox	5(1.4)	27(73)	32(8.4)
Protestant	11(3.2)	4(10.8)	15(3.9)
Catholic	0(0)	1(2.7)	1(0.3)
Traditional	329(95.5)	0(0)	329(86.1)
<b>Occupation</b>			
Employed	1(0.3)	15(40.5)	16(4.2)
House wife	22(6.4)	11(29.5)	33(8.6)
Pastoralist	302(87.5)	5(13.5)	307(80.4)
Merchant	0(0)	1(2.7)	1(0.3)
Drink seller	6(1.7)	5(13.5)	11(2.9)
Others	14(4.1)	0(0)	14(3.7)
<b>Educ. Status</b>			
Unable to R&Write	318(92.2)	2(5.4)	320(83.8)
Read & write	6(1.7)	4(10.8)	10(2.6)
1-6	15(4.3)	8(21.6)	23(6)
7-12	6(1.7)	15(40.5)	21(5.5)
12+	0(0)	8(21.6)	8(2.1)
<b>Ethnicity</b>			
Hamer	343(99.4)	4(10.8)	347(90.8)
Amhara	2(0.6)	27(73)	29(7.6)
Guraghe	0(0)	1(2.7)	1(0.3)
Other	0(0)	5(13.5)	5(1.3)
<b>Total</b>	<b>345(100)</b>	<b>37(100)</b>	<b>382(100)</b>

detained to know their husbands' co-wives followed by lack/ weakening of opposition from the co wives by the remaining 8(6.7%) of them.

An outweighing proportion of study women (89.2%) had conceived at least once in their life time before the study period. The number of deliveries ranging from none to 9 and the mean number of deliveries per woman was  $3.8 \pm 2.28$  SD. As to the age interval between consecutive births, it was two years for an outweighing number of them (47.2%) but ranged from 1 to 7 years for the study women.

In this study fertility difference of study women for one year preceding the survey was assessed by strata and it was found that the age group from 20-39 years for the rural and 15-34 years for the urban were the most fertile ones, as their age specific fertility rate was high. The comparison of ASFR for rural and urban study women showed that rural women were found to have high fertility rate. The Total Fertility Rate (TFR) of rural and urban study women for the preceding one year was found to be 11.4 and 8.07 children respectively if the current fertility level continues in their life time and if the women survived all their reproductive time (Table 2).

Potential fertility was also assessed by the study; in line with this, it was known that most of the study women have a future intention to have surfeit number of children. In this regard the stratified analysis has shown that rural women were about 24 times more likely to have more than 5 children as compared to urban women [OR (95% CI)= 24(8.21, 69.6) in their life time. The mean number of future intended number of children was  $8 \pm 4$  SD per woman.

When we see the number of unintended pregnancy prevalence; it was a common experience for majority of study women. Out of 257 rural and 32 urban reproductive aged women who have ever conceived, 76(22%) of the rural and 14(37.8%) of the urban women had had at least one unintended pregnancy in

their life time with no statistical difference in coverage between the two groups ( $P>0.05$ ).

Almost all (95.5%) of study women responded that it is culturally unacceptable for a woman to become pregnant premarital; if it happens for any reason, she has to go to a local traditional abortion to expel the concept tissue as it was believed by (98.3%) of them. Personal experience of the women was also assessed and 105(27.5%) of the study women reported experiencing premarital pregnancy; of these, some (81.9%) of the study women have aborted it while the remaining 19(18.1%) reported as they born it safely (Table 3).

### Traditional fertility regulation methods

Abortion as traditional fertility regulation method: It was shown in this study that, a passable amount of study women 84(22%) have undergone abortion as a means of traditional fertility regulation method; with no statistical difference by residence ( $P>0.05$ ) (Table 4).

Comparison of the other socio demographic characteristics of the study subjects versus use and non-use of abortion as a means of fertility regulation is summarized in Table 4. In this table, it is clearly shown that most of the variables had shown no significant association with the variable but educational status.

Women who can read and write as well as women who are in secondary school (7-12) had experienced abortion 6 times more often than the illiterates [OR (95%CI) = 6.41(1.5, 27.5) and 6(1.05, 34.2) respectively] as a one means of traditional fertility regulation method. This finding has statistical significance. For women in elementary and tertiary level this finding was not statistically significant [OR (95%CI) = 3.9(0.5, 27.87), 5.3(0.93, 30.64) respectively].

Use of natural methods as traditional fertility regulation method: In this study, a large number of study women who mentioned to know natural

**Table 2:** Comparison of the total fertility rate of study groups, Hamer District, Southern Ethiopia, March 2008

Age group	Rural women n=345	One year live birth	ASFR	Urban Women n=37	One year live birth	ASFR
15-19	75(21.7)	5	0.07	7(18.9)	4	0.57
20-24	49(14.2)	14	0.28	8(21.6)	1	0.125
25-29	93(27)	54	0.58	12(32.4)	3	0.25
30-34	73(21.2)	58	0.79	6(16.2)	4	0.67
35-39	41(11.9)	23	0.56	3(8.1)	0	-
40-44	14(4.1)	0	0	1(2.7)	0	-
45-49	0	0	0	0	0	-
Total	345(100)	154	2.28	37(100)	12	1.625
TFR	-	-	11.4	-	-	8.07

**Table 3:** Selected Reproductive Characteristics of study groups, Hamer District, Southern Ethiopia, March 2008.

Reproductive Characteristic of study women	No (%)
<b>Number of co-wives</b>	
1	35(28.9)
1-3	75(61.9)
3+	11(9.1)
<b>Reason for polygamy</b>	
Culture	113(93.4)
Lack of opposition	7(6.7)
<b>Number of deliveries</b>	
0	5(1.7)
1-3	143(49.5)
4-6	95(32.9)
7+	46(15.9)
<b>Age interval b/n birth</b>	
1-2	212(87.6)
3-4	30(12.4)
<b>Number of currently alive children</b>	
1-3	163(58.2)
4-6	101(36.1)
7 +	16(5.7)
<b>Potential fertility</b>	
1-5	12(34.8)
6-10	137(39.4)
10+	90(25.9)
<b>No of Unintended pregnancy/woman</b>	
1	53(58.9)
2	27(30)
3	10(11.1)
<b>Aborted fetus while unintended</b>	
0	6(6.7)
1	50(55.6)
2	28(31.1)
3	6(6.7)
<b>Fate of unintended pregnancy culturally</b>	
Aborted	367(96.1)
Born safely	15(3.9)

methods also reported to use different methods to regulate fertility (Table 5).

According to the findings of this study, 174 (97.8%) of the rural and some 16(88.9%) urban women used these methods. This variation in utilization by residence has a statistical significance ( $p < 0.05$ ).

Religion was also seen to have a significant variation in the use of natural methods; Muslims and Orthodox Christian followers reported to use these methods 21 and 3 times more than traditional religion followers [OR(95% CI) = 21.2(1.58, 285), 3.27(0.34, 31.41) respectively].

The bivariate analysis of this study has revealed that Occupation, age and ethnic back ground were

seen to have no statistically significant difference in the use of natural fertility regulation methods.

Post Partum Abstinence was the other method used traditionally to regulate fertility by a large proportion of the respondents; about 249(89.2%) of the rural and 26(78.8%) of the urban women were abstained post partum mainly due to cultural influence. With regard to their religion 242(89%) of Traditional religion followers, 24(82.2%) Orthodox Christians and 5(83.3%) of protestants were abstaining for so; the median duration of abstinence being 1 year  $\pm$  8 months SD post partum. As to the ethnic group of prolonged period post partum abstinence; a large number 250(89%) of the Hamer, 21(80.8%) of the Amhara and 3(75%) of other ethnic group members of the respondents were abstaining after delivery.

When we see the duration of abstinence, 75% of the responding women used to abstain less than a year while the remaining 25% abstained for more than a year; the range of abstinence period starts as early as one month post partum and extending up to 6 years in few cases.

On the other hand, though all were not practical to abstain, majority (89.2%) of the respondents were in favor of a prolonged post partum abstinence period exceeding 3 months.

#### Breast feeding

was also one of the other traditionally practiced natural fertility regulation method by Hamer peoples. Almost all 289(98.3%) of the responding women explained that they have breastfed their children for at least for 6 months; the median duration of breast feeding being 12 months. Pertaining to their marital status, singled and widowed women were more likely to prolong their feeding compared to other marital statuses [OR 95% CI = 40(3.14, 476.6), 20.2 (1.8, 0.016) respectively]. A statistically significant difference in breast feeding was also noticed across different ages; women in the age group of 26-30 being less likely to breastfeed than those in the age group of 15-20 ( $p < 0.05$ ). Other back ground variables showed no variation in practicing longer period of breast feeding.

#### Other Methods of Traditional Fertility Regulation Methods

Herbs and Roots are also the other traditionally known methods of fertility regulation in the district as mentioned by a sizable proportion of the respondents

**Table 4:** Comparison of Socio- Demographic characteristics of women who have and who have not experienced abortion as a meanse of traditional fertility regulation method, Hamer District , southern Ethiopia, March 2008

	Had abortion Hx N = 84	Had no abortion Hx N = 298	OR (95% CI)	$\chi^2$ (p value)
Rural	72(20.9)	273(79.1)	1.00*	<b>3.6 (&gt;0.05)</b>
Urban	12(32.4)	25(67.6)	0.55 (0.26, 1.15)	
<b>Age</b>				
15-19	17(20.7)	65(79.3)	1.00*	<b>4.14(&gt;0.05)</b>
20-24	15(26.3)	42(73.7)	0.95(0.24, 0.38)	
25-29	22(21)	83(79)	0.7(0.17, 2.83)	
30-34	49(24.1)	60(75.9)	0.94(0.24, 3.64)	
35-40	8(18.2)	36(81.8)	1(0.2, 3.10)	
41+	3(20)	12(80)	1.13(0.26, 4.94)	
<b>Marital Status</b>				
Married	55(20.8)	209(79.2)	1.00*	<b>4.8(&gt;0.05)</b>
Single	19(24.1)	60(75.9)	1.27(0.25, 6.5)	
Divorced	3(75)	1(25)	1.05(0.19, 5.66)	
Widowed	5(18.5)	22(81.5)	0.11(0.01, 1.78)	
Separated	2(25)	6(75)	1.47(0.23, 9.53)	
<b>Religion</b>				
Muslim	2(40)	3(60)	1.00*	<b>3.4(&gt;0.05)</b>
Orthodox	10(31.3)	22(68.8)	0.40(0.66, 2.47)	
Protestant	2(13.3)	13(86.7)	0.59(0.27, 1.31)	
Catholic	-	1(100)	1.56(0.39, 7.97)	
Traditional	70(21.3)	259(78.7)	48.7(0.0, !)	
<b>Occupation</b>				
Employed	8(50)	8(50)	1.00*	<b>9.1(&gt;0.05)</b>
House wife	8(24.2)	25(75.8)	0.27(0.05, 1.36)	
Merchant	-	1(100)	0.85(0.19, 3.84)	
Drink seller	5(45.5)	6(54.5)	49.15(0.00, !)	
Pastoralist	60(19.5)	247(80.5)	0.33(0.57, 1.87)	
Other	3(21.4)	11(78.6)	1.12(0.30, 4.15)	
<b>Educ. status</b>				
Illiterate	66(20.6)	254(79.4)	1.00*	<b>12.34(&lt;0.05)</b>
Read & write	3(30)	7(70)	6.41(1.49, 27.53)	
1-6	5(21.7)	18(78.3)	3.89(0.54, 27.87)	
7-12	5(23.8)	16(76.2)	6(1.05, 34.21)	
12+	5(62.5)	3(37.5)	5.33(0.93, 30.64)	
<b>Ethnicity</b>				
Hamer	73(21)	274(79)	1.00*	<b>4.05(&gt;0.05)</b>
Amhara	8(27.6)	21(72.4)	5.63(0.94, 34.32)	
Guraghe	-	1(100)	3.94(0.55, 28.11)	
Other	3(60)	2(40)	270.3(0.00, !)	

\* denotes the reference category ! Denotes very huge number

**Table 5:** Showing the different types of natural methods practiced, Hamer District , Southern Ethiopia, March 2008

Natural Method Type	Total no of users (%)
Abstinence	17(8.7)
Breast feeding	13(6.7)
Calendar method	136(69.7)
Cervical mucus method	1(0.5)
Syphtho-termal method	24(14.4)
Total	196(100)

Around 22% of the rural and 2.7% of the urban

respondents, all from Hamer ethnic group, said that they know herbs and roots that enable to control birth. This variation by residence is statistically significant (P<0.05); furthermore, rural women were 10 times more likely to know these herbs and roots than their urban counterparts OR (95% CI = 10.2 (1.4, 75.4). As compared to married women, widowed and separated women are less likely to know these herbs with a statistically significant variation (p<0.05) OR (95%CI = 0.2(0.09, 0.48), 0.23(0.06, 0.94)

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respectively. With respect to their age women in the age group of 21-25 are about 4 times more likely to know these herbs as compared to those in the age group of 15-20 while women in the age group of 40 and above are less likely to know them with a statistically significant variation ( $p < 0.05$ ) OR (95% CI = 3.7(1.02, 13.5), 0.07(0.02, 0.27) respectively. The other categories as well as background variables didn't reveal any statistically significant variation in the use of herbs for fertility regulation (Table 6).

**Table 6:** Socio- Demographic characteristics of women who abstained and who don't abstained post partum as a meanse of traditional fertility regulation method, Hamer District , Southern Ethiopia, March 2008

Characteristics	PP abstainers	Non- abstainers
	No (%)	No (%)
Rural	249(89.2)	30(10.8)
Urban	26(78.8)	7(21.2)
<b>Age</b>		
15-20	19(70.4)	8(29.6)
21-25	38(82.6)	8(17.4)
26-30	92(90.2)	10(9.4)
31-35	75(94.9)	4(5.1)
36-40	38(88.4)	5(11.6)
40+	13(86.7)	2(13.3)
<b>Marital status</b>		
Married	227(90.1)	25(9.9)
Single	14(66.7)	7(33.3)
Divorced	1(25)	3(75)
Widowed	27(100)	-
Separated	6(75)	2(25)
<b>Religion</b>		
Muslim	3(75)	1(25)
Orthodox	24(82.8)	5(17.2)
Protestant	5(83.3)	1(16.7)
Catholic	1(100)	-
Traditional	242(89)	30(11)
<b>Occupation</b>		
Employment	12(80)	3(20)
House wife	28(93.3)	2(6.7)
Merchant	1(100)	-
Tella seller	10(90.9)	1(9.1)
Pastoralist	217(87.5)	31(12.5)
Other	7(100)	-
<b>Ethnic group</b>		
Hamer	250(89)	31(11)
Amhara	21(80.8)	5(19.2)
Guraghe	1(100)	-
Others	3(75)	1(25)

**THE SITUATION OF MODERN CONTRACEPTIVES**

Knowledge and practice of modern contraceptives: In

this study the knowledge and practice of modern family planning methods were assessed and the finding of the survey showed that 68% of the rural women and about 97% of the urban women have heard about modern contraceptive methods. This difference was statistically significant ( $p < 0.05$ ).

Women who heard about modern contraceptives were further inquired about the sources of information and it was learned that majority 158(62.7%) of the rural and 20(58.6%) of the urban women communed the information from health workers followed by friends or neighbors for the former groups while the latter mentioned 3 different sources.

Those who heard about modern contraceptive methods were also asked weather they know any of the modern methods by name or scene, and it was found that out of the total 235 rural women who heard about modern contraceptive methods only 187(79.6%) of them enlighten to know the methods while some 34(94.4%) of the urban women dared to know these method; this shows that urban women are about 4 times more likely to know the modern methods than their rural counterparts with a statistically significant difference ( $p < 0.05$ ).

Study women who knew about the methods were also asked to mention them by name and it was shown that almost half of each group mentioned injectables followed by pills; condom was known more by rural women than urban as it was mentioned to be known by some 20(10.7%) of the rural and only 1(2.9%) of the urban responding women; moreover, though it is not a statistically significant difference Urban women had a better awareness in terms of knowing method mix than the rural ones as this was mentioned by not more than 46(24.5%) of the rural women whilst around 11(32.5%) of the urban.

The current study also assessed the contraceptive prevalence rate of the area, and it was possible to know that urban women were about 34 times more likely to use modern contraceptives than rural women OR (95% CI = 33.9(14.6, 78.7) the coverage for the rural being as low as 8.4% while the urban as high as 75.7% with a statistically significant variation in utilization ( $p < 0.05$ ).

Study women were interviewed regarding the current specific method they are using; the finding showed that about 51.3% of rural and 47.1% of the urban women used Injectable contraceptives while the rate for oral contraceptives was 13.4% and 11.8% respectively for the two study groups.

Study subjects were also asked for the source of

MCM and it was learned that, health centers for the rural and clinics for the urban women were the major sources for these study groups, which is 80.3% and 58.3% respectively. The second major source was vice versa as clinics for (16.1%) of the rural study women while health center for (41.7 %) urban women.

The findings of the analysis concerning the perceived benefit of MCM revealed that around 74.4% of the rural and 36.1% percent of the urban study women reported child spacing as a main and foremost reason; on the other hand, the reason mentioned for current non-use of modern contraception indicated that cultural influences and other unspecified reasons were listed top by almost half of the study women followed by use of natural methods like abstinence (18.9%), need to have additional children (12.6%) and other unspecified reasons (Table 7).

## Discussion

The result of this study showed that majority (>90%) of the study women are having a typical characteristics of a primitive society where grater part of them were from remote rural villages, members of the Hamer ethnic group, traditional religion followers and illiterates by some of their background characteristics and their life is based on subsistent farming and cattle rearing mainly pastoralist; moreover, they are too far from the center and basic infrastructures are poorly available in the area. All these and other factors inevitably have lead them to have their own reproductive characteristics and medical practices in which fertility regulation method is one.

In the area especially in the rural villages of the District , where almost all are indigenous residents, polygamy is a common practice reaching up to 45.5% of married men, which is by far higher than the DHS 2005 finding of the national and regional figures as well as the study conducted in Gambella town which have a coverage of 14.2%, 22% and 39% respectively (11, 12) ; the number of co-wives ranging from 1 to 5 depending on the wealth of the individual .It is a common practice nationwide. In many regions, including Oromia, ANNP, Somali, Benishangul and Gambella polygamy is widely practiced; 5% of women in their teens and 8% of women 20-24 are married to men who have more than one wife (12). This can be explained by the fact that the tradition of the society allows males to have more than one wife and the economic background of males also contributed; moreover, the culture enforces

monogamous males to look for postpartum sexual abstinence also contributed to the fact of having more than one wife.

The practice of polygamy in the area is believed to influence fertility from two different angles. In one hand, by prolonging the post partum period to space children; on the other hand, it has grave consequences in the transmission of STDs in the area which will in turn affect fertility indirectly by causing a higher maternal and child morbidity (13). This is exactly the same as the findings of other qualitative studies conducted in Bensa district and Suri Communities in Southern Ethiopia (13, 14).

Extramarital relations are also very common which will inevitably lead to higher fertility; the findings of the current study suggests that a higher fertility was recorded in both setups especially the rural signified a higher fertility reaching up to 11 per woman which is nearly twice of the current regional and national figures, and by far higher than the findings of the DHS 2005 (12, 15) but comparable with the study in Gondor (16). This is explained by the poor access of the community to modern and effective birth control methods and/or the ineffectiveness of the on use traditional fertility regulation methods.

The birth interval between two children in rural area is too close than the urban with a statistically significant variation. This is also the other aspect of higher fertility and it may be due to the non use of any fertility regulation method or the higher demand of children by the pastoralist communities of the district. This is similar with the findings of the DHS 2005 and the study conducted in Gambella (11, 12). The potential fertility of the area is still very large since Hamer couples desire to have as many children as possible. Children are source of respect, security and wealth in Hamer society this is also a common practice in most of Agrarian African societies. Unlike the findings of the study in Bensa district, which revealed the less desire of children by that community, the qualitative study conducted in Suri societies is in line with the findings of the current study (13, 14).

In all communities of the District , among the rural communities in particular, unintended pregnancy is not uncommon to present but not welcomed pre-marital. This is due to the cultural believe that a premarital delivery is a shameful act leading to great discrimination, hence the only fate of unplanned pregnancy is abortion by the Hamer ethnic



**Table7:** Comparison of knowledge and practice of Modern contraceptive methods by Residence, Hamer District, Southern Ethiopia March 2008

Characteristics	Rural women No (%)	Urban women No (%)	$\chi^2$ (p-value)
<b>Awareness of MCM</b>			
Yes	235(68.1)	36(97.3)	13.8(0.00)★
No	110(39.1)	1(2.7)	
<b>Source of information</b>			
Radio	-	1(2.8)	106.5(0.00) ★
Friend/neighbor	75(31.9)	-	
Health worker	158(62.7)	20(58.6)	
Other	2(0.9)	3(8.3)	
3 of the above	-	10(27.8)	
All	-	2(5.6)	
<b>Knowledge of MCM</b>			
Yes	187(79.6)	34(94.4)	4.6(0.03) ★
No	48(20.4)	2(5.6)	
<b>Knowledge of specific MCM</b>			
Pills	25(13.4)	4(11.8)	25.9(0.00) ★
Injectables	96(51.3)	16(47.1)	
Condom	20(10.7)	1(2.9)	
Pills + Injectable	20(10.7)	5(14.7)	
Pills + condom	16(8.6)	2(5.9)	
Depo + condom	8(4.3)	-	
More than 3	2(1.1)	6(17.6)	
<b>Current use of MCM</b>			
User	29(8.4)	28(75.7)	119.1(0.00) ★
Non-users	316(91.6)	9(24.3)	
<b>Current specific method being used</b>			
Pills	8(28.6)	9(32.1)	0.4(0.82)
Injectables	18(64.3)	18(64.3)	
Others	3(7.1)	1(3.6)	
<b>Sources of MCM</b>			
H/center	179(80.3)	15(41.7)	32.5(0.00) ★
clinic	36(16.1)	21(58.3)	
Other sources			8(3.6)
<b>Importance of MCM</b>			
Prevent pregnancy	4(1.8)	1(2.8)	36.5(0.00) ★
Space children	166(74.4)	13(36.1)	
Reduce cxn	24(10.8)	3(8.1)	
Limit family size	29(13)	18(50)	
Others	-	1(2.8)	
<b>Reason for non-use</b>			
Use of natural method	30(18.9)	2(33.3)	18.5(0.002) ★
Need to have more child)	20(12.6)	-	
Fear of side effects	2(1.3)	1(16.7)	
Religious prohibition	4(2.5)	-	
Cultural influence	84(52.8)	-	
Others	19(11.9)	3(50)	

★ Denotes significant findings

groups while it can be born safely in the other ethnic background residents of the District . This has lead to a large amount of fertility wastage in the area; more than

that, just like that of the unplanned pregnancy, planned birth but Anatomically or physiologically not in line with the culture of the society is also either killed or

thrown to the field alive. This also contributes to the fertility wastage in the area. Nationally, 54% of pregnancies to girls under age 15 are unwanted compared to 37% for those ages 20-24 (12).

Use of natural methods as a means of traditional fertility regulation is mainly attributed to the knowledge of the people about it since knowledge and practice gaps are too close. Among the different natural methods known in the area, the rhythm method is the widely practiced method especially premarital. Cognizant with this the DHS 2005 of Ethiopia also shows that the rhythm method as the leading natural method currently used though the coverage is low. Even though prolonged lactation amenorrhea up to 19 months is reported in Ethiopia, the period of post partum sexual abstinence is only 2 months nationally. Contrary to its benefits in increasing effectiveness, longer days of sexual abstinence in each cycle would definitely put pressure on the sexual life of the Hammer women. This is exactly the same as Suri women in the same region as it was inveterated by a study conducted in that area (13).

The numbers of days that are considered unsafe in Hammer community while practicing the rhythm method are much longer than the scientifically proven biologically unsafe days. This could be a reason for the effectiveness and wide use of the method. In Bolivia, when surveyed about traditional methods, 89 percent of women knew about rhythm, while only 56 percent of women knew about withdrawal. Nearly 67 percent of women who reported rhythm as their primary method could accurately identify the most fertile period of a woman's menstrual cycle (17).

Post partum sexual abstinence was practiced widely despite there is variation in the duration of abstinence this is also under cultural influence not mainly for the sake of fertility regulation; however it has its own role in delaying birth interval between children.

Though it is not well perceived by the community, breast feeding was also the other widely practiced fertility regulation method in the area. In this regard singled and widowed women were more likely to prolong their feeding compared to other marital statuses 40 and 20 times respectively. This may be due to the fact that these women do not have had additional birth and growing the already born child and nourishing very well as their husbands are not with them.

In the district, especially by urban and married women, there is a belief that there are herbs and roots that are used to regulate fertility mainly to abort unwanted pregnancy and some of them dare to tell the

name of these herbs; on the other hand, the qualitative study has revealed that old local traditional abortions used to give herbs named 'Dita' and 'dodhe' to premarital conceived women in order to facilitate the abortion procedure. The study conducted in Suri community identified the non existence of any herbs or roots used in that community to space children or limit family size despite outsiders' believe about it.

When we come to see the situation of modern contraceptive methods in the area, a passable proportion (32%) of rural women even didn't hear any thing about it. This may be due to the cultural influence, poor access of the women to modern health facilities/services as well as the higher illiteracy level of the area. Contrary to this, in the country as well as in the region awareness about MCM is very high (12). Coming to the knowledge about MCM it gets even lower by far. Only 54% of the total rural study women or around 80% of those who heard about it know at least one method by name or scene. This is by far lower than the national as well as many regional figures and contributes for under utilization leading to higher fertility (12).

Pertaining to the types of MCM known by the responding women who know the methods by name or scene, Injectables were listed top followed by pills. This is similar to the finding of the DHS 2005 but the order exchanged (12). A cross cutting issue here is condom was known more by rural women than the urban as a means of contraception which may be due to the advocacy of condom by the newly deployed rural health extension workers in line with the prevention of HIV/AIDS and strong advocacy done by different NGOs working in the area.

Method mix was known more by urban women than the rural Hamer women particularly knowledge of more than 3 methods. This is mainly due to the higher illiteracy of the rural women and poor access of the methods to rural area since some of them are rendered only at health center level where majority of rural women are far from.

The current modern contraceptive prevalence rate is too high for the urban while by far lower for the rural from regional, national figures as well as the findings of other studies but better than Somali region which is as low as 3% (12). This can be explained by the Geo-socio demographic structure of the District and the culture of the community. The coverage of the urban is even higher than the coverage of some urban towns which are close to the center and have good access to the MCM. This may be due to the

non- indigenous inhabitants of the district do not like to have more children there since the area is remote and not habitable. This is also further evidenced by the total number of children living with their parents in the urban is by far lower than the rural, where urban women send their children to other sites as they grow elder.

Current non-users of MCM justified their non use as cultural influence by the rural and other unspecified reasons by the urban study women. This is also explained by culture and other background variables are the detrimental factors influencing modern contraceptive methods utilization.

### Discussion

Among the various reasons affecting fertility regulation in the area include: socio-demographic variables, culture as well as primitive nature of the community are visible to mention. Though majority of them are practiced impetuously to regulate fertility, the community practices different types of traditionally known fertility regulation methods including:- Post partum sexual abstinence, Natural methods like the rhythm/ calendar method, breast feeding and others, Abortion of a premarital conceived fetus, Use of herbs and roots and infanticide and killing of a child that has culturally unacceptable Physio-anatomic

A significant difference was observed in the knowledge and practice of MCM between different setups, ethnic groups and religions. Among the various MCM that exist in the area, Injectables and oral contraceptive pills are known as well as utilized more than other methods existed. Condoms are known only by small segment of the study groups as contraception; in this regard rural women were found to be better than their urban counterpart. Cultural influence was the main reason for non use of modern contraceptive method particularly in the rural area

A strong and urgent Information, Education and communication (IEC) should be implemented to raise the awareness and knowledge of the rural community about MCM. All concerned bodies should strive to improve the current MCM coverage in the rural area by providing adequate and varied methods and creating a good access of the methods to the rural community.

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