

**COMPARATIVE STUDY ON UTILIZATION OF MODERN CHILD SPACING
METHODS AND FACTORS AFFECTING ITS USE AMONG INDIGENOUS
AND NON-INDIGENOUS WOMEN OF REPRODUCTIVE AGE GROUP IN
GAMBELLA TOWN, SOUTH WEST OF ETHIOPIA**

By

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Assessment of utilization of Modern Child Spacing Methods

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DECLARATION

I the undersigned, declare this thesis is our original work and has not been presented for a degree in this or any other University, and all sources of materials used for this thesis have been fully acknowledged.

Name _____

Signature _____

Place _____

Date of Submission _____

This thesis has been submitted with my approval as university advisor

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Advisor's Name

Signature

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Acronyms

AIDS	Acquired Immune Deficiency Virus
ANC	Antenatal Care
CBD	Community Based Distribution
CI	Confidence Interval
CPR	Contraceptive Prevalence Rate
CSA	Central Statistics Authority
DHS	Demographic and Health Survey
FGD	Focus Group Discussion
FP	Family Planning
HH	House Hold
HIV	Human Immunodeficiency Virus
ICPD	International Conference on Population and Development
IUDS	Intra Uterine Device
MCM	Modern Contraceptive Method
MMR	Maternal Mortality Rate
MoH	Ministry of Health
PNC	Postnatal Care
RH	Reproductive Health
SPNNRS	Southern Peoples Nations Nationalities Regional State
STD	Sexually Transmitted Diseases
TFR	Total Fertility Rate
UNFPA	United Nations Population Fund
USA	United States of America
USD	United State Dollar
WHO	World Health Organization

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ABSTRACT

Comparative Community-based cross sectional study conducted in Gambella Town of Gambella Regional State, which is 777 kms away from Addis Ababa to the South west of the country. The study populations were women of reproductive age group residing in the urban area of Gambella woreda during the study period. Multistage sampling procedure was carried out to reach at the 936 households to be included in the survey. Simple random sampling technique was applied to select the respondent women when more than one women of reproductive age group resides in the same household. Data was collected using pre-tested structured questionnaire complemented by focus group discussion.

The finding of the study revealed that there is statistically significant difference between indigenous and non-indigenous study groups by educational status, number of co-wives, intended number of children and length of postpartum sexual abstinence. Ninety six percent of the non-indigenous women and sixty two percent of the indigenous women have heard about modern contraceptive methods. The most commonly known contraceptive methods were oral pills and injectables. More than 50.0% of the non-indigenous women were used modern contraceptive methods in their lifetime while only 20.2% of the indigenous have ever tried.

Current contraceptive prevalence was 11.5% among indigenous study women while it was 36.4% among non- indigenous group. Desire for more children and use of natural method like prolonged postpartum sexual abstinence were the reasons for non use among indigenous women while desire for more children and not currently engaged in

wedlock were the most commonly reported reasons for non-use of modern contraceptive methods for non-indigenous women while

It was found that the tradition of indigenous population enforces male partners to observe for prolonged postpartum sexual abstinence and their culture allows them to have multiple wives. More over, it was noted in the qualitative finding that once a women is engaged in wedlock it is must that she has to produce as many children as possible because children particularly daughters were assumed to be the source of family income and women can not make any decision related to reproductive matters which consequently influenced their modern contraceptive utilization.

The result of multivariate analysis showed statistically significant association between age, marital status, number of co-wive, previous attendance of PNC previous health institution delivery, and modern contraceptive utilization. Women empowerment through education and looking for alternative sources of family planning delivery system and involving male partner in reproductive health issues were recommended.

INTRODUCTION

Reproductive Health implies that people are freely able to (i) enjoy a safe and satisfying sex life (ii) reproduce and (iii) decide as to when and how often to reproduce. The last condition assume beforehand the right of men and women to be informed and to have access to safe, effective, affordable and acceptable methods of family planning and essential obstetric care. Reproductive health, thus, is a crucial part of general health, and is central to human development (1).

Reproductive ill health includes problems such as female genital mutilation, malnutrition and anemia, abortion, reproductive tract infections including sexually transmitted diseases and HIV/AIDS, infertility, unregulated fertility, maternal morbidity and mortality, sexual and gender violence, and other related health problems. Reproductive health advocated amore comprehensive, holistic response to human reproduction. It necessitate collaboration across sectors that previously have been conceived, implemented and evaluated separately .It also assume before hand the synergy among health care services. (2,3).

Reproductive health is part of an essential package of health care and education. It is a means to the goal of women's empowerment, but it is also a human right and includes the right to choose the size and spacing of the family. Achieving equal status between men and women, guaranteeing the right to reproductive health, and ensuring that individuals and couples can make their own choices about family size will also help to slow population growth rates and reduce the future size of world population (4).

Changes, in the size, rate of growth and distribution of human populations have a broad impact on the environment and on development prospects. A variety of demographic changes in different areas provide new challenges and opportunities. Fertility is 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). These countries are also among the most severely challenged by soil and water degradation, and the most severely affected by food deficit (5).

Women in general and women in developing countries in particular are under privileged. The origins of this situation are found in factor related to gender. The disparities are everywhere manifests themselves in the lack of economic, cultural and political rights. These problems become even further magnified when it comes to the traditional woman. The features of the exploitation are to be found in all aspects of life (6).

Woman's death from pregnancy and childbirth is a social injustice; lack of power access to employment, finances, education, health care and other resources is the root cause of maternal ill health before and during pregnancy and childbirth. To make mother hood safer, requires ensuring women empowerment and their human right including the right to get quality service and reproductive health related information. The 1994 International Conference on Population and Development in Cairo (ICPD) and Fourth World Conference on Women in Beijing have set goals that encourage and protect

women's reproductive health needs and equality in all aspects of social and economic developments (7).

Socio-economic difference between women and men are even more important than biological ones in determining the sexual and reproductive health status of women. Lack of autonomy, failure to enforce laws in women's favor, discrimination in laws such as the criminalization of abortion, inadequate allocation of health resources and failure by Governments to implement remedial measures sanctioned by international agreements, all contribute to the relatively poor health status of women in many societies (8)

In industrialized countries, fertility is now 1.6 children per women, which is below the replacement level. Unwanted pregnancy, particularly among adolescents, often result in unsafe abortions, which account for 10-14 percents of maternal deaths. The average number of live birth per African women is 5.6. Maternal mortality rate (MMR) in Africa is the highest in the world. It averages at 870 deaths per 100,000 live births with variation among countries and between urban and rural areas. In some countries the rate is as high as 2000 deaths per 100,000 live births (9).

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. Women spend decreasing proportions of their

lifetimes giving birth and caring for young children. The fertility rate in the developing world, excluding China, is 4.3 children per woman, which is still twice the number in industrial countries and high enough to double the population in 30 years. Developing countries produce most of the 90 million people added to the world population every year, which is the largest increase in human history (10).

Contraceptives prevent maternal death by reducing the number of times women go through pregnancy and childbirth. They also provide significant protection for women by preventing unintended pregnancies, which often end in unsafe abortions. These in turn can threaten the life of the mother or lead to infertility and related social stigma, such as the threat of abandonment. Contraceptives also allow women to delay mother hood, space births, and protect themselves from sexually transmitted disease including HIV/AIDS (11).

Even if, reproductive health services including family planning services are available the current contraceptive prevalence rate (CPR) at regional and national level is found to be very low which is 12.3% and 6.3% respectively that is far bellow the nation goal of the Ethiopian Population Policy to be attend by the year 2015(44.0%). In addition modern contraceptive method choices are lacking in health infrastructure. Health professional biases were also barriers to utilization of modern contraceptives. Additionally, the regional TFR is found to be about five children per women, which is inline of the regional low contraceptive prevalence. The population of the region is growing at an annual rate of 2.6% which is also high as compared to the other merging

regions in the country as it is 2.2% for Afar and 2.4% for BEN/Gumz. Community based study that compare and try to identify determinants of utilization of available reproductive health services among segments of the population of the region to approach the problem accordingly were lacking or else very few. Moreover, studies have shown that reproductive rights of women were mainly affected by male dominance and bride wealth among the indigenous women in the region by which men effectively purchase, and own the reproductive rights of their wives. Such male dominance was evident in the degree to which women failed to utilize their knowledge of reproductive health services. There fore, this study was meant to look in to the difference in utilization of modern contraceptive methods and factors affecting its use among such culturally and socially influenced indigenous women and non-indigenous women that can be utilized by policy makers, health managers and other non-governmental organization to bridge the gap between service availability and utilization.

2. Literature Review

The proportion of young population varies among developed and developing countries. The population of less than 15 years accounts for less than 25 percent of the population of developed countries while they are about 40 percent of the population of developing countries with even higher proportions in some of them. Although it is not the case in every country, one of the most serious problems that society in general is facing today is the problem of over population and its consequences such as environmental degradation, stress over social services, depilation of scare resources and so on. This is especially true for people of developing countries where the rate of economic growth is usually lower than that of population growth (12).

For women of reproductive age group, pregnancy and childbirth are the leading causes of deaths, disease and disabilities, accounting for at least 18 percent of the global burden of disease in this age group. A survey conducted in four developing countries showed that 58-80 percent of pregnant women developed acute health problems and 8-29 percent went on to develop chronic health problems as a result of pregnancy, including obstetric fistulae. Due to teenager's physical immaturity, which increases the risk of obstructed labor leads to maternal mortality and devastating complications. Surveys conducted in Africa and Asia indicated that adolescents are more likely to suffer from obstetric fistulae than older women. It was indicated that in Nigeria, 80% of fistula cases were women aged 15-19 years (13).

Socio-demographic characteristics

A range of barriers limits women's access to health care, including distance, cost of services, multiple demand on women's time, poverty and lack of decision making capacity in household and reproductive matters. The findings of surveys conducted among twelve developing countries, most in Africa have showed that Gender has a powerful influence on reproductive decision-making and behavior. The findings of this survey also revealed that in many of the developing countries men are the primary decision makers about sexual activity, fertility and contraceptive use (14,15). Ideally couples decisions about family size and contraceptive use should be made jointly, with equal considerations given to the concerns of the women and the men. The findings of the survey conducted in Pakistan showed that decision-making about reproductive matters reside primarily with the husbands (16).

A national impact survey on obstacles to contraceptive use in Pakistan revealed that a large proportion of reproductive age group expressed a desire to terminate child bearing but were not using any method of contraception. The primary reason claimed by the respondents for contraceptive non-use among apparently motivated women are the perception that family planning is unacceptable by religious groups, fear of contraceptive side effects on health, opposition from husbands and the limited availability of family planning services were some of the reasons claimed by the respondents (17).

A prospective cohort study done in the Rakai district of Uganda for 30 months showed that women's contraceptive use increased significantly overtime with in each age group from 15-39 years. In this study it was found that contraceptive prevalence is highest among the better-educated women's. The prevalence of contraceptive use among women varied by desired family size, previous unintended pregnancy and experience of induced abortion. In the survey it was indicated that there is no difference in contraceptive use by religious affiliation. Among respondents involved in the survey the younger women (15-19) years claimed to have small family size (a mean of 3.9 children) than older women (18).

Surveys conducted in Egypt, Guatemala, India and Philippines indicated that women's perception that their husbands oppose family planning was a dominant factor discouraging contraceptive practice in a wide variety of settings. Religious concerns and fear of side effects on health are also mentioned. Contraceptive use rate was higher among women with more living sons, educated and women who reported greater decision-making power in household matters (19).

According to the 1998 world health day report there were several reasons mentioned for contraceptive non-use of which personnel or religious beliefs, inadequate knowledge about the risks of pregnancy and women's limited decision-making ability with regard to sexual relations and contraceptive use were the major ones (20).

Many couples an estimated 120-150 million mainly in developing countries do not use contraceptives despite an apparent need for some form of family planning and an apparent lack of obstacles to acquire it. A study done among 20,000 women in sixteen developing countries showed that over a third of users has abandoned whatever, method they had been using with in twelve months of starting it. The reason found for abundance are desire to have children, inconvenience of use, husbands objections, expense, difficulty in obtaining the contraceptive and failure of the method were frequently mentioned (21).

The poor quality of services, including poor treatment by health providers, also makes some women reluctant to use services. A survey conducted in Morocco to show the impact of family planning service provision on contraceptive use dynamics indicated that the number of methods available in community significantly increase postpartum contraceptive use (22).

Qualitative studies in Kenya and Zambia have shown that women are afraid to ask their husbands permission to use a family planning method. If they practice family planning without their husbands consent, they worry about being discovered. In Nigeria, qualitative study done to assess women's perception to their husband's attitude towards MCM use showed that women fear that they may be forced to leave their husbands homes if they caught. Some worry that a contraceptives side effect will expose their secret use to their husbands. In Uganda disagreement between husbands

and wives carries a high social cost including violence, divorce or husbands “ bringing in” another wife (23).

Fertility is the most important component of population dynamics and plays a major role in changing the size and structure of the population of a given area. The total fertility rate in Ethiopia for the five years preceding the 2000 Ethiopian DHS survey was 5.9 children per women. The total fertility in rural area was 6.4 and is almost twice as high as the total fertility in urban areas (3.3 children). The survey also showed that current use of contraceptive is found to be positively influenced by women’s marital status, education and the number of living children that they own. Of the respondents involved in the survey less than, one in four women stated that contraceptive use was mainly the decision of the women alone, two-third of the respondents stated that decision is made jointly with their husband (24).

In North and South Gonder survey conducted to assess the perception of women of reproductive age group showed that 17(7.8 percent) of the females wanted the decision to use contraceptive to be made by males. In this survey contraceptive decision was found to be associated with Gender (25).

Qualitative study done in one of the remote district SNNPRS in Ethiopia also found out that because of male dominance in the culture, women were forced to bear large number of children. This is reported to be a major obstacle in the fertility regulation decisions by women (26).

A community based study done in rural areas of Jimma showed that age and educational status of the women were found to have impact on contraceptive use. The most common contraceptive to be used was pills (65 percent), injectables (4.4 percent), and rhythm (23.3 percent). The reasons given for contraceptive non-use was not knowing how to use, need for more children, unavailability of contraception, fear of side effects, believed to go with nutritious food are some of the reasons mentioned (27).

A study done by Tesfaye also claimed that knowledge and practice of family planning to be determined by educational status of women. Studies about socio-economic and demographic factors that determine contraceptive non-use in Ethiopia concluded that the major constraints, among others, are religious prohibitions. A survey done by Antenane has also shown poor method mix to be a factor for non-use of contraceptives (27).

The result of survey done in Gonder town and the surrounding peasant association revealed that the overall modern contraceptives prevalence rate was 28.6 percent for the periurban and, 35.5 percent for the urban area. The most important reason given by 54.3 percent of the female respondents for not using modern contraceptives was the need to have children. The same factor was mentioned by 34.4 percent of the female ever users reported to have discontinued taking contraceptives for different reasons, the main one being the need to have children. About 19 percent of the female respondents reported that sexual abstinence was the reason for not using modern contraceptives (28).

The findings of the rapid assessment on knowledge, attitude and practices related to reproductive health in Ethiopia indicated that there are many barriers for the ordinary residents to use the available reproductive health services. The most common ones are related to problems of accessibility, awareness, attitudes, acceptability, poor quality of services and health seeking behavior related to cultural and religious practices. Majority of the urban residents involved in the survey have negative attitudes towards reproductive health service providers and the services provided (29).

A community based survey done to evaluate Community Based Distribution (CBD) of family planning methods around Jimma showed that contraceptive use was found to be 16 percent of the potential users. The most common method being used was oral pills (94.4 percent). Like other surveys done in our country it was also observed that desire for more children was frequently mentioned as the reason for not practicing contraception during the survey and lack of knowledge about family planning was also mentioned (30).

The report of a survey done in head quarter of the domestic distribution corporation employees in Addis Ababa indicated that contraceptive prevalence rate (CPR) to be 39 percent. Oral pills were found to be the second method of choice used by 32.5 percent of the females. The respondent's main source of information was found to be radio (35 percent) followed by relatives (20 percent). The main reasons for not using contraceptives were rumors of contraceptives as being the causes of illnesses such as cancer, liver disease, reduced sexual desire and disagreement of spouse, other

problems mentioned were unavailability, high cost, and socio-cultural incompatibility with the use of contraceptives were described by the respondent women (31).

In the absence of correct information, it is not surprising to observe fears and misconceptions about the methods, which may prevent people from using them or from using them effectively. Subsequently, if contraceptive methods are not explained sufficiently and side effects appreciated, users are much more likely to discontinue using them (32).

The findings of assessment done on contraceptive utilization pattern of Kola Diba health center indicated that the reason for non-use of contraceptive was the desire to have baby. The second most common reason for never using contraception was ignorance of contraceptive method followed by the beliefs, that pregnancy was unlikely to happen was also mentioned. About 10 percent of the respondents involved in the survey claimed to have difficulty in obtaining contraceptives. In the survey seasonality of the number of new acceptors and discontinuers suggested that there is a need for timing advocacy activities in the communities and supplying more cycles of pills to avert discontinuation or interruption due to seasonal factors. The reasons mentioned for early discontinuation of the adopters were low level of sympathy and counseling given to clients at reception. The survey also indicated that requiring a client to come to the health center every month to collect pills could be a source of a programme failure (33).

The assessment done on reproductive health needs of women among the eleven regional state of Ethiopia reported that the public sector was constrained by shortage of human resources, accessibility, supply shortages, cost concerns, inadequately trained service personnel, as well as lack of information and client fears and concerns were mentioned to be barriers for family planning service use. The use of modern contraception is also constrained by the need to have more children, which related to the sex of the children and the age at which she first becomes pregnant. In some parts of our country bride wealth is mentioned to be a factor for not using permanent methods of contraception. This is for the fact that a woman has to continue bearing children particularly producing girl children, as they are the source of income for the family. The low demand for the short-term method, on the other hand was attributed to other cultural factors, particularly the tradition of postpartum sexual abstinence. Based on the findings of this report women's reproductive decision is centered to the political, socio-economic and cultural dominance of men (34).

Reproductive characteristics

About 133 million births occur in the world annually of this total one in four (33 million) is estimated to be unintended-either mistimed or never wanted. In addition an estimated 46 million induced abortion are performed, bringing the total number of unintended pregnancies to about 79 million per year. Fifty six percent of pregnancies in developed world are unintended as compared to 42 percent in developing world. The proportion of pregnancies ended in abortion is also higher in developed than developing world (41 percent versus 23 percent)(35).

In Namibia surveys have indicated that as many as 28 percent of pregnancies are unwanted by the mothers. 46 percent of current pregnancies in Ghana are either mistimed or unwanted. The 1993 Philippines DHS reported that only 56 percent of all recent births were intended (36,37).

A survey conducted to assess the prevalence and determinants of unwanted pregnancy and induced abortion in Nigeria found out that of the women surveyed 291 (20 percent) reported having experienced an unwanted pregnancy. Of the women who experienced unwanted pregnancies 58 percent resolved their unwanted pregnancy through termination and 9 percent reported that they had attempted termination but failed (38).

The custom of prolonged postpartum sexual abstinence may have been a feature of many societies at one time. Studies done in West Africa showed that postpartum abstinence is most commonly justified by their belief that sperm will poison the mothers breast milk and there by harm the nursing infant. Its contribution to maternal health may also be recognized, but its explicit deployment as a birth-spacing mechanism is thought to be uncommon. The variation in the length of abstinence is also considered as a consequence of the strength of the marital bond. Postpartum sexual abstinence provides potentially powerful degree of protection against infection from HIV and other sexually transmitted disease. The benefit of postpartum abstinence may be diluted or overridden if it is prolonged and leads to an increased probability that husbands will have unprotected sex with extramarital partners and thus return to the conjugal bed with a greater chance of being infected. The analysis of the 1996 Benin DHS report

found out that husbands who were observing postnatal abstinence were 50-60 percent more likely than other husbands to have had at least one extra marital partner. The median duration of abstinence was shorter among urban (9.3 months) and educated women (9.3 months) than among rural (12.2 months) or uneducated women (14.7 months). The analysis also showed that more than one third (37 percents) of currently married women aged 15-49 years were in Polygamous unions. A survey conducted in Coted'Ivoire revealed that monogamous men are more likely to seek extra marital partners when they are observing the customary period of postnatal abstention from marital sex than at other times (39).

In Bensa (one of the ethnic group in SNNPRS of Ethiopia), tradition, postpartum sexual abstinence and prolonged breast-feeding are the main methods of fertility regulation. Couples are not allowed to sleep together before the preceding child starts walking or for at least 4-6 months postpartum. The tradition also allows men to have more than one wife. Thus during the period of postpartum sexual abstinence with the breast-feeding wife the male spends more time with his other wife/wives. This is believed to have contributed to the relatively few number of children born per women (26,39).

Medical barriers

Recent studies have given attention on medical barriers that women face when seeking family planning services. Medical barriers are service provider's biases and practices that have no scientific justification and that deny clients their rights to obtain contraceptive services. Among the many medical restrictions arbitrary ages parity limits,

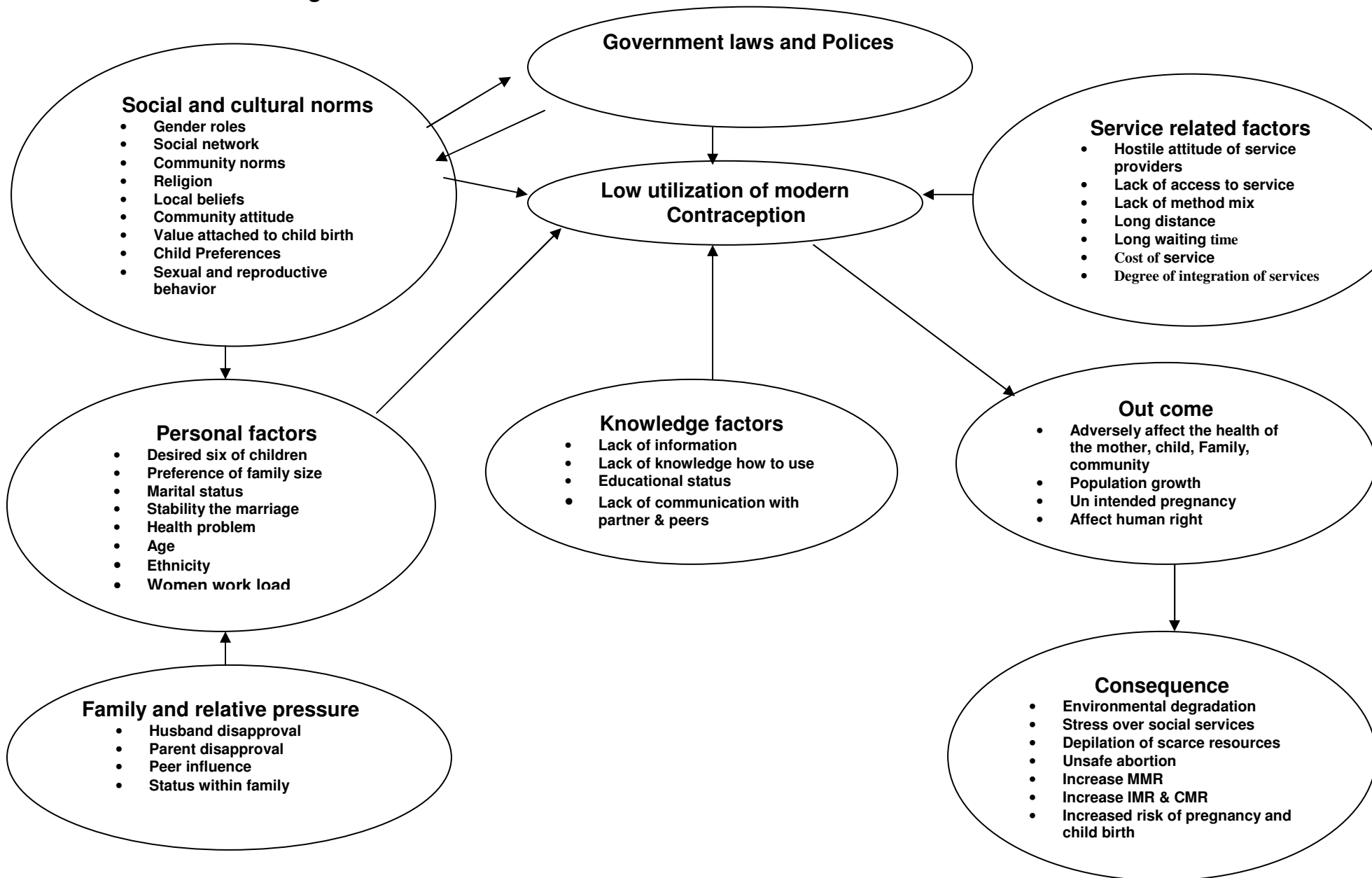
marriage, spousal approval requirements, restriction on the number of pill packets offered to oral contraceptive clients and above all the requirements that women seeking hormonal methods and IUDS present themselves for family planning services while they are menstruating was the most common but little appreciated barrier to use the services. According to this regulations of service providers non-menstruating clients are told to return at the onset of menses and often receive neither barrier methods nor counseling. Some women may be so discouraged by such encounters that they abandon their plans to use contraceptives. Others may become pregnant while waiting their menses before returning to the clinic. A survey conducted in Ghana at 46 service delivery points showed that out of 97 providers interviewed, 74 indicated that non menstruating women were sent home and told to return at their menses. Another survey conducted in the same country in 1997 among 204 providers, 46 percent said that they require clients to be menstruating at the time of oral contraceptive prescription. Surveys conducted in Kenya also showed that women who were presented six-weeks postpartum who are amenorrhic are usually denied services in the absence of a negative pregnancy test (41).

Health care attendance

A study conducted to found out the relation ship between prenatal and postnatal care and subsequent modern contraceptive use in three countries (Bolivia, Egypt and Thailand) showed that prior use of prenatal care has a strong influence on subsequent use of modern contraception (42). Another study conducted in Kenya to show the linkages between incomplete abortion treatment and family planning service utilization

has shown that among the women who interviewed for the survey 24 percent of women has experienced previous pregnancy losses and the study has shown the link between post-abortion care services to other reproductive health care services (43).

Fig. 1 SHOWS CONCEPTUAL FRAMEWORK OF SITUATIONAL ANALYSIS



RATIONALE OF THE STUDY

- The national population policy of our country has set an objective to reduce the current fertility rate of 7.7 children per women to 4.0 children by the year 2015 and increase the contraceptive prevalence from the current level (4.0%) to 44.0% by the same year. To attain the already set objective of the national policy of this country it is sound able to assess factors affecting modern contraceptive utilization among segments of population of the country in order to set strategies for policy makers and other responsible bodies.
- Tradition like prolonged postpartum sexual abstinence among societies were found to significantly affect utilization of modern contraceptives and the health benefit of postpartum sexual abstinence for the women and children might be diluted if it has been prolonged. So the findings of this study provide important information for program managers for future substitution of abstinence by modern contraceptive methods that potentially reduce future fertility directly by increasing birth interval as well as delaying first childbirth and reducing the chance of being engaged in polygamous marriage

3. Objective of the Study

3.1 General Objective

- To determine the prevalence of contraceptive use rate and assess factors affecting its utilization among indigenous and non-indigenous women of reproductive age group (15-49 years) in urban area of Gambella regional state.

3.2 Specific Objectives

- To determine and compare the prevalence of contraceptive use rate among indigenous and non-indigenous women.
- To determine some of the factors influencing the utilization of family planning service among study groups.
- To assess fertility difference among the indigenous and non-indigenous women
- To assess the difference in birth interval among both study groups.

4. SUBJECTS & METHODS

4.1 STUDY AREA

The study was carried out in urban area of Gambella Regional State. The region has about 222,605 populations. Administratively the region has two zones and nine woredas. Gambella town is the capital of the region, which is 777 km from Addis Ababa. The region is one of the lowland areas in the country with an annual temperature estimated average minimum of 18°C and maximum of 38°C that can reach occasionally 45°C and an annual rainfall of 1400mm to 2000mm. The region has one hospital, five health centers and 38 health stations including those that are run by Mekanyesus, which were distributed unevenly through out the region. According to the Ethiopian health and health related indicator published in 2001 G.C by MOH the geographic health coverage of the region is about 87%(44). In the region there are 6 kindergartens, 129 elementary, 6 high schools, one agricultural training collage and one Teachers Training and Health Sciences College. Agriculture including fishing is the main source of income. The communication status in the region is found to be poor. It is found that a number of communities are totally cut off due to the limited transportation and communication facilities.

4.2 STUDY DESIGN

Cross-sectional comparative study was carried out using both quantitative and qualitative methods to maximize the quality of data and identify possible sources of information.

4.3 STUDY POPULATION

All women of reproductive age group (15-49 years) residing in Gambella woreda were the source population. The study populations were all women of reproductive age group (15-49 years) in Gambella Town.

Inclusion criteria

Inclusion

- Those women who were in the reproductive age group (15-49 years).
- Those women who were residing in the study sites for more than six months and during the data collection.

4.4 SAMPLE SIZE

The required sample size for the study was determined using two-population proportion formula considering the following assumption.

$$n_1 = \left[\frac{Z_{\alpha/2} \sqrt{(1+1/r) p (1-p)} + Z_{\beta} \sqrt{p_1 (1-p_1) + \frac{p_2 (1-p_2)}{r}}}{(p_2 - p_1)^2} \right]^2$$

Where n_1 = Indigenous study population

n_2 = Non- indigenous study population

P_1 = prevalence of family planning among indigenous women = 0.04

P_2 = prevalence of family planning among non- indigenous women = 0.123

$r = n_2 / n_1 = 1:1$

$Z_{\alpha/2}$ = Value of the standard normal distribution curve corresponding to level of significance alpha 0.05 = 1.96

Power = Z_{β} = Value of the standard normal distribution curve corresponding to 80% = 0.842

Considering design effect of two and adding 20% non-response rate

P (population proportion) = $\frac{P_1 + rP_2}{1+r} = \frac{0.04 + 1 \times 0.123}{1+1} = 0.0815$

$n = 386 \times 2 = 772 \times 20\%$ non-response rate

$N = 936 (n_1 = 468 \quad n_2 = 468)$

4.5 SAMPLING PROCEDURE

The study was carried out in the urban area of Gambella woreda of Gambella Regional State. Gambella town of Gambella woreda was selected for the reason that it has comparable population of both study groups. The other small towns in the region don't have comparable population for the survey. All the kebeles in the town were included in the survey.

Census was carried out before the actual survey to stratify the study population into indigenous and non-indigenous. Women of reproductive age group residing in each household were registered by their place of birth irrespective of their ethnicity during the census. Each household was given consecutive corresponding house number and the total family size was registered. Study populations were subdivided by their geographic place of residence for the purpose of the study using big rivers and major roads as a point of reference. Non-indigenous study population was subdivided in to three small zones and indigenous study population in to two zones. The determined sample size was distributed over each zone proportional to their population size.

Multistage sampling technique was used to reach at household level and systematic sampling technique was followed to identify study household. The first household interviewed was identified using lottery method. In each household one women of reproductive age group was interviewed. The interview was held separately to maintain confidentiality of the respondents. In households were more than one women of reproductive age group resides one was selected at random using lottery method. Each study household was predetermined by their corresponding house number given during

the census to avoid bias. If no women of reproductive age group in the selected household the next nearest household was included in the survey. If the selected household was closed but there was/were women of reproductive age group the interviewer re-visited the household three times and if failed to get that household was excluded from the survey.

Fig 1 schematic presentation of the sampling technique

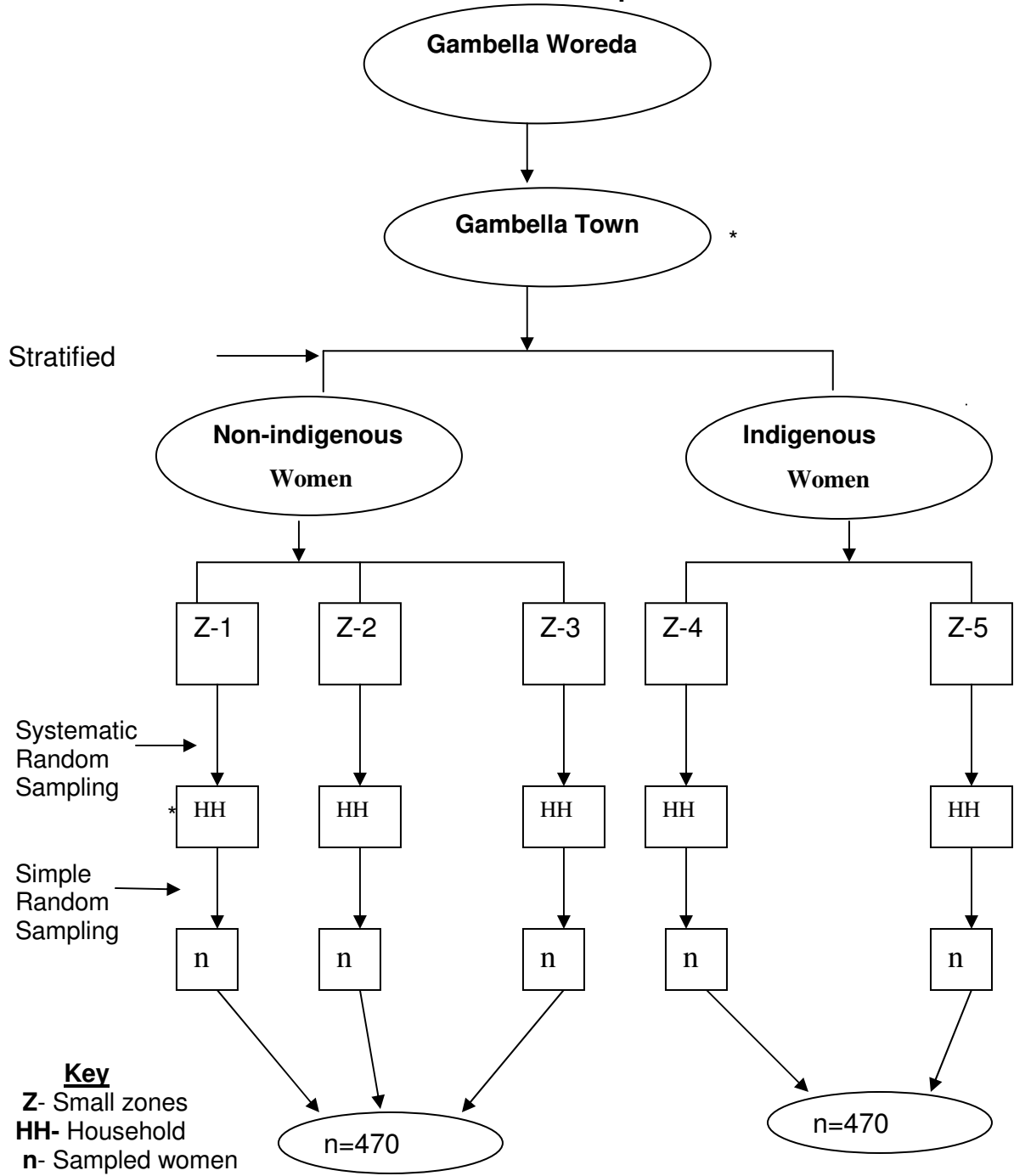
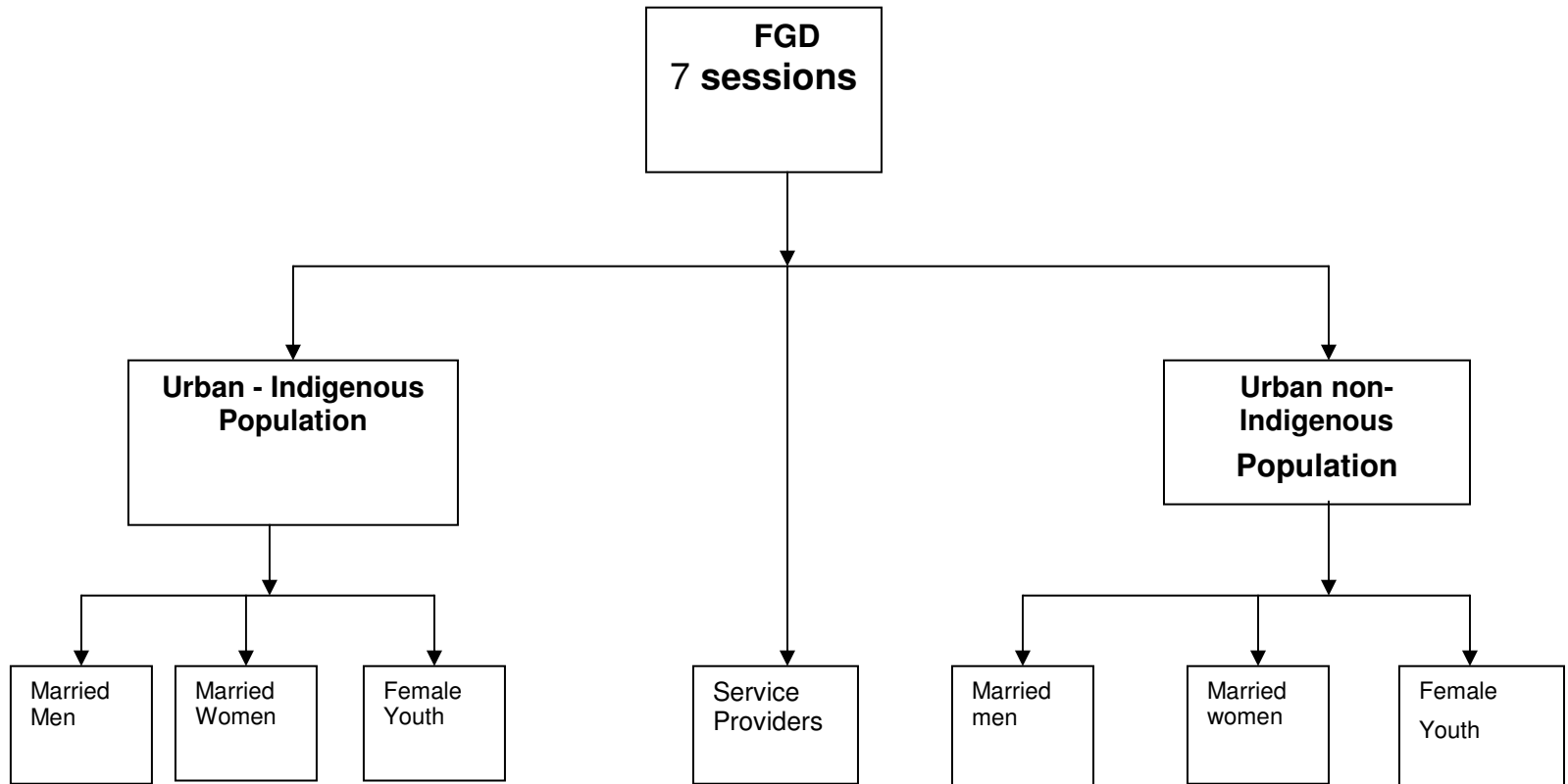


Fig -2 Schematic Presentation of the focus group discussion



4.6 DATA COLLECTION

Sixteen data collectors (who speak both local language and Amharic) were recruited. All the interviewers were females who have completed grade 12 and not yet employed were involved in the data collection and four supervisors who Nurses by profession were selected from Gambella Hospital and Regional Health Bureau whose responsibility was checking whether the data collection instrument was correctly completed or not and supervising the data collectors and reporting problems encountered immediately to the principal investigator.

The enumerators and supervisors were given training for five days on procedures, techniques and ways of expressing the questionnaires to collect the necessary information. The training included pretesting of the instrument.

The data were collected using structured standardized questionnaire going house-to-house. The questionnaire was translated from English to Amharic then back to English to check for its consistency. The study subjects were interviewed about their socio demographic variables, utilization of family planning service and factors affecting its utilization. The questionnaire was pre-tested prior to the actual data collection on 36 respondents that were not included in the main survey. Possible re-structuring and adjustment were made.

Seven sessions of focus group discussions were undertaken among married men, married women, female youth, and service providers. Each focus group discussion

consists of 8-12 members .In selecting each member of the focus group discussion participants age, educational status, occupation and residential backgrounds were considered. Individuals of the same age group, educational status occupational and those who reside in the study area for more than six months were involved in the same group. The members of each FGD were selected by the supervising health professional and moderated by principal investigator with the assistance of one trained recorder. Semi-structured questionnaire, that was open ended, was used to initiate the discussions. Note was taken both through writing and tape recorder in order to backup the written note. The purpose of the FGD was to maximize the quality of data and to look for different and multiple sources of information in order to complement the finding of the quantitative survey.

4.6.1 Data quality assurance

To assure the quality of the data properly designed data collection instrument was developed. Training was given for data collectors and supervisors on the instrument used. Every day the collected data were reviewed and checked for completeness and consistency by supervisors and principal investigator. Problems encountered were reported to supervisors and principal investigator for immediate action. Discussions were made with the interviewers at the end of the day and in the morning to minimize errors committed during interview and to take corrective actions timely. Repeated visit was made when study households were found to be closed or when respondents were unavailable. The non-response rate was very small and negligible for this study.

4.7 STUDY VARIABLES

Dependent Variable

Current utilization of modern contraception

Independent Variables

- Socio demographic variables
 - Age
 - Marital Status
 - Occupation
 - Education
 - Religion
 - Ethnicity
- Reproductive History
 - Intended number of children
 - No of alive children
 - Number of pregnancy
 - Length of abstinence
 - Birth in the last 12 months
 - Length of breast feeding
- Knowledge of modern contraception
- Communication of FP among partner
- Desired sex of children

4.8 DATA ENTRY AND ANALYSIS

The collected data from each respondent and each study group was grouped manually and frequency distribution and tables were prepared for each of the variables. Data editing was carried out regularly through the course of the survey. EPI- INFO version 6 and SPSS version 10 computer software packages were used for data analysis. Percentages and rates were calculated and the results were presented in tables. Odds ratio, chi-square, 95%CI and P-value were used to assess the strength of association and statistical significance. Binary Logistic regression analysis was used to see the adjusted effect of each independent variable on the dependent variable.

ETHICAL CONSIDERATION

Ethical clearance was obtained from the Ethical Committee of Medical Faculty of Addis Ababa University (AAU). Informed consent was also obtained from each study subject prior to interview and the purpose of the study was explained to the respondents. Confidentiality of the information obtained was assured and privacy of the respondents was maintained. During the interview each study subject was informed on methods of child spacing and its health benefit to the mother and child. The use of modern contraception was also advocated.

OPERATIONAL DEFINITION

- **Family Planning-** refers to the use of modern methods of fertility control that will help individuals (men and women) or couples to have the number of children they want when they want them in order to assure the well-being of the children and the parents.
- **Unwanted Pregnancy-** Pregnancy that comes beyond the intention or need of the women for different reasons.
- **Child Spacing-** refers to the minimum interval between two successive pregnancies, which is about two years.
- **Non- indigenous women** – are women of reproductive age group (15-49 years) who are not native i.e. women who are not born in the region but those who migrate to the region for search of job or for other reasons and currently living in the region.
- **Indigenous women** -are women of reproductive age group (15-49 years) who are native i.e. women who born in the region irrespective of their ethnicity.
- **Modern methods-** refers to methods of child spacing or birth control other than natural methods (abstinence, basal body temperature, cervical mucosa, and symptom-thermal and withdrawal methods).
- **Birth control-** is the use of contraceptive method not to have any more children after having what the couples need.
- **TFR-** is the measure of children a women would have over her life time if she were to follow current age-specific fertility rates
- **Fertility transition-** is a substantial irreversible decline in human fertility

- **Contraceptive method mix-** refers to the variety of contraceptive methods available to clients through a family planning programme
- **Reproductive revolution-** a revolution in the intimate behavior and relations of men and women that has far-reaching consequences
- **Sex-** refers to the biological and physiological differences between men and women
- **Gender-**refers to the different roles that men and women play in society and also the rights and responsibilities that come with these roles
- **Current users-** refers to women who were found using modern contraceptive method at the time of the survey.
- **Non users-** refers to women who were found not using modern contraceptive method at the time of the survey.
- **Ever user-**these are women who were used modern contraceptive methods at some time in their life but not during the survey.
- **Never user-**these are women of reproductive age group who have never used modern contraceptive methods in their past life for one or other reasons
- **Natural methods** –are methods, which are not originated by human technology but used to control human fertility including calander, cervical mucosa, basal body temperature, abstinence and withdrawal methods.

5. Results

5.1 General Description

I. Quantitative study

A total of 960 women of reproductive age group were interviewed and response was obtained from 940 women from whom data were collected making a response rate of 97.9% of the participants. Some of the non-respondents were illiterate by their educational background and are not willing to respond to questions related to their family size and others didn't claim any reason for their objection other wise they were not willing to participate.

Socio demographic characteristics

The socio demographic characteristics of study subjects were summarized in Table-1. The Nuwer ethnic group comprises the large proportion of study subjects (24.7%) followed by Aqunak and Oromo ethnicities accounting for 24.2% and 22.2% respectively. The mean age was found to be 24.32 ± 7.29 for indigenous and 25.73 ± 6.50 for non-indigenous study women.

Majority of the women 87.7% were protestant for indigenous group while 60.2 percents of the Non-indigenous women where orthodox by religion. Muslims, catholic and other religions constitute less than 15% of both study groups. Among currently married women of study groups more than half (54.1%) were indigenous and 45.9% were non-indigenous. Unmarried women constitute 9.8% and 16.0% for both indigenous and non-indigenous respectively. Widowed, Divorced and Separated study subjects constitute less than 15% of each study group.

In both groups more than half of the study subjects 57.7% and 55.5% were housewife by occupation. Employed women accounts for 12.8% and 14.7% of study subjects of each group while students, Drink sellers and others constitute less than 30% of the proportion of occupational categories.

The assessment of educational status of study women involved in the survey showed that 38.7% indigenous and 26.4% of non-indigenous study women were illiterate by their educational status. About 41.3% of indigenous and 32.6 % of non-indigenous attained primary education, 18.7% of indigenous and 35.9 % of the non-indigenous women have attended their secondary school (grade 7-12) while only 1.3% of the indigenous and 5.1% of the non-indigenous women have attended beyond high school (Table 1).

Table -1 Socio-demographic characteristics of respondents by category, Gambella Town, Ethiopia, April.2003.

Characteristics	Non-indigenous women No (%) N= 470	Indigenous women No (%) N= 470	Total No (%) N= 940
Age			
15-19	74(33.2)	149 (66.8)	223 (23.7)
20-24	139(55.6)	111 (44.4)	250 (26.6)
25-29	131 (56.7)	100 (43.3)	231 (24.6)
30-34	67 (57.8)	49 (42.2)	116 (12.3)
35+	59(49.2)	61(50.8)	120(11.7)
Marital Status			
Married	337 (45.9)	398 (54.1)	735 (78.2)
Unmarried	75 (62.0)	46 (38.0)	121 (12.9)
Divorced	31 (83.8)	6 (16.2)	37 (3.9)
Widowed	17 (65.4)	9 (34.6)	26 (2.8)
Separated	10 (47.6)	11(52.4)	21 (2.2)
Religion			
Orthodox	283 (95.0)	15 (5.0)	298 (31.7)
Protestant	118 (22.3)	412 (77.7)	530 (56.4)
Catholic	64 (98.5)	1 (1.5)	65 (6.9)
Others	5(10.6)	42(89.4)	47(5.0)
Occupation			
Employed	69 (53.5)	60 (46.5)	129 (13.7)
House wife	261 (49.1)	271 (50.9)	532 (56.6)
Student	57 (30.8)	128 (69.2)	185 (19.7)
Drink seller	27 (81.8)	6 (18.2)	33 (3.5)
Others	56(91.8)	5(8.2)	61(6.5)
Educational Status			
Illiterate	124(40.5)	182(59.5)	306(32.6)
1-6	153 (44.1)	194 (55.9)	347 (36.9)
7-12	169 (65.8)	88 (34.2)	257 (27.3)
12+	24 (80.0)	6 (20.0)	30 (3.2)
Ethnicity			
Amhara	162 (98.2)	3 (0.6)	165 (17.6)
Oromo	203 (97.1)	6 (2.9)	209 (22.2)
Agnuak	0(0.0)	227 (100.0)	227 (24.2)
Nuwer	0(0.0)	232 (100.0)	232 (24.7)
Others	105(98.1)	2(1.9)	107(11.4)

It was indicated that the proportion of current modern contraceptive utilization among both study women has shown major variation. In this study current modern contraceptive use was found to be 11.5% for indigenous women and 36.4% for non-indigenous. On top of the coverage difference the univariate analysis has shown that non-indigenous women were about 5 times more likely to use modern contraception than indigenous women. This difference was statistically significant [OR (95% CI)= 4.41(3.09,6.28) (Table 2)].

Comparison of the socio demographic characteristics of the study subject versus current use and non-use of modern contraception was summarized in Table-2. In this table it was clearly stated that as the age of the women increases the likelihood of using modern contraception increases for each of the age group from 15-34 years [OR (95%CI)=1.61(1.54,4.43), 3.57(2.12,6.03), and 4.46(2.47,8.09) for each of the age group. This difference was found to be statistically significant. Women who were younger than 35 years were found to utilize modern contraceptive than their elders [OR (95%CI)=0.75(0.37,1.50)].

The findings of the univariate analysis have shown that there was significant difference among the different marital status with regard to modern contraceptive utilization. Being unmarried, Divorced and Widowed were found to have less likely influence utilization of contraception as compared to married women [OR (95%CI)=0.28 (0.15,0.54), 0.10(0.03,0.25), 0.10(0.01,0.72) respectively. This finding has statistical significance. For separated women this finding was not statistically significant [OR (95%CI)=0.27(0.04,1.22)].

Religious wise being protestant Christian and follower of other religions were found to have less likely influence modern contraceptive utilization as compared to orthodox Christians. This was statistically significant [OR (95% CI)= 0.47(0.33, 0.66)], 0.12(0.01,0.88)] for protestant Christian and followers of other religion.

The result of the analysis of occupation also showed that being Housewife, student, Drink Seller, merchant and others were found to have less likely influence modern contraceptive utilization as compared to government employed women since the odds of these socio demographic variables were below one (Table 2).

Educational status of the respondent women was analyzed by their use of modern contraception and shown to have statistical significance. The analysis have shown that as the educational status increase from primary education to grade 12 plus the likelihood of utilizing modern contraception increases [OR (95%CI)=2.33(1.51,3.60)], 3.27(2.09,5.11)] and 6.85(2.90,16.21)] respectively. This is statistically significant.

Ethnically the result of the survey showed that being the member of Oromo, Agnuak, Nuwer and the other ethnicity were found to have less likely influence modern contraceptive utilization [OR (95%CI)=0.93(0.59,1.44)], 0.45(0.28,0.71)], 0.03(0.01,0.08)] and 0.68(0.39,1.17)] as compared to Amhara ethnicity (Table 2).

Socio demographic characteristics of each study group versus current use of modern contraception was summarized in table-3. The summary finding has showed that age group from 20-34 years, married, employed women and women who

attended more than grade twelve were found to use modern contraceptives currently than the others for both indigenous and non-indigenous study women (Table-3).

Table-2 Comparison of Socio- Demographic characteristics of current users & non- users of modern contraception, Gambella Town, Ethiopia, April. 2003.

Variables	Current-Users (N=225)	Non-Users (N=715)	Crude OR (95%CI)	Adjusted OR (95%CI)
Indigenous	54(11.5)	416(88.5)	1.00*	1.00*
Non- Indigenous	171(36.4)	299(63.6)	4.41(3.09,6.28)	1.45(0.26,1.89)
Age				
15-19	26(11.7)	197(88.3)	1.00*	1.00*
20-24	64(25.6)	186(74.4)	2.61(1.54,4.43)	2.67(1.04,6.83)
25-29	74(32.0)	157(68.0)	3.57(2.12,6.03)	2.50(0.92,6.83)
30-34	43(37.1)	73(62.9)	4.46(2.47,8.09)	2.27(0.76,6.75)
35+	18(15.0)	102(85.0)	0.75(0.37,1.50)	4.13(1.28,13.25)
Marital Status				
Married	205(27.9)	530(72.1)	1.00*	1.00*
Unmarried	12(9.9)	109(90.1)	0.28(0.15,0.54)	0.18(0.31,1.07)
Divorced	5(13.5)	32(86.5)	0.10(0.03,0.25)	0.31(0.04,2.34)
Widowed	1(3.8)	25(96.2)	0.10(0.01,0.72)	0.98(0.12,7.99)
Separated	2(9.5)	19(90.5)	0.27(0.04,1.22)	6.18(0.39,99.21)
Religion				
Orthodox	102(34.2)	196(65.8)	1.00*	1.00*
Protestant	90(17.0)	440(83.0)	0.47(0.33,0.66)	0.82(0.36,1.87)
Catholic	25(38.5)	40(61.5)	1.23(0.66,2.16)	0.34(0.06,1.98)
Others	8(17.0)	39(83.0)	0.12(0.01,0.88)	1.38(0.08,24.16)
Occupation				
Employed	55(42.6)	74(57.4)	1.00*	1.00*
House wife	123(23.1)	409(76.8)	0.40(0.27,0.62)	0.36(0.74,1.81)
Student	27(14.6)	158(85.4)	0.23(0.13,0.41)	0.58(0.13,2.72)
Drink seller	8(24.2)	25(75.8)	0.43(0.16,1.10)	1.39(0.23,8.33)
Others	12(19.7)	49(80.3)	0.33(0.15,0.71)	0.25(0.04,1.77)
Educational status				
Illiterate				
1-6	39(12.7)	267(87.3)	1.00*	1.00*
7-12	88(25.4)	259(74.6)	2.33(1.51,3.60)	1.26(0.34,4.69)
12+	83(32.3)	174(67.7)	3.27(2.09,5.11)	0.98(0.13,7.33)
	15(50.0)	15(50.0)	6.85(2.90,16.21)	1.24(0.38,4.04)
Ethnicity				
Amahara	63(38.2)	102(61.8)	1.00*	1.00*
Oromo	76(36.4)	133(63.6)	0.93(0.59,1.44)	0.78(0.36,1.71)
Agnuak	49(21.6)	178(78.4)	0.45(0.28,0.71)	0.99(0.47,2.08)
Nuwer	4(1.7)	228(98.3)	0.03(0.01,0.08)	1.19(0.05,28.30)
Others	33(29.5)	79(70.5)	0.68(0.39,1.17)	0.01(0.00,12.09)

**Note* Denotes reference category
Adjusted for socio-demographic variables**

Table -3 Comparison of Socio - Demographic characteristics of current users and non -users by category, Gambella town, Ethiopia, April. 2003.

Variables	Indigenous women			Non-Indigenous women		
	Current-users No (%)	Non-users No (%)	OR (95% CI)	Current-Users No (%)	Non-users No (%)	OR (95%CI)
Age						
15-19	11 (7.4)	138 (92.6)	1.00*	15 (20.3)	59 (79.7)	1.00*
20-24	17 (15.3)	94 (84.7)	2.27(0.95,5.45)	47 (34.3)	90 (65.7)	2.05(1.01,4.24)
25-29	19 (19.0)	81 (81.0)	2.94(1.25,7.00)	55 (42.3)	75 (57.7)	4.40(2.21,8.88)
30-34	4(8.2)	45(91.8)	1.12(0.28,4.05)	39(58.2)	28 (41.8)	5.48(2.44,12.43)
35+	3(4.9)	58(95.1)	0.65(0.14,2.64)	15(25.9)	43(74.1)	1.34(0.55,3.27)
Marital Status						
Married	48 (12.1)	350 (87.9)	1.00*	157 (47.0)	177(53.0)	1.00*
Unmarried	1(2.2)	45 (97.8)	0.16(0.01,1.13)	11 (16.9)	64(85.3)	3.15(0.76,15.07)
Others	5(19.2)	21(80.8)	1.74(0.55,5.17)	3(5.2)	55(94.8)	0.06(0.02,0.21)
Religion						
Orthodox	3 (20.0)	12 (80.0)	1.00*	99 (35.1)	183 (64.9)	1.00*
Protestant	45 (10.9)	367 (87.1)	0.49(0.12,2.18)	45 (9.6)	71(61.2)	1.17(0.73,1.88)
Others	6(14.0)	37(86.0)	0.65(0.12,3.91)	27(39.1)	42(60.9)	1.19(0.67,2.11)
Occupation						
Employed	23 (38.3)	37 (61.7)	1.00*	32 (46.4)	37 (53.6)	1.00*
House wife	14 (5.2)	257 (94.8)	0.09(0.04,0.20)	109 (42.2)	149 (57.8)	0.85(0.48,1.49)
Student	17 (13.3)	111 (86.7)	0.25(0.11,0.54)	10 (17.5)	47(82.5)	0.25(0.10,0.60)
Others	0 (0.0)	11(100.0)	0.15(0.01,1.24)	20(24.1)	63(75.9)	0.37(0.17,0.77)
Educational Status						
Illiterate	1 (0.5)	181(99.5)	1.00*	38(30.9)	85(69.1)	1.00*
1-6	32 (16.5)	162 (83.5)	35.8(5.16,71.5)	56 (37.5)	93 (62.4)	1.35(0.79,2.31)
7-12	18 (20.5)	70 (79.5)	46.54(6.37,95.1)	65 (38.5)	104(61.5)	1.41(0.84,2.38)
12+	3 (50.0)	3 (50.0)	181.0(10.9,64.7)	12 (50.0)	12 (50.0)	2.26(0.86,6.00)
Ethnicity						
Amahara	0(0.0)	3 (100.0)	1.00*	63 (39.1)	98 (60.9)	1.00*
Oromo	1(16.7)	5(83.3)	0.60(0.01,34.71)	75 (36.9)	128(63.1)	0.91(0.58,1.43)
Agnuak	49 (21.6)	178 (78.4)	0.83(0.07,21.07)	0(0.0)	0(0.0)	1.56(0.0,58.09)
Nuwer	4(1.7)	228 (98.3)	0.04(0.0,1.29)	0(0.0)	0(0.0)	1.56(0.0,58.09)
Others	0(0.0)	2(100.0)	1.33(0.13,13.74)	33(32.0)	70(68.0)	0.73(0.42,1.28)

Note * denotes reference category

Reproductive Characteristics

Comparisons of the selected reproductive characteristics of the respondent women were summarized in Table-4. The univariate analysis of these reproductive concerns has shown that 185(39.4%) of the indigenous women were currently engaged in polygamous marriage and the median number of co-wives that a woman engaged in polygamous marriage has was one while the rate was about 22(4.7%)for the non-indigenous women with the same median of co-wives. The analysis has also shown that the likely hood of non-indigenous women to have multiple co-wives was minimal.

The average number of pregnancy among the two groups has shown slight difference with a median of three and two pregnancies for indigenous and non-indigenous women respectively. This difference was statistically significant among the two study women (Table 4). The median number of live children for indigenous women was three while it was two for non-indigenous women. This difference in number of a live children among study women has shown statistical significance as the number of live children increases from one to six children which indicate that as the number of children that belongs to a woman increase the chance of being non-indigenous women decreases.

According to the finding of this study indigenous women were found to have high future potential fertility as compared to non-indigenous women as the median intended number of children for women who were engaged in wedlock during the survey was six and three children for indigenous and non-indigenous study women respectively. This difference in median number of intended children was statistically

significant for those women who intended to have seven and more children in their lifetime. It was found that non-indigenous women were intending to have fewer children in their lifetime as compared to indigenous women.

The median length of postpartum sexual abstinence among the two study groups have shown a major difference with a median of twenty four and three months for indigenous and non- Indigenous study women who have had at least one previous experience of child birth irrespective of their wedlock. This difference was statistically significant for those women who abstain for 1-3 months and for those who abstain 10-12 months and more (Table-4).

The finding of the analysis of breast-feeding showed that the median length of breast-feeding among the two study women was found to be 24 months for both indigenous and non-indigenous women (Table 4).

Table –4 Comparison of selected reproductive Characteristics of study groups, Gambella Town, Ethiopia, April. 2003.

Variable	Non-indigenous women No (%) N= 470	Indigenous women No (%) N= 470	Crude OR (95%CI)	Adjusted OR (95%CI)
Number of co-wives				
0	448(95.3)	285(60.6)	1.00*	1.00*
1	19(4.0)	113(24.0)	0.11(0.06,0.18)	0.01(0.00,2.94)
≥2	3(0.6)	72(15.3)	0.03(0.01,0.09)	0.17(0.04,4.02)
Number of pregnancy				
0	145(30.9)	104(22.1)	1.00*	1.00*
1-3	261(55.5)	232(49.4)	0.81(0.59,1.11)	0.82(0.37,1.83)
4-6	56(11.9)	95(20.2)	0.42(0.27,0.65)	0.84(0.30,2.36)
7-9	8(1.7)	39(8.3)	0.15(0.06,0.34)	0.70(0.16,3.21)
Number of alive children				
0	171(36.4)	120(25.5)	1.00*	1.00*
1-3	259(55.1)	253(53.8)	0.72(0.53,0.97)	0.74(0.35,1.54)
4-6	36(7.7)	89(18.9)	0.28(0.18,0.46)	0.73(0.25,2.14)
7-9	4(0.9)	8(1.7)	0.35(0.09,1.32)	4.88(0.62,38.56)
Intended Number of children				
0	93(19.8)	57 (12.1)	1.00*	1.00*
1-3	193(41.1)	88(18.7)	1.34(0.87,2.08)	3.52(2.04,6.06)
4-6	176(37.4)	155(33.0)	0.70(0.46,1.05)	1.79(1.05,3.04)
7-9	6(1.3)	75(16.0)	0.05(0.02,0.09)	0.06(0.02,0.18)
≥10	2(0.4)	95(20.2)	0.01(0.00,0.06)	0.03(0.01,0.02)
Length of post partum abstinence in months				
0	290(61.7)	115(24.5)	1.00*	1.00*
1-3	107(22.8)	21(4.5)	2.02(1.18,3.50)	14.88(7.35,30.13)
4-6	47(10.0)	22(4.7)	0.85(0.47,1.52)	5.50(2.66,11.37)
7-9	6(1.3)	7(1.5)	0.34(0.10,1.15)	1.87(0.49,7.14)
10-12	13(2.8)	107(22.8)	0.05(0.02,0.09)	0.33(0.15,0.73)
≥13	7(1.5)	198(42.1)	0.01(0.01,0.03)	0.02(0.00,0.13)
Length of breast feeding in months				
0	291(61.9)	120(25.5)	1.00*	1.00*
1-6	29(6.2)	16(3.4)	0.75(0.38,1.50)	0.12(0.05,0.31)
7-12	18(3.8)	70(14.9)	0.11(0.06,0.19)	0.09(0.04,0.21)
13-18	17(3.6)	12(2.6)	0.58(0.26,1.35)	0.57(0.15,2.21)
19-24	49(10.4)	147(31.3)	0.14(0.09,0.21)	0.18(0.08,0.38)
24+	66(14.0)	105(22.3)	0.26(0.18,0.38)	0.12(0.07,0.21)

Note* Reference category
Adjusted for reproductive variables

As it is indicated in table–5 currently married women were asked if their husband has another wife/wives other than the respondent women and the result has shown that polygamy was found to have negatively influence current use of modern contraception. Those women who have two or more co-wives do not use contraception as compared to those women who engaged in monogamous wedlock which can be substantiated by [OR (95%CI)=1.31 (0.85, 2.00)] for those women who have only one co-wives and 0.13 (0.03, 0.42)] for those who have two or more co-wives.

Each women were interviewed if they have had pregnancy experience and the finding of the analysis of number of pregnancy versus current contraceptive use showed that there is an association between number of pregnancies that a woman experienced and their current modern contraceptive use where by as the number of pregnancy that a woman experienced increase from 1-3 to 4-6 pregnancies the likely hood of using modern contraception increase by 23 and 37 times as compared to those who do not have pregnancy experience. This association is found to be statistically significant [OR (95%CI) = 23.31 (15.43, 35.31) and 36.46 (6.02, 42.00)]. Similar trend was observed for the number of currently live children that belongs to a woman (Table 5).

Currently coupled women were also asked for the number of intended children they want to have in the future and their future intention was compared to current contraceptive use and the result has shown that utilization of contraception decrease as the intended number of children that a woman want to have in the future increase (for those whose intention was from 1-3 and 4-6 children with [OR (95%CI) = 42.63

(18.74, 102.05] and 26.97 (11.87, 64.48)] respectively. Those women who intended to have seven children and more in their lifetime were found to use modern contraceptive less likely than those who intend to have fewer children (Table 5)

The study women from each group were also asked for previous use of other RH services previous obstetric experiences and about current contraceptive use. The analysis revealed that women who have previous history of ANC, PNC, immunization, previous health institution delivery and previous unintended pregnancy have showed statistical significance for current modern contraceptive use as compared to those who did not attend these services (Table 5).

Table- 5 Reproductive and service attendance of current users and non-users of modern contraception by category, Gambella Town, Ethiopia, April, 2003.

Variable	Current-users N= 225	Non-users N=715	Crude OR (95%CI)	Adjusted OR (95%CI)
Number of co-wives				
0	182(24.8)	551(75.2)	1.00*	1.00*
1	40(30.3)	92(69.7)	1.31(0.85,2.00)	1.64(0.93,1.84)
≥2	3(4.0)	72(96.0)	0.13(0.03,0.42)	0.01(0.00,1.52)
Number of Pregnancy				
0	41(16.5)	208(83.5)	1.00*	1.00*
1-3	197(40.0)	296(60.0)	23.31(15.43,35.31)	1.58(0.57,4.38)
4-6	3(2.0)	146(98.0)	36.46(6.02,42.00)	4.96(0.24,103.64)
7-9	2(4.1)	47(95.9)	0.22(0.03,0.96)	0.13(0.00,1.33)
Live children				
0	65(22.3)	226(77.7)	1.00*	1.00*
1-3	110(21.5)	402(78.5)	12.28(7.93,19.05)	0.35(0.11,1.16)
4-6	50(36.5)	87(63.5)	1.15(32.52,860.37)	0.11(0.00,11.06)
Intended Number of children				
0	7(4.7)	143(95.3)	1.00*	1.00*
1-3	112(39.9)	169(60.1)	42.63(18.74,102.05)	8.56(10.23,80.25)
4-6	98(29.6)	233(70.4)	26.97(11.87,64.48)	11.23(3.62,5.46)
7-9	8(9.9)	73(90.1)	7.37(2.34,23.45)	4.64(0.82,5.42)
≥10	0(0.0)	97(100.0)	0.64(0.03,5.26)	0.62(0.00,2.80)
ANC attendance				
	N=194	N=497		
Yes	186(32.0)	396(68.0)	5.93(2.73,13.44)	3.73(0.89,15.68)
No	8(7.3)	101(92.7)	1.00*	1.00*
Previous Unintended Pregnancy				
Yes	31(86.1)	5(13.8)	1.83(1.09,3.09)	0.31(0.02,5.69)
No	168(27.3)	447(72.7)	1.00*	1.00*
PNC attendance				
	N=192	N=386		
Yes	154(55.2)	125(448)	8.46(5.49,13.09)	2.20(1.28,3.78)
No	38(12.7)	261(87.3)	1.00*	1.00*
Place of delivery				
	N=193	N=488		
Health institution	186(32.3)	389(67.7)	6.81(2.49,16.35)	4.26(1.28,3.78)
Home	7(6.6)	99(93.4)	1.00*	1.00*
Immunization attendance				
Yes	185(86.9)	28(13.1)	5.44(2.20,14.27)	0.74(0.14,3.84)
No	6(9.4)	58(90.6)	1.00*	1.00*

Note*reference category

Adjusted for reproductive characteristics and service attendance

Knowledge, attitude and practice of family planning

In this study the knowledge, attitude and practice of family planning was tried to be assessed and the finding of the survey showed that sixty two percent of the indigenous women have heard about modern contraceptive methods and about ninety six percent of the non-indigenous women were heard about modern contraceptive methods. This difference was statistically significant [OR (95% CI)](Table 6)

Women who heard about modern contraception was further asked to mention about source of information and it was found that peer groups (friends) (40.0%) and Health professionals (33.8%) were the major sources of information for indigenous women while Radio (72.3%) and Health professionals (41.7%) were taking the largest proportion of source of information for the interviewed non-indigenous women. The percentile difference in source of information can be further substantiated by the [OR (95% CI)] indicating that knowledge of specific MCM is less likely influenced being the member of non-indigenous group which is statistically significant for oral pills and injectables while IUD's were more likely known by the same groups as compared to their counterparts.

In order to assess the specific knowledge of MCM women were interviewed about their knowledge of specific modern contraceptive method and 69.4% of indigenous women responded that they know oral pills followed by injectables 30.2%. Their knowledge towards the other modern methods were found to be less than 2%. Knowledge of specific methods for non-indigenous women was 75.1% for oral pills and 67.7% for injectables. Knowledge of other MCM was also 20% for this study woman.

Study women were interviewed regarding the current specific method they are using; the finding showed that about 92.6% of indigenous and 39.8% of the non-indigenous women used oral contraceptive while the rate for injectable contraceptives was 7.4% and 59.6% respectively for the two study groups. Utilization of specific MCM was not found to have association with being the member of one of the study group.

Study subjects were also asked for the source of MCM and Government hospital was the major source for both study groups, which is 45.3% and 83.2% respectively. The second major source was private clinic (20.6%) for indigenous study women while private pharmacy (12.8%) for non-indigenous women. The percentile difference in source of MCM was found to have an association for government clinic and private clinic which can be further substantiated by [OR (95% CI)]=0.14(0.07,0.26)] and 0.07(0.03,0.14) respectively.

About forty six percent of the indigenous and eighty four percent of non-indigenous study women reported with regard to the importance of MCM that it prevent pregnancy and 41.1% and 78.5% of study women from both group reported that it helps for child spacing while the rate of other responses were below 20% for indigenous study women and less than 30% for non-indigenous women. Prevent pregnancy and space children were found to have an association.

The findings of the analysis of the reason for current non-use of modern contraception indicated that the need to have children was the most frequently

mentioned response for the two study women which was 51.2% for indigenous women and 52.2% for non-indigenous women being followed by use of natural methods like abstinence (22.8%), fear of side effects of modern methods (16.6%) and currently not being engaged in wedlock (4.1%) were some of the commonly mentioned reasons among indigenous women while the rate for the above described reasons were found to have variation among study groups. This proportion difference in reasoning the current non-use of MCM was statistically significant for use of natural methods and fear of side effects of the drugs as compared to other reasons (Table 6).

The analysis of birth interval between the two last children that belongs to women of both study groups who had experienced two or more deliveries showed that 9.2% of indigenous and 13.6% of non-indigenous women reported that they have delivered their last two children in less than two years time while 90.8% of indigenous and 86.4% of non-indigenous women have attended their deliveries in more than two years time. This difference is found to be statistically not significant (Table-6).

Table- 6 Comparison of knowledge, attitude and practice of family planning by category, Gambella Town, Ethiopia, April. 2003.

Variable	Non-Indigenous women No (%) N=470	Indigenous women No (%) N=470	OR (95% CI)
Knowledge of MCM			
Yes	450 (95.7)	291(61.9)	13.84(8.34, 23.30)
No	20(4.3)	179(38.1)	1.00*
Source of information			
Radio	340(72.3)+	58(12.3)+	4.76(3.31,6.84)
Television	167(35.5)	61(12.9)	2.22(1.53,3.24)
Husband	84(17.9)	48(10.2)	1.42(0.92,2.19)
Peer	201(42.8)	188(40.0)	0.87(0.64,1.17)
Health professionals	196(41.7)	159(33.8)	1.00*
Knowledge of specific MCM			
Pills	353(75.1)+	326(69.4)+	0.07(0.01,0.03)
Injectables	318(67.7)	142(30.2)	0.15(0.03,0.68)
IUD, s	56(11.9)	2(0.6)	1.93(0.18,20.53)
Other	29(6.2)	2(0.6)	1.00*
Ever use of MCM			
Ever used	255(54.3)	95(20.2)	4.68(3.47,6.32)
Never used	215(45.7)	375(79.8)	1.00*
Current use of MCM			
User	171(36.6)	54(11.5)	4.41(3.09,6.28)
Non-users	299(63.4)	416(88.5)	1.00*
Current specific method being used			
Pills	68(39.8)	50(92.6)	1.36(0.00,51.19)
Injectables	102(59.6)	4(7.4)	25.50(0.00,1211.20)
Others	1(0.6)	0(0.0)	1.00*
Sources of MCM			
Hospital	391(83.2)+	213(45.3)+	0.67(0.39,1.16)
G/clinic	55(11.7)	146(31.1)	0.14(0.07,0.26)
Private clinic	18(3.8)	97(20.6)	0.07(0.03,0.14)
Private pharmacy	60(12.8)	22(4.7)	1.00*
Importance of MCM			
Prevent pregnancy	393(83.6)+	214(45.5)+	0.50(0.33,0.78)
Space children	369(78.5)	193(41.1)	0.52(0.34,0.81)
Limit family size	184(39.1)	40(8.5)	1.26(0.73,2.17)
Others	124(26.4)	34(7.2)	1.00*
Reason for non-use			
Use of natural method	31(10.4)	95(22.8)	0.29(0.08,0.96)
Need to have more child	16(52.2)	213(51.2)	0.64(0.20,1.99)
Fear of side effects	20(6.7)	69(16.6)	0.25(0.07,0.89)
Religious prohibition	17(5.7)	4(1.0)	3.72(0.68,21.76)
Husband objection	10(3.3)	11(2.6)	0.80(0.17,3.67)
No partner	57(19.1)	17(4.1)	2.93(0.81,10.71)
Others	8(2.7)	7(1.7)	1.00*
Birth interval	N=199	N=273	
<2 years	27(13.6)	25(9.2)	1.56(0.84,2.88)
2 years and more	172(86.4)	248(90.8)	1.00*

Note + percentages were more than 100 percent because of multiple responses given by single respondent

- Percentages were less than 100 percents because of few responses

**** P-value less than 0.05**

Informations related to source, expenditure and reproductive health related decision making of the respondent women was depicted in table 7. As it has been clearly showed in the summary table 69.9% of the source of family income was claimed to be males among indigenous respondents while it was 61.7% for non-indigenous women. Of these coupled or women engaged in wedlock for both groups 21.7% and 27.9% responded that both partners were the source of income for their families. Other sources of income were less than 10% for both study groups. This difference was found to have statistical significance among the two study women ($p < 0.05$).

Each respondent woman who were currently engaged in wedlock irrespective of its legality were asked about the responsibility of family income expenditure was correspondingly over handed to the male partner with a rate of 73.9% for indigenous coupled women while majority of the non-indigenous women (75.5%) responded that the expenditure of family income was the responsibility of both partner. The other family income expenditure responsibilities were less than 15% for both groups. This difference was found to be statistically significant ($P < 0.05$).

The study women were also compared with respect to reproductive health service use and there was statistically significant difference between the two groups ($p < 0.05$). Respondent women were also asked about use of contraception with out their husband's knowledge and 36.9% of the indigenous women claimed immediate divorce while the rate for non-indigenous women was only 1.6%. The majority among indigenous category (53.7%) expected that it might end up in violence while almost half (50.5%) of the non-indigenous women claimed that he stop coming to her and 43.4% said that nothing will happen to them. This difference was found to

be statistically significant ($P < 0.05$). There has been also statistically significant difference in information sharing with their husband ($p < 0.05$) (Table 7).

Significant difference was observed among the two study groups regarding abandoning of modern contraception they have initiated at some time in their life. The result of the analysis indicated that 18.6% of the indigenous women currently abandoned the method they have initiated in the past while for non-indigenous women the proportion was about 37.3%. The observed difference was statistically significant among the study groups (0.05)(Table 7).

Table-7 Comparison of sources, expenditure of family income, and reproductive health related decision-making by category, Gambella Town, Ethiopia April. 2003.

Variables	Non-indigenous No (%) N=376	Indigenous No (%) N=415	X²	P-value
Source of income				
Both	105 (27.9)	90(21.7)	51.95	0.000**
Male	232 (61.7)	290(69.9)		
Female	6(1.6)	33(8.0)		
Others	33(8.8)	2(05)		
Expenditure of family income				
Both	284(75.5)	85(22.6)	325.06	0.000**
Male	40(10.6)	278(73.9)		
Female	19(5.1)	49(13.0)		
Other	33(8.8)	2(0.5)		
Family size				
Both	311(82.7)	105(27.9)	370.51	0.000**
Male	18(4.8)	278(73.9)		
Female	12(3.2)	32(8.5)		
Other	35(9.3)	0(0.0)		
RH service use				
Yes	176(46.8)	71(17.1)	79.65	0.000**
No	200(53.2)	344(82.9)		
Use of contraception with out husbands knowledge				
Divorce	6(1.6)	160(36.9)	562.12	0.000**
Violence	12(3.2)	202(53.7)		
Stop coming to me	190(50.5)	2(0.5)		
Nothing	163(43.4)	45(10.8)		
Acquisme	5(1.3)	6(1.4)		
Discussion with husband on MCM				
Yes	181(48.1)	71(17.1)	86.07	0.000**
No	195(51.9)	344(82.9)		
Discontinued using of MCM				
Yes	84(37.3)	41(18.6)	18.58	0.016**
No	141(62.7)	180(81.4)		

Note ** P-value less than 0.05

Analysis of the reasons for current abandoning of the method they have initiated in the past and reasons for never use of modern contraception was summarized in table 8. The respondents from indigenous study group claimed desire to have children (47.2%), male disapproval (28.0%) and use of natural methods like prolonged postpartum sexual abstinence were mostly mentioned for never use of MCM while having no partner (28.2%), desire to have children (26.7) and desired sex of children were mostly reported reasons for never-use among non-indigenous women. The above-mentioned proportional difference among the two study women were also statistically significant ($P < 0.05$).

As it was clearly stated in table 8 the major reason for current abandoning of modern method was found to be desire to have children for both study groups with a proportion of 56.1% and 25.0% for indigenous and non-indigenous women respectively. The other reasons claimed were inconvenience to use; husband objection and fear of side effects of the drug were frequently mentioned by the respondent women. (Table 8).

Table- 8 Comparison of determinants of modern contraceptive use by category, Gambella Town, Ethiopia, April. 2003.

Response	Non-indigenous women No (%) N=215	Indigenous women No (%) N=375	X²	P-value
Reasons for never use of MCM				
Use of natural methods	18(9.2)+	75(20.0)+	158.28	0.000**
Desired sex of child	26(13.3)	1(0.2)		
Lack of information	2(1.0)	14(3.7)		
Male dominance	9(4.6)	105(28.0)		
Desire to have child	52(26.7)	177(47.2)		
Religious prohibition	20(10.3)	51(13.6)		
Don't have partner	55(28.2)	26(6.9)		
Others	13(6.05)	12(3.20)		
Reasons for current abandoning of MCM				
	N=84+	N=41+		
Desired sex of child	6(7.1)	2(4.9)	16.89	0.03125**
Inconvenience of use	5(5.9)	6(14.6)		
Parent disapproval	4(4.8)	1(2.4)		
Desire to have more child	21(25.0)	23(56.1)		
Husband objection	6(7.1)	4(9.8)		
Fear of side effect	14(16.7)	3(7.3)		
Others	34(40.5)	8(19.5)		

Note + percentages were greater than 100 because of multiple responses

**** P-value less than 0.05**

In this study fertility difference of both study women for one year preceding the survey was assessed and it was found that the age group from 20-34 years were the most fertile ones, as their age specific fertility rate was high. The comparison of ASFR for indigenous and non-indigenous study women showed that indigenous women were found to have high fertility rate. The total fertility rate (TFR) of indigenous and non-indigenous study women for the preceding one year was found to be 9.4 and 4.6 children respectively if the current fertility level continue in their life time and if the women survived all their reproductive time (Table-9).

Table- 9 Comparison of the total fertility rate of study groups, Gambella Town, Ethiopia, April. 2003.

Age group	Non-indigenous Women n=470	One year live birth	ASFR	Indigenous Women n=470	One year live birth	ASFR
15-19	74 (15.7)	14	0.19	149 (31.7)	30	0.20
20-24	139 (29.6)	23	0.17	111 (23.6)	60	0.54
25-29	131 (27.9)	31	0.24	100 (21.3)	48	0.48
30-34	67 (14.3)	10	0.15	49 (10.4)	20	0.41
35-39	40 (8.5)	3	0.08	36 (7.7)	4	0.11
40-44	11 (2.3)	1	0.09	14 (3.0)	2	0.14
45-49	8 (1.7)	0	0.00	11 (2.3)	0	0.00
Total	470 (100.0)	82	0.92	470 (100.0)	164	1.88
TFR	-	-	4.6	-	-	9.4

Logistic Regression Analysis

Binary logistic regression analysis was used to control the effect of confounding variable to modern contraceptive utilization and differences in major reproductive characteristics of study group. Binary logistic regression analysis was used and entered socio-demographic, reproductive and service attendance related variables against the dependent variable. The result of the analysis indicated that current use of modern contraceptive methods was not associated with being the member of the two-study category while age and occupation were found to have association with current use of MCM. The analysis also showed that having one or more co-wives didn't maintain its statistical significance found in univariate analysis [OR (95%CI)=0.01(0.00,2.94)] for women who do have one co-wives and 0.17(0.04,4.02)] for those who have two or more co-wives. The statistical significance found in univariate analysis for intended number of children, length of postpartum sexual abstinence and length of breast-feeding were maintained. For some of the categories of these independent variables that didn't show association in univariate analysis were found to have an association after binary logistic regression.

Number of pregnancy and number of alive children were found to have an association in univariate analysis. When the effects of other variables were controlled these variables didn't show statistical significance. Proxy indicators of modern contraceptive utilization like previous attendance of ANC, PNC, and delivery at health institution and attendance of immunization services were found to have statistically significant association to the current use of modern contraception. When the effect of other variables were controlled only PNC, attendance and delivery at

health institution were found to retain their association [OR (95%CI)=2.20(1.28,3.78)], 4.26(1.28,3.78)] respectively for PNC attendance and place of delivery.

II. Qualitative Study

The qualitative study carried out in this survey was using focus group discussion (FGD) as an alternative source of information to back up the quantitative study. Seven sessions of FGD were undertaken. The focus group involved married women, adolescents (15-19 years), married males from each study group and service providers. Using the checklist that was developed relevant information was obtained. The members of the focus group discussion were participating actively in the discussion and they were expressing their ideas freely without reservation. Majority of the participants of the FGD had general concepts of modern contraception.

The findings of the focus group discussion also showed that women who engaged in wedlock prefer to produce more children than the single adolescents for both study groups. Majority of the indigenous married women prefer to have more than five children and it was found that only some of the women in this group know few of the modern methods of contraception while majority of the participant from non-indigenous women desired to have as few as three children in their life time and majority of women in this group knew some of the specific modern methods of contraception. Of the specific modern methods known by some of the indigenous and majority of the non-indigenous women oral contraceptives and injectables take the leading.

Some of the indigenous participants said that "producing as many as possible children makes you respected" and some other said "producing female daughters means producing source of income for the family" some of the participants coated that "as far as a woman get married it is up to her to produce children other wise her

family give back the dowry collected from the bride "A few other, said" women engaged in polygamous marriage compete each other to produce more children to get respect over the others"

Majority of the participants from the non-indigenous group said that "family size depend on the income of the family" and it is known, producing many children that you cannot grow well is a problem. Of the specific methods known oral pills and injectables were frequently mentioned by majority of the participants, where as Norplant, IUD's, Foam tablets, Tubal Ligation and Vasectomy were known by few of the non-indigenous participants. Discussion was also made regarding reproductive health service approval by the participants of the FGD, participants from both group usually said "they approve use of any of the reproductive health service including use of family planning explaining its use fullness for the family and others."

The results of the discussion indicated that majority of the participants said "they were not asked for payment whenever they need to have any of the modern contraception". The focus group discussion also tried to investigate the variety of MCM available at health infrastructure and the result of the analysis showed that majority of the study participants claimed oral pills as one of the available MCM and some of the participants from non-indigenous and few of the indigenous participants mentioned injectables as MCM available for use in health institutions. None of the participants from both group justified the availability of other methods. The participants from both category were probed to mention the reasons for non-use of modern contraceptive methods and the result of the analysis showed that majority of the participants from both group claimed that the reason for non-use was due to the

desire for more children and majority of the indigenous and few of the non-indigenous participants also mentioned lack of women's decision making capacity as a reason. Majority of the indigenous and few of the non-indigenous study participants also claimed husband objection. Relative objection was also reported by some of the indigenous group. The other reasons need nutritious food, religious objection, fear of side effects of the drug and result in sterility were responded by few of the participants from both groups.

Majority of the participant from non-indigenous and some from indigenous group claimed medical barriers as one of the obstacle for modern contraceptive utilization. One woman from non-indigenous group said that "menses is the first question of professionals" why was that" she questioned, and another men also from non-indigenous group said that "my wife went to a health institution to take an injection, she was breast feeding and her menses did not come, more over she told the professional that since her delivery time she has no history of sexual contact but she was denied her choice, look what might happen if she start sexual contact without taking any control for the next birth".

Majority of the participants said that the relation between service provider and potential consumers were found to be rough. Some of the participants said that "some of the service providers treat clients roughly and annoy women and these clients may not come back to get services". Few of the indigenous and some of the non-indigenous participants said that health professional provide only one cycle of oral pills which compels women to visit health services every month. Some of the participants said "it is known that women face a lot of problems to collect MCM every

month so if the method was what the women uses usually it would be better to supply the clients as they need".

Reasons for polygamous marriage was raised as an issue of discussion and majority of the participants from both group mentioned cultural support, and bride wealth as a primary reason and older wife support was responded by few indigenous participants and other factors like religious support was claimed by none of the participants.

The summary result of focus group discussion under taken with service providers indicated that majority of the professionals said that if a non-menstruating women come for service they tell her to come when her menses comes and majority of the service providers also send the women after giving counseling only. Some of the participants said that they provide the women with barrier methods and few of the service providers said that even if the women was not on menses they provide the client with oral pills as far as there is no risk factor.

Majority of the service provider claimed that there was no method mix available; they said that oral pills, injectables and Condom were the only available methods currently. Even if the other methods were available there was no professional trained to provide the service like IUD's, nor plant and the other methods. Moreover, lack of resource was mentioned by few of the participants.

Reasons for non-use of MCM among potential clients were one of the issues for discussion. The summary of the discussion showed that majority of the service

provider indicated that cultural influence, need for more children and husband objection were commonly mentioned by the participants. Religious prohibition was also mentioned by a few participants.

During the FGD the participants were discussed on issues related to the possible difference in service utilization among the two-study groups and the majority said that there is a difference and claimed that male dominance, inconvenience to use and lack of male participation in reproductive health are contributing to the difference.

6. Discussion

The result of this study showed that non-indigenous women were found to be more likely to use modern contraception than indigenous study women. The finding of the study also noted that married women were utilizing modern contraceptive than the other subjects involved in the study. The rate of current modern contraceptive utilization among married couples were found to be 91.1% of the current users while it was less than 10% for the other study subjects having different marital background. This can be explained by the under reporting of modern contraceptive utilization by the unmarried, divorced and separated women because of the social stigma attached to it's use being the member of the group. The rate of contraceptive use for currently married women according to this study was 21.8% while the rate was only about 2% for the other group of women having different background of marriage. The result of the year 2000 Demographic and Health Survey (DHS) of Ethiopia also indicated that current use of contraceptive was highest among currently married women (24).

Most of the studies conducted on religious affiliation and contraceptive use showed that there is a difference among different religious origins to practice modern contraception (17,20).

In this study ethnicity has shown to have great difference in modern contraceptive practice, Amahara (28.0%), oromo (33.8%) and Agnuak (21.8%), while the rate of modern contraceptive use among the other ethnic groups included in the survey were found to be less than 5.0%. A study done in Kuwait on modern contraceptive

utilization also showed significant difference among the different ethnic groups involved in the survey (43).

Educational status has also shown to have statistically significant difference for each category of educational level that the participant women attended. It was indicated that as the educational status of the respondent women increase the likelihood of utilizing modern contraceptive also increases. This can be explained by the fact that as the educational status of the women increases their knowledge, awareness, and access to modern contraceptive methods also increases. The finding of this study also shares the conclusions made by different researchers that educated women tend to use modern contraception and desire less children than the illiterate women (25,40,42). Cohort study done in Rakai district of Uganda also showed that contraceptive prevalence was highest among the better-educated women involved in the survey. Survey conducted in Egypt, Guatemala, India, and Philippines also showed the relationship between education and modern contraceptive utilization. The finding of surveys done in different parts of Ethiopia like the survey conducted in rural Dale demonstrated similar result (18,33).

The finding of this study showed that statistically significant difference among the two study women by some of their reproductive characteristics, thirty nine percent of the indigenous women were engaged in polygamous marriage. Studies have shown that in some tradition males were allowed to have more than one wife, in order to spend the postpartum period with their other wife/wives. This prevalence of polygamy is higher than the prevalence of polygamy in Ben/Gumz, which is 18.9% according to the finding of DHS of 2000. The survey also showed that overall, 14%

of currently married women in Ethiopia were engaged in polygamous marriage. According to this study polygamy was found to be higher among indigenous women as compared to their counterparts. 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. It was found that the proportion of modern contraceptive users decreases as the number of co-wives increase which was 17.8% for those who have only one co-wife and 1.3% for those who have two or more co-wives. This can be explained by the fact that women who were engaged in polygamous wedlock do not spend their postpartum time with their husband as this could result in prolonged postpartum sexual abstinence and women could get reluctant to adopt modern methods of contraception (35,37).

The result of our study showed that the average number of pregnancy among the two study women have showed statistically significant difference where by, the median number of pregnancy experience was three for indigenous women and two for non-indigenous women. This finding goes inline with their current modern contraceptive utilization. It was found out that as the number of pregnancy increase from one to six the likely hood of using modern contraception increases for each category from the first (1-3 pregnancies) to the second (4-6 pregnancies) with [OR (95%CI)=23.31(15.43,35.31)] and 36.46(6.02,42.0)] respectively and for those who do have 7-9 pregnancy experience, number of pregnancy was found to be less likely influence current modern contraceptive utilization [OR (95%CI) = 0.22 (0.03,0.42)].

The finding of this study complement the findings of the study conducted by other researchers.

The number of live children that belongs to the study women has also showed statistically significant difference among the two study groups. In this study it was found that the likely hood of using modern contraception among women who have currently live children was 12 times as compared to women who do not have currently alive children. The finding of this study complement the result of survey done in Egypt, Guatemala, India and Philippines which have showed that the rate of contraceptive use was found to be higher among women with more living children. This can also be further substantiated by the finding of the Ethiopian DHS conducted in 2000. According to the result of the DHS the number of currently alive children that a women has was found to have positive influence on modern contraceptive utilization (19, 24).

Intended number of children that study women want to have was also found to have statistically significant difference among both study women. The median number of intended children for indigenou women was six and three for non-indigenou women. In this survey it was found that the likely hood of using contraceptive decreases as the number of intended children increase. This can be explained by the fact that if a women want to produce more children in the future that she could get reluctant to use modern contraception. Surveys done in Uganda noted that the prevalence of contraceptive use varied by the desired family size that a women want to have in her life time (19).

Being engaged in polygamous marriage was found to influence utilization of modern contraception and had statistically significant difference. As the number of co-wives increase from one to two and more, polygamy was found to be negatively influence use of MCM when compared with women who did not have co-wives. This might be due to the limited time spent with their husband after childbirth. In this study it was indicated that there was statistically significant difference among study women who had previous history of RH service attendance and who do not. Previous attendance of prenatal, postnatal, immunization and delivery services were found to have an association with the current utilization of modern contraception. Studies conducted in Bolivia, Egypt and Thailand showed that prior use of prenatal and postnatal care had a strong influence on subsequent use of modern contraception. Survey conducted in Kenya also showed the link between post abortion care to other reproductive health care services (19,35, 41,42).

The finding of the analysis suggested that there was statistically significant difference in knowledge of modern contraception, only 61.9% of the indigenous women had heard about modern contraception and 95.7% of the non-indigenous women had heard about modern contraceptive methods. This can be explained by access to information, language barrier to use mass media and educational status of the women. The low contraceptive prevalence among indigenous study women was inline with the level of their knowledge. Most studies done by many researchers have shown the complementary effect of knowledge on current modern contraceptive utilization (31, 34).

Participants of the survey claimed various sources of information in which peer group and health professionals were found to be the major sources of information for indigenous study women with a rate of 40.0% and 33.8% respectively. For non-indigenous study women radio (72.3%), peer group (42.8%) and health professional were found to be the major sources of information. The finding of this survey does not complement the findings of other researches for indigenous study women. The finding of the survey conducted among head quarter of domestic distribution corporation employees in Addis Ababa showed that the main source of information to be radio (35.0%) and relatives (20.0%) (31).

Analysis of knowledge of specific methods of MCM noted that oral pills as the most popular method known by majority of study subjects being followed by injectables. Of the methods currently used oral pills takes the largest proportion followed by injectables for the two study women. Limited proportion of study women from both study groups were using other methods of MCM. This finding noted that there was lack of methods mix and quality of the services, which was markedly supported by the finding of the qualitative study. In Morocco survey done to assess the impact of family planning service provision on contraceptive use indicated that the number of methods available in a community significantly increase postpartum contraceptive adoption (28). Many researches done by different researchers in our country also demonstrated the same finding (29,32,33).

Government health institutions were the primary source of MCM according to this research and private clinic and private pharmacies were taking the lowest proportion of the supply. It was observed that other sources of method supply were non-

existent, even if other means of service provision like CBD, commercial supply and school services were found to be alternative sources to be used, in order to make the service accessible for potential clients. Researchers have shown that these alternative sources have a potential to increase CPR (32).

Reasons for current non-use of modern contraception was assessed by this study and it was found that desire to have children (51.2%) and use of traditional methods like postpartum sexual abstinence (22.8%) were the major reasons mentioned among indigenous women; other reasons include fear of side effects, not being currently engaged in wedlock, religious prohibition and husband objection. Unlike the findings of other studies the finding of this study demonstrated that prolonged postpartum sexual abstinence to be the major method of child spacing among the indigenous study women. The other reasons complement the results of other researches (28,29,30,32,43). The result of the qualitative study also support the findings of the quantitative study where by women's lack of decision making capacity were additionally reported by majority of women from indigenous study groups.

Analysis of birth interval between the last two children that women of both study groups have experienced showed 9.2% of indigenous and 13.6% non-indigenous women claimed that their birth interval was less than two years. This difference in birth interval can be explained by the difference in length of postpartum sexual abstinence and the difference in the rate of polygamy among the two study groups.

Of the currently coupled indigenous women 69.9% informed males to be the source of income for their family and 61.7% of their counterparts also claimed the same

response. Twenty-two percents and twenty-eight percents of the participants from both study women reported both couples as a source of family income. About seventy four percent of the indigenous women reported that family income expenditure was controlled by males while 75.5% of study women from the non-indigenous group noted that the expenditure of family income to be made Jointly with their partner. This finding indicates that women were not the source of family income and don't control family income expenditure particularly among indigenous study groups. This indicates that women don't have power to decide on family related matters, Consequently women don't have capacity to decide on reproductive related issues. As a result women fail to decide to use modern contraceptive methods. The finding of the qualitative study also support this finding.

Decision with regard to family size was primarily centered to male partner for indigenous study women where 73.9% of the respondent women from this group mentioned that they were not given such an opportunity in their culture to restrict their family size. Once a woman was coupled it was up to her to produce as many children she can, otherwise it was up to the male partner to decide. About eighty-three percents of the non-indigenous study women said both couples made the decision. In this survey it was indicated that males were the primary decision makers. The findings of surveys conducted in twelve developing countries most in Africa have showed Gender has a powerful influence on reproductive decision-making and behavior. In Pakistan decision-making about reproductive matters reside primarily with husbands (14,15,16,20).

7. STRENGTHS AND LIMITATIONS OF THE STUDY

Strengths

The study has included both quantitative and qualitative methods in order to improve the outcome of the research as the findings of the qualitative research complement the result of the quantitative study. All women of reproductive age group were included irrespective of their marital status hoping not to miss those women who use modern contraception without being engaged in wedlock. Random sampling technique was used to avoid selection bias among women of reproductive age group residing in the same household. The comparative study tries to identify the difference among the two study groups. Attempt was made to include many of the factors that are suspected to influence modern contraceptive utilization. Logistic regression analysis was used to control the possible confounding factors.

Limitations of the study

Even if, effort has been made to explore whether the respondent women was using modern contraception or not some might denied that they are currently using due to fear of social influence on the women. The survey was conducted in the urban area of the region, which may not represent the rural women population. The study design was cross sectional, which measures the exposure and outcome simultaneously but cannot measure the cause and effect relationship between the outcome and exposure. The separation of indigenous and non-indigenous women might create a feeling of discrimination among the community. The other limitation of the study was that male partner were not included in the study as they are influential of women's reproductive health.

8. Conclusion

- The result of this study showed that there is a significant difference in utilization of modern contraceptive methods among the two study groups.
- Women involved in the survey particularly indigenous women didn't have the right to decide on family income expenditure and they also lack decision making capacity on limiting their family size which consequently resulted in their lack of decision making capacity to utilize available reproductive health services.
- The difference in CPR rate among the two study women can also be attributed to their knowledge, education, social and cultural differences.
- Oral contraceptives were the most widely known MCM followed by injectables and these methods were the most utilized ones current users from both study women.
- There is high intention of producing more children among indigenous women, which goes in line with their current use of MCM.
- Medical barriers and hostile attitude of professionals has also contributed to the under utilization of RH services.
- Need for more children, fear of side effects and inconvenience to use were the major reasons for discontinuation of MCM among the study women.
- Use of natural methods, male disapproval, and not being engaged in wedlock were the major reasons for never use of Modern methods.
- Lack of method mix in health infrastructure has also found to limit women's MCM adoption and continuing use of contraception.

- Women who had history of previous unintended pregnancy and previous use of reproductive health services were found to use modern contraception currently than others.

9. Recommendation

Based on the finding of the study, the following recommendations were made:

- Concerted efforts should be made to greatly increase the number of contraceptive users, by educating and motivating the public, in order to reduce this high fertility and thereby to alleviate the socio-economic problems it poses. This is possible through strengthening the currently available sources of information, use of local radio media that use agnauak and nuwer language to disseminate reproductive health related information, planned and sustainable ICC program has to be coordinated with the outreach immunization service giving particular attention for indigenous study women.
- Particular attention has to be given for indigenous women empowerment through education and male involvement in reproductive health issues were also has to be given due attention as males were making decision on most of the reproductive health matters among this particular study group.
- There is a need to look in to other family planning service delivery options in addition to the currently available services to permit a wide and easy expansion of family planning and increase it's local and regional coverage through adoption of Community-Based-Distribution (CBD) in the region and moreover, to think of other alternatives like school peer service & office services.
- Prolonged postpartum sexual abstinence was found to be a means of child spacing among indigenous study women. Males who were looking for postpartum sexual abstinence were more likely to look for extramarital sexual partner and then come back with HIV/AIDS and other sexually transmitted disease to their conjugal bed. So that it will be recommended if the prolonged

postpartum sexual abstinence among indigenous study women should be substituted by utilization of modern contraceptive methods after childbirth.

- Medical barriers were found to annoy the potential consumers as far as the clients were sure of their reproductive issue it is the right of the women to get any of the reproductive health services she is in need of. So on job training of professionals will be recommended.
- In order to make mixed methods available for potential users in addition to resource availability mid term and long term professional training has to be taken in to consideration by responsible bodies at all level.
- A study that investigates the relationship between prolonged postpartum sexual abstinence and extramarital sexual practice will be undertaken among indigenous population.

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Annex- 1 Summary results of focus group discussion; 20-35 years old married women participants, Gmbella Twon, Ethiopia, Feb. 2003.

S.no	Discussion points	Married indigenous women	Married non-indigenous women	Note
1	Desired family size	5++++	3++++	
2	Knowledge of MCM			"Female children were the source of income" so need more
	Yes	+++	++++	
	No			
3	Methods known			
	Oral pills	+++	++++	
	Indictable	+++	++++	
	Norplant	+	++	
	IUD	+	+++	
	Foam	+	++	
	Tubal liqation	+	++	
	Vasectomy	+	++	
4.	RH service approval			
	Approved	++	++++	
	Objected			
5	Payment is asked to get MCM			
	Yes			
	No	+++	++++	
	Don't know			
6	Methods available			
	Oral pills	++++	++++	
	In jectables	++	+++	
	IUD, S	+	+	
	Don't know	+	+	
7	Reasons for non-use			
	Need nutritious food	++	+	
	Need for more children	++++	++++	
	Lack of decision making	++++	++	
	Religious objection	++	++	
	Relative objection	++++	++	
	Husband objection	++++	++	
	Fear of side effects	++	+++	
	Induce sterility	+	++++	
8	Medical barriers			
	Menses	+	++++	"If a women fail to produce a baby the money that was paid by the bride be given back
	Parity	+	++	
	One cycle	+	+++	
	Bad attitude towards H.profftonal	+	+	
9	Postpartum sexual abstinence			
	Yes	++++	+++	
	No			
	Don't know			
10	Reason for poly gamy			
	Cultural support	++++	++	Males were privileged out of the traditional culture.
	Bride wealth	++++	+++	
	Religious support	++	+	
	Older wife support	+++	+	

Key- ++++ Majority of the participants +++ Some of the participants ++ Few of the Participants + Non of the participants

Annex- 2 Summery results of focus group discussion; 30-45 years old married male participants, Gambella Town, Ethiopia, Feb. 2003.

S.no	Discussion points	Married indigenous males	Married non-indigenous males	Note
1	Desired family size	5++	2+++	
2	Know ledge of MCM			
	Yes	+++	++++	"Female children were considered as a source of income"
	No			"Family size depends on family income".
3	Methods known			
	Oral pills	+++	++++	
	Injectables	++	+++	
	Norplant	+	++	
	IUD	+	++	
	Foam	+	++	
	Tubal liqation	+	++	
	Vasectomy	+	+	
4	RH Service approval			
	Approved	++++	++++	
	Objected			
5	Payment is asked for MCM			
	Yes			
	No	+++	++++	
	Don't know			
6	Methods available			
	Oral pills	+++++	++++	
	Injectables	++	+++	
	IUD	+	+	
	Don't know	+	+	
7	Reasons for non-use			
	Need nutritious food	++	+	"Unless the women produce children the family will give back the bride money"
	Need for more children	++++	++++	
	Lack of decision making	++++	++	"In polygamous family there is a competition between women to produce many children to get respect over others "
	Religious objection	++	++	
	Relative objection	++++	++	
	Husband objection	++++	++	
	Fear of side effects	++	+++	
	Induce sterility	+	++++	
8	Medical barriers			
	Menses	+++	++++	"Professional deny the right of a woman"
	Parity	++	++	
	One cycle	+++	+++	
	Bad attitude towards Health professional	++++	++++	
9	Postpartum abstinence			
	Yes	++++	+++	"If prolonged it is not supported"
	No			
	Don't Know			
10	Reason for polygamy			
	Cultural support	++++	++	"Because males were looking for prolonged postpartum sexual abstinence"
	Bride wealth	++++	+++	
	Religious support	++	+	
	Older wife support	+++	+	Said that" it has to be criticized by nodding "

Key- +++++ Majority of the participants +++ Some of the participants ++ Few of the Participants + Non of the participants

Annex-3 Summary results of focus group discussion, 15-19 years old unmarried adolescent participants ,Gambella Town, Feb. 2003

S.no	Discussion paints	Unmarried indigenous 15-19 years old women	Unmarried non-indigenous 15-19 years old women	Note
1	Desired family size	3++++	2++++	Majority agreed by nodding
2	Knowledge of MCM			
	Yes	++++	++++	
	No			
3	Methods known			
	Oral pills	++++	++++	
	Injectables	+++	++++	
	Nor plant	++	++++	
	IUD	++	++++	
	Foam	++	++++	
	Tubal ligation	+	++	
	Vasectomy	+	++	
4	RH service approval			
	Approved	++++	++++	
	Objected			
5	Payment is asked for MCM			
	Yes			
	No	++++	++++	
	Don't know			
6	Methods available			
	Oral pills	+++	++++	
	Injectables	++	++	
	IUD'S	+	+	
	Don't know	+	+	
7	Reasons for non-use			
	Need nutritious food	+++	++	
	Need for more child	++++	++++	
	Lack of decision making	++++	++	
	Religious objection	+	+	
	Relative objection	+++	+	
	Husband objection	++++	++	
	Make sterile	++	++	
8	Medical barriers			
	Menses	+++	+	
	Parity	+	+	
	One cycle only	+	+	
	Bad attitude towards HP	++++	++++	
9	Postpartum abstinence			
	Yes	++++	++++	
	No			
	Don't know			
10	Reason for polygamy			
	Cultural support	++++	++	
	Bride wealth	+++	+++	
	Religious support	+	+	
	Older wife support	++	+	

Key ++++ Majority of the participants +++ Some of the participants ++ Few of the participants + Non of the participants

**Annex- 4 Summary results of focus group discussion among service providers,
Gambella Town, Ethiopia, Feb. 2003**

S.no	Discussion points	Service provider from health institutions	Note
1	Service for non-menstruating women Tell her to come when menses comes Counseling only Send home with barrier method (Condom) Provide her with necessary MCM (after lab.)	++++ ++++ +++ ++	Most of service providers agreed that they ask for menses after postpartum initiation as well as for continuous recipients.
2	Problem faced during service provision Lack of resource Lack of skill (training) Lack of method mix	++ ++++ ++++	
3	Reasons for non-use of MCM by potential clients Cultural influence Need for more children Husband objection Religious prohibition	++++ ++++ ++++ ++	"Male partners were strongly opposing any of the MCM"
4	Ways of providing MCM After education Provided by health professional Clients	+++ + ++++	
5	Do you think there is a difference in MCM utilization among the two study group Yes No	++++ ++++	"Non-indigenous women were attending more"
6	Reasons for the difference Male dominance Inconvenience to use Lack of male participation	++++ ++++ ++++	

Key- +++++ Majority of the participants +++ Some of the participants ++ Few of the Participants + Non of the participants

Structured questionnaire for quantitative study

Greeting: We came from Addis Ababa University Medical Faculty. We would like to ask you a few questions about modern child spacing methods and factors affecting its utilization. This will help us to identify some of the barriers to use available reproductive health services in general and family planning in particular based on your answer to our question. I would be thankful if you spend sometime answering questions related to modern child spacing methods. No identification related to you will be stated on the questionnaire. Confidentiality of your responses will be kept. May I get your permission to continue my interview? Yes ___1

No ___ 2 → Stop

If yes name of data collectors _____

Signature _____

Study area- Gambella town of Gambella Woreda

Identification

Region _____.

Kebele _____.

Divisions _____

Place of birth _____

Duration of residence _____

Place of birth of parents _____

Father _____

Mother _____

Grand parents: Four in number

Male: Male _____ Female _____

Female Male _____ Female _____

PART-ONE SOCIO-DEMOGRAPHIC CHARACTERISTICS (For all women included in the survey)

S.No	Questions	Response
101.	Age of the respondent _____	_____
102.	Marital status _____.	1. Married 2. Unmarried 3. Divorced 4. Widowed 5. Separated
103.	Religion _____.	1. Orthodox 2. Protestant 3. Muslims 4. Catholic 5. Others, specify _____.
104.	Occupation _____.	1. Government employee 2. Housewife 3. Merchant 4. Drink seller 5. Others, Specify _____.
105.	Educational Status _____.	1. Illiterates 2. Read and write 3. 1-6 grade 4. 7-12 grade 5. 12 plus

S.No	Questions	Response	Code
106.	Ethnicity.	1. Amhara 4. Gurage 7. Nuwer 9. Opuo 11. Others, Specify	2. Oromo 3.Kambata 8 Majangir 10. Komo 4. Tigree 5 Agnuak
PART-TWO FERTILITY (For married / who have partner)			
201.	Do you have husband/partner? If no skip to ques.301.	1. Yes 2. No	
202.	Does your husband have another wife? Only for married women	1. Yes 2. No 3. I don't know	
203.	If Yes to Q no.202, how many wives he has other than you?	<input type="checkbox"/>	
204.	If the answer to Q no 202 is yes, what is the reason for that?	1. Cultural motivation 2. Bride wealth 3. Support of previous co-wives 4. Others, specify _____	
205.	Did you have any experiences of Pregnancy? If no skip to ques. 218.	1. Yes 2. No	
206	If the answer to Q no 205 is yes, how many Pregnancies have you experienced?	<input type="text"/>	
207	How many of the pregnancies were born a. live? If she is pregnant for the first time skip to 218.	<input type="text"/>	
208	At how many years interval you have delivered your last two children? If women has only one child skip to ques. 209.	<input type="text"/>	
209.	How many of the live birth/births is/are alive now?	<input type="text"/>	
210.	How many of your currently alive children are living with you?	<input type="text"/>	
211.	How many are living elsewhere?	<input type="text"/>	
212.	Had your given birth in the last twelve months prior to the survey? If no skip to ques. 215.	1. Yes 2. No	

213	If yes to ques. 212 what was the delivery outcome?	1. Single 2. Twins 3. Still birth 4. Others specify _____.	
214	If the answer to Q no. 212 is yes, how many of the delivery/deliveries was/were born live?	1. One 2. Two 3. Others, specify _____	
215	Did you have deliveries in the last five years preceding the survey? If no skip to ques. 218.	1. Yes 2. No	
216	If the answer to Q no 215 is yes, state the number of single and twin deliveries?	1. Single _____ <input type="text"/> <input type="text"/> 2. Twins _____ <input type="text"/> <input type="text"/> 3. Stillbirth _____ <input type="text"/> <input type="text"/> 3. Others, specify _____	
2017	If the answer to q. no 215 is yes, how many of the delivery/deliveries was/were born live?	<input type="text"/> <input type="text"/>	

S.No	Questions	Reponses	Code
218	How many children do you want to have in your life?	<input type="text"/> <input type="text"/>	
219	Have you experienced unintended pregnancy till today? If no skip to ques. 223.	1. Yes 2. No	
220	If the answer to Q. no 219 is yes, how many of your pregnancies were unintended?	<input type="text"/> <input type="text"/>	
221	If the answer to Q no 219 is yes, how many of the unintended pregnancies ended up in induced abortion?	<input type="text"/> <input type="text"/>	
222	Have you attended health care during the occasion?	1. Yes 2. No	
223	Have you attended ANC during your last pregnancy?	1. Yes 2. No	
224.	Where did you deliver your last child?	1. Health institution 2. Home 3. Others, specify _____	
225	If the place of delivery for Q no. 224 is home what was the reason for home delivery?	1. Lack of money 2. No problem I have faced 3. Fear of instrument used 4. Others, specify _____.	
226	Have you attended immunization sessions during your pregnancy or at any time?	1. Yes 2. No	
227	Have you attended PNC during you last delivery?	1. Yes 2. No	
228	Where do you take/go when ever you or your child gets diseased?	1. Government HI 2. Private clinic 3. Private pharmacy 4. Other, specify _____.	

S. No.	Questions	Responses	Code
301	Do you know any natural family planning method? If no skip to quest. 401.	1. Yes 2. No	
302	If the answer to Qes. no 301 is yes, which method do you know?	1. Abstinence/postpartum abst. 2. Breast feeding 3. Calendar/periodicabst./Safe-p 4. Cervical Method 5. Others, Specify _____	
303	Have you ever used any of the method? If no skip toquest.306	1. Yes 2. No	
304	If yes to quest. 303 which of the natural methods you are/were using? (Circle all that apply).	1. Abstinence/postpartum abst. 2. Breast feeding 3. Calendar/periodic abstinence 4. Cervical Method 5. Others, Specify _____	
305	Why do you choose this method from modern contraception?	1. Religious factor 2. Fear of side effects of modern methods 3. Others, specify _____	
306	Do you abstain sexual contact postpartum?	1. Yes 2. No	
307	If the answer to Q no 306 is yes, for how many months do you abstain?	<input type="text"/> <input type="text"/>	
308	If the answer to Ques. 306 is yes, what was the reason for abstinence?	1.Male spermatozoa poison breast milk 2. To space births 3. For health concern 4.Cultural factors 5. Others, Specify	
309	Do you support postpartum abstinence beyond three months?	1. Yes 2. No	
310	Is there any local herbal used to control fertility? If no skip to ques. 312.	1. Yes 2. No	
311	If the answer to Ques. no 310 is yes, Specify it?	_____	
312	Have you breast fed your last child? If no skip to ques. 401	1. Yes 2. No	
313	If yes to quest 312 for how many months you have breast-fed your child?	<input type="text"/> <input type="text"/>	

S.no	PART FOUR, MODERN CONTRACEPTION (For all women included in the survey) Questions	Response	Code
401.	Have you heard about any of the modern contraception? If no skip to ques. 403.	1. Yes 2. No	
402.	If the answer to Q no 401 is yes, from where or whom you have heard about it?	1. Radio 2. Television 3. Husband 4. Peer 5. Health professional 6. Others specify.	
403.	Do you know any of the modern contraception's? If no skip to ques. 501	1. Yes 2. No	
404.	If yes to ques. no 403, which of the modern contraception do you know? (Circle all that apply)	1. Pills 2. Injectables 3. IUDS 4. Diaphragm 5. Barriers 6. Others, specify ____	
405.	If the answer to Ques. no 403 is yes, are you using it currently?	1. Yes 2. No	
406.	If the answer to Ques. no 405 is yes, which method are you using?	1. Pills 2. Inject able 3. IUD 4. Diaphragm 5. Barrier methods 6. Others, Specify	

S. No	Question	Response	Code
407	If the answer to Ques. no 405 is <u>no</u> , what was the reason?	1. Use of natural method 2. Need more child 3. Fear of side effects 4. Religious prohibition 5. Husband objection 6. Others, specify _____	
408	If you want to use modern contraception (pills, injectable, IUD, Implant or Barrier Method), from where do you get?	1. Hospital (Government) 2. Health center (Government) 3. Private clinic 4. Private pharmacy 5. Others, specify, _____	
409	What is the importance of modern contraception?	1. Prevent pregnancy 2. Space children 3. Avoid complication 4. Limit family size 5. Help to maintain health 6. Others, specify _____	
PART-FIVE, DECISION MAKING (For those who are married only)			
501	Who is/are the source of income for the family?	1. Both 2. Husband 3. Wives 5. Others, specify _____	
502	Who can make decision on family income expenditure?	1. Both 2. Male 3. Female	
503	Who can make decision on family size?	1. Both 2. Male 3. Female 4. Others, specify _____	
504	Did you have discussion with your husband in the last six months about family planning?	1. Yes 2. No	
505	Do you have the right to use any of the reproductive health service including the use of family planning? If yes skip to ques. 601	1. Yes 2. No	

506	If the answer to Q no 505 is no, who can make the decision?	1. Both 2. Male 3. Female 4. Others, Specify	
507	What would happen if you have used contraception with out the knowledge of your husband?	1. Divorce me immediately 2. Bits me 3. Stops coming to me 4. Others, specify	
601	Is there any problem that you face when you want to get service? If no skip to ques.603.	1. Yes 2.No	
602	If yes to ques 601, what are these Problems? Said you are not on menses Today is not a service day Asked to pay for the service Many clients were there then appointed To come with husband Not meant for un married women Restricted parity against my need Restricted age against my need Required method is not available No trained professional on methods Required instrument is not available Others, specify_____	1. Yes 2. No 1. Yes 2. No 1. Yes 2. No 1. Yes 2. No 1. Yes 2. No 1. Yes 2. No 1. Yes 2. No 1. Yes 2. No 1. Yes 2. No 1. Yes 2. No 1. Yes 2. No 1. Yes 2. No	
603	Have you ever visited family planning clinic in the absence of your menses? If no skip to ques. 605	1. Yes 2. No	
604	If yes to ques 603, which methods of family Planning you were given? Barrier method Barrier method & a cycle of oral pill Counseling only Counseling & barrier method Investigated sign & symptoms of Pregnancy & given contraception Done pregnancy test & give contraception Others, specify_____	1. Yes 2. No 1. Yes 2. No 1. Yes 2. No 1. Yes 2. No 1. Yes 2. No 1. Yes 2. No 1. Yes 2. No 1. Yes 2. No	
605	Do you intended to use modern contraception in the next 12 months? For non-users only/	1. Yes 2. No	
606	If the answer to ques. 605 is no, why not? Use of natural method (abstinence) Desired sex of child	1. Yes 2. No 1. Yes 2. No	

	Lack of information (knowledge)	1. Yes	2. No	
	Male dominance (disapproval)	1. Yes	2. No	
	Desire to have child	1. Yes	2. No	
	Religious prohibition	1. Yes	2. No	
	Don't have partner/no sexual intercourse	1. Yes	2. No	
	Lack of method mix	1. Yes	2. No	
	Others, specify	1. Yes	2. No	
607	Have you used any of the modern contraception in your life? If no skip all (For all respondents)	1. Yes		
		2. No		
608	If yes to ques. 607 have you discontinued using for a minimum of three consecutive months during the last three years? If yes skip to ques. 610.	1. Yes		
		2. No		
609	If the answer to ques. 608 is no, for how long have you used with out interrupting?	<input type="text"/> <input type="text"/>		
610.	If yes to ques 608, was/were the reasons that made you to discontinue contraceptive method? / For those who discontinued using/			
	Desired sex of child	1. Yes	2. No	
	Lack of method mix	1. Yes	2. No	
	Criteria requested	1. Yes	2. No	
	One cycle rule followed	1. Yes	2. No	
	Failure of method	1. Yes	2. No	
	Lac of money	1. Yes	2. No	
	Lack of respect of service provider	1. Yes	2. No	
	Parent disapproval	1. Yes	2. No	
	Desire to have child	1. Yes	2. No	
	Husband objection	1. Yes	2. No	
	Fear waiting time	1. Yes	2. No	
	Others, specify			
<p>Now I have completed the interview, thank you for your cooperation</p> <p style="text-align: center;">Name of data collector _____</p> <p style="text-align: center;">Signature _____</p>				