MODERN CONTRACEPTION INITIATION:
DOES INVOLVING HUSBANDS MAKE A DIFFERENCE?

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ABSTRACT

A field trial to initiate modern contraception (MC) was conducted in Kotebe Awraja, Addis Ababa Administrative Region, between August 1990 and January 1991. The purpose of the field trial was to examine what effect involving husbands in a family planning (FP) intervention program would have on the initiation of modern contraception (MC) by the couple. A total of 528 married women aged 15-49 were included in the study, randomly divided into two groups on the basis of "blocked" assignments to home visitors. The experimental group, totalling 267 received the intervention package with their husbands, while the control group, totalling 261 received the intervention package without the involvement of their husbands. The FP intervention package was the same. A baseline interview conducted to assess socio-demographic, reproductive, knowledge and attitudes of the wives, as well as of their husbands prior to group assignment did not reveal any statistically significant differences between the experimental and control groups. Of the 528 married couples who were entered into the study, 106 initiated MC. A statistically significant higher proportion of couples in the experiment group initiated MC as compared to those in the control group. (relative risk 1.61), 95%

CI (1.13, 2.3), $p < .007$. The younger age of wife and husband, higher educational level of wife, greater number of barriers identified to use MC, and having a husband's support were positively associated with the verified initiation of MC. It is concluded that FP programs for married women of reproductive age which include husbands have a higher degree of success than those only directed to wives. It is therefore recommended that future family planning programs should include men and that further investigation of its effectiveness be implemented.

INTRODUCTION

The need to control the size of a family appears to be as ancient as the history of mankind. The subject has been written about on Egyptian papyrus almost 4,000 years ago, discussed among Greek philosophers 2,400 years ago, and documented references have mentioned birth control in India and China as far back as 1,600 and 1,300 years respectively (1). Earlier the emphasis had been to contain potential population explosions and to the preservation of a stationary populations. Although there were fewer people then than there are now, the ability to provide for life's necessities were correspondingly low, hence progress and civilization was thought to be served best by birth control (1). Similar incentives now prevail, though at a much higher magnitude and urgency.

The motive behind couples practising birth control then was probably no different than those practising birth control now. Couples wanting to be free from the constant confinement of pregnancy and the burden of properly feeding and caring for a new baby each year. In other words couples practise birth control to avoid the risk that pregnancy presents to the mother, as well as the economic and health care demands that uncontrolled fertility imposes on the family as a whole.

Based on a United Nations (UN) report, the median crude birth rate (CBR) in developed countries has dropped from 21 to 14 during the years 1960-88, while that for developing countries has remained stable at around 50 during the same period. The median 1
contraceptive prevalence rate (CPR) was 71% and 5% for developed and developing countries, respectively, in 1988 (2).

A study conducted in 5 regions of Ethiopia by Alasebu Gebre Selassie found that 63.5 percent of women were married by the time they were 15 years old and only 3.7 percent of women remained single by the time they were 24 years of age. Her study included 1700 women from; Addis Ababa, Eritrea, Arssi, Hararghe and Godjam (3). With the fecundity level regular or nearly so from one group of women to another (4), the existence of a very low CPR results in the potential for a very high total fertility rate (TFR). High TFR's such as that of Ethiopia at 7.5 children/women over the child bearing years (5) has a negative impact on the health of individuals and on the socio-demographic as well as economic status of the nation.

Ethiopia is one of the developing countries where maternal mortality rates (MMR) are the highest. A maternal mortality survey conducted by Kwast et al. (6) in Addis Ababa estimated the MMR for 1982-83 to be

566/100,000 live births. Considering other variables such as health services coverage, population distribution and literacy levels, rural areas are likely to have an even higher rate. Consequently, the MMR is estimated to range between 500-2,000/100,000 live births in Ethiopia (6,7). In addition the infant mortality rate is 139 per 1000 live births and overall CPR's are around 2% (2,5). The very low CPR of our study area, also at around 2% (8), and the need to raise this rate led to the present study.

Based on the 1984 Ethiopian Population Report, the CBR is stable at around 47.6/1000 and the crude death rate (CDR) of 17.9 is declining, thus yielding an accelerating population growth rate of 2.97 with an estimated base population of 47.3 million in 1988 and a doubling time of only 24 years (5). The population projection of Ethiopia using a low fertility projection, which assumes intensive and extensive FP programs, is expected to reach 90 million by 2010 and 165.3 million by 2035. With a high variant projection i.e. no formal FP intervention and therefore a constant fertility level, the population is expected to reach 95.5 million by 2010 and 251.2 million by 2035 (5).

This situation is alarming, and calls for urgent intervention. Any study conducted to improve this low contraceptive prevalence rate is of a public health,

socio-economic and demographic priority. It is therefore the duty of those aware of the problem and its consequences and those having the resources to improve the situation, to expose the problem and do their best to alleviate this complex situation.

Due to the limited period of time allocated to pursue this study, the focus is limited to initiation of modern contraception. Evaluation of the continued use of MC will be conducted at a later date on the same population. It is expected that if the study is successful similar intervention procedures would be conducted with the appropriate modification in other awrajas of the same and other regions.

LITERATURE REVIEW

Throughout the world at least one-third of all couples who practice family planning (FP) use a method that requires male involvement; these include condoms, vasectomy, withdrawal and periodic abstinence (9). It takes two to start a new life and to say the least it takes two responsible couples or partners to prevent it in a situation where couples are residing in union. To date most family planning studies carried out in developing countries have been done exclusively on women. FP studies on both men and women, and exclusively on men are very few. For years FP responsibilities were viewed to be the women's domain. The trend towards involving men in FP studies over the past decade continues to gain momentum, yet the fact that FP remains an integral and vital part of maternal and child health (MCH) program implies that FP responsibilities are still attached very strongly to women.

Knowledge, attitude, and practise (KAP) information about FP in men has mainly been collected from their wives. The few studies dealing directly with men reveal that, contrary to the general belief, many men want to limit family size, support child spacing, and are aware of economic burdens that result from having large families. The sources of information on FP for men are

mainly their wives, friends and mass media while those for women are friends and health professionals (9).

Fertility, which is the actual performance of child bearing, is a sociological and cultural interplay of various factors. It is more than a biological phenomenon of the physiological capacity to produce children. Fertility regulation represents a deliberate intention to control behaviours which lead to childbearing. Behaviours of individuals are by and large determined by cultural norms, taboos, and values of one's society which directs one's behaviour among other issues to the use or nonuse of MC (4).

Barriers to the use of modern contraception have been studied in several countries. Though the degree may vary from one county to another, most communities expressed barriers reflecting upon lack of knowledge, desire for more children, lack of services, fear of side effects, and husband disapproval (9,10). The findings of Agonafer (11) and that of Fikreab (12) in Ethiopia support these generalizations. Joseph et al. (13) found in their study conducted over five metropolitan cities in Indonesia that the percentage of nonuse attributed to husbands disapproval was 17.4% and 27.2% in the two areas studied. In Indonesia a husband's approval plays an important role in contraceptive use among women who desire to have no more children.

Gallen et al. (9) integrated material that was published and unpublished along with correspondence and interviews; they conclude that in most societies the husband is the decision maker. This is particularly true when the wife is economically dependent on the husband. The decision-making role of the husband is extended to the couple's reproductive behaviour. Results from countries as far apart as Hong Kong, Indonesia, Mexico, Nigeria, South Africa, Ireland and the United States indicate that the decision of woman to initiate, continue, or to stop MC is strongly influenced by her husband or partner (9).

A survey conducted by Khalifa (14) on men's attitudes towards FP involved 1,500 urban Sudanese men over 18 years of age. The decision not to practise FP was found to be made by men. Even when men support FP to be practised by their wives, when asked who should make the decision, 44.7% said the decision to practise FP should be made jointly by husband and wife, 34.1% said it should be made by husbands only, 14.5 felt it should be made by a medical professional, while only 5.4% believed it should be solely the wife responsibility. An additional 12% would not even respond to the question.

In Sub-Saharan Africa there is the fear among men that if their wives control their fertility without informing their husbands female promiscuity and

infidelity will result. This general attitude pressures women not to initiate contraception and further contributes to high fertility (15). Nichols et al (10), conducted a study in the three hospitals where FP programs were run in Dakar, Senegal. In their findings 50% of the MC clients stated lack of knowledge as reason for low prevalence, with another frequently stated reason being husband's opposition.

Studies done in Ethiopia do not differ from others done in the same region (11,12). Cook (16) has stated that removal of husband's autonomous authority is an essential requirement for improvement in utilization of FP services. In her study, Cook estimates when this happens, MC coverage increases by about 25%.

Agonafer (11), based on his study of barriers to access to MC in Addis Ababa concluded that the reasons for none use of MC to be lack of factual knowledge, desire for more children, fear of side effects, religious and cultural pressures, and spousal opposition. In Fikreab's study (12) it was reported that MC usage was strongly positively associated with husband reporting of husband-wife communication as well as husband attitude towards MC.

It is estimated each year 500,000 women die as a result of pregnancy and childbirth (17); 99 percent of these deaths occur in developing countries (18).

Trussell et al. (19) explored the relation between a hypothetical effective FP programme and changes in infant, child and maternal mortality using results of recent multivariate studies and estimated the following; 1) if childbearing were confined to the "prime" reproductive age of 20-34, infant and child mortality would fall by 5 percent, 2) limiting childbearing to between the ages of 20-39 would reduce maternal mortality rate by 11 percent, 3) preventing fourth and higher order births would reduce infant and child mortality by about 8 percent while elimination of fifth and higher order birth would reduce maternal mortality rate by about 4 percent, and 4) if all births subsequent to the first are spaced by at least 2 years infant mortality may be reduced by 10 percent and child mortality by 21 percent.

Winikoff's et al. (17) estimate of the extent of the reduction of maternal mortality and birth based on the analysis of maternal mortality studies conducted by five scholars in Asia, Western Europe and Africa reveals that prevention of birth to women $\leq$ 15 and to women over 30 years of age or parity equal to or greater than five will reduce maternal mortality by 47% and at the same time prevent 18% of births.

FP addresses two of the most serious health problems of the developing world, namely maternal mortality and infant mortality. It addresses these problems first and

foremost by preventing pregnancy and all the risks associated with it. It addresses infant mortality by preventing births, controlling the arrival of unplanned infants, and enabling responsible parents to produce only those offsprings whose biological, social, economical and emotional needs they could satisfy. FP has a unique attribute in that while it reduces MM and IM it also controls population growth, an impact which could not be achieved through improvement of other health programs the contribution of which are prolonging life thus contributing to population growth (18,19,).

Based on evidence from the world fertility survey (WFS) if those women who do not want to become pregnant are empowered to exercise their choice the rate of population growth in the developing world would fall by about 30% (2).

In considering the risk of adverse pregnancy outcomes one must take into account the complex interaction of the socio-economic status of women in developing countries, their general health status, physical development, nutritional status, access to antenatal care, and quality of care. When one or more of these is adversely affected there will be significant effects on the well being of the mother.

This study is conducted to determine the effect of involving husbands in the initiation of MC usage by the

couple. Husbands disapproval has been given as one of the most common barriers to MC usage in Sub-Saharan Africa, including Ethiopia. Initiation, continuation of use, as well as discontinuation of MC is influenced by husbands and male partners as declared by their wives and partners in several studies. This study will experimentally assess to what extent involving husbands in FP education improves MC initiation rates.

OBJECTIVES AND HYPOTHESIS

OBJECTIVE

To determine the relative efficacy of two modern contraception programs; the first providing health education in the home directed towards married women of childbearing age, the second providing a similar service, also in the home, but involving husbands in the health education. In both instances modern contraception was provided in the home if requested and its "initiation" was confirmed at a 2 months follow up visit at the local health station or outreach.

HYPOTHESIS

That women who receive a family planning education intervention with their husbands when compared to those receiving the same educational intervention, but not with their husbands, will be significantly more likely to initiate modern contraception. ($p < 0.05$), (one-sided).

MATERIALS AND METHODS

STUDY DESIGN

This is an experimental, randomized field trial comparing the relative efficacy of two alternative modern contraception educational intervention programs. The general architecture of the study is found in figure 1. The setting of this trial is the urban Kotebe District of Addis Ababa. The trial was carried out between August, 1990 and January, 1991.

POPULATION

Source Population. After assessing the accessibility of the area to conduct the study, in view of the fact that the study was conducted during the rainy season and the lack of transportation to the peasant association, the urban area of the awraja was selected to be the area at which the study would be conducted. The urban population constitute eighty percent of the total 43,000 awraja population. Twelve zones in the urban area were selected using the table of random figures. The source population was any urban Kotebe resident female, between the ages of 15 and 49 years, married, and living with her husband. It was estimated that there were approximately 4,200 women meeting these criteria at the time of the study. Excluded from eligibility were those

women presently using modern contraception, pregnant women, and those with a chronic physical or mental illness.

Sample Size. The following formula for the comparison of two independent proportions was used to calculate the required sample size (20).

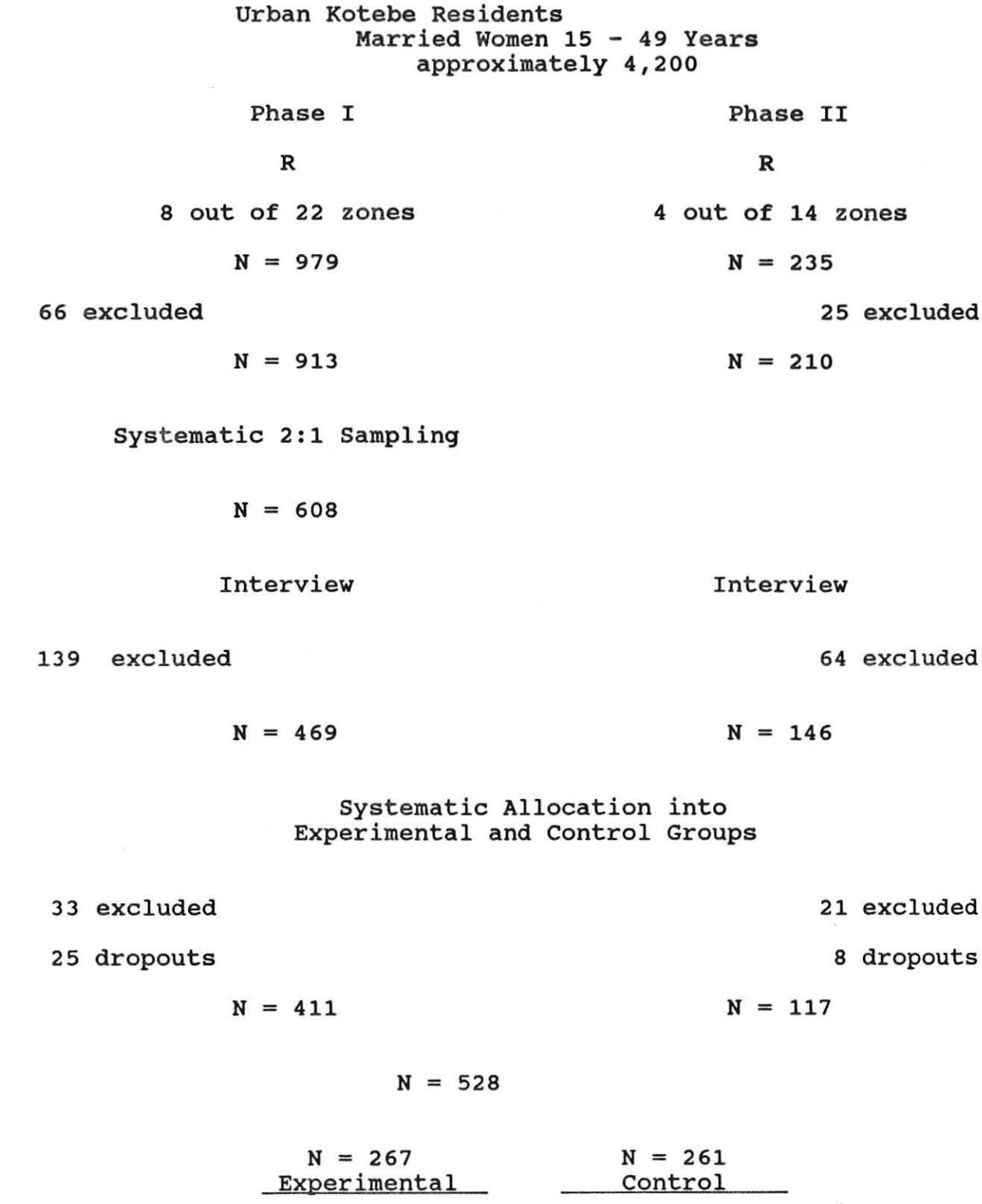

Figure 1. Architecture of Trial and Sampling Framework

$$n = \frac{(Z_{\alpha/2} + Z_{\beta})^2 \; P(1 - P)}{L^2} \; \frac{r+1}{r}$$

The following parameters were set; alpha=.05, beta=.20, the overall expected proportion of women initiating modern contraception (P) to be .20, and the minimal detectable difference in initiation rates between the two study groups (L) to be .10. The ratio of those in the two study groups (r) was planned to be approximately 1:1. Given these parameters n which is the number of subjects per study group was calculated to be 251. Allowing for dropouts it was decided to aim for 260 subjects per group.

Study population. Entry to the study had two phases as outlined in figure 1. It was estimated that there are around 4,200 married women of reproductive age in Kotebe urban area of 22 zones. In the first phase 8 out of 22 zones were selected using the table of random numbers. A total number of 979 were collected from the kebeles where these zones were located. Of these 66 were excluded because of known pregnancy (n=53) or taking MC (n=13). The remaining 913 women were systematically sampled by a 2:1 ratio. The names and addresses of two thirds, 608 women was then prepared and separated into blocks of ten. 54 names were excluded as they could not be found or their houses could not be located; the husbands of 36 women were not residing in the study area during the time of the study and therefore were excluded. 17 women were pregnant and 11 were on MC and therefore excluded. 7 were either

over 49 or had reached the stage of menopause. 6 of the remaining eligible were either divorced or separated, 4 were widows and 4 refused to be interviewed. The remaining 469 women were interviewed.

Completed interviews were checked the day following the interview for accuracy and completeness. Interviewers had to be sent back to properly complete the questionnaires on 15 of the women. The completed questionnaires were collected and safely stored. The names and addresses of the women who were interviewed were prepared in blocks of ten.

During the stage of the intervention blocks of ten names and addresses were provided to the home visiting health assistants and TTBAs. Four of the 8 home visitors had blocks of names from the experiment group for the first and second week, and then switched over to blocks of names from the control group for the third and fourth week. The other 4 health assistants had blocks of names from the control group for the first two weeks and then switched over to the experiment group in the third and fourth week. This procedure was followed to the end of the study. In the final accounting each home visitor had more or less an equal number of women from the experiment and control group.

Of the 469 women who were interviewed some dropped out; these were those not found at home twice when TTBAs went back to arrange for an appointment for the FP health education after the interview has been completed (n=25). Further exclusions were made during the home visits: 13 women were pregnant, 8 were over 49 or have reached

the stage of menopause. In 9 cases either husband or wife were out of the area after the interview and 4 had tubal ligation. 411 women eventually received a FP intervention.

The need for additional subjects was identified mid-way into the study. 4 out of the remaining 14 zones were selected randomly using a table of random numbers. A census of 235 names and addresses of eligible were collected from the registry covering the selected zones. 25 women were excluded because of known pregnancy (N=20) or taking MC (N=5). Of the remaining 210 women 18 could not be found or located. The husbands of 26 women were not staying in the study area during the study period. Fourteen were pregnant and 6 were using MC. The remaining 146 women were interviewed. Only 117 had the intervention as a further 11 women were pregnant, 8 dropped out, 5 were over 49 years of age or reached the stage of menopause, 3 husbands refused the intervention, 2 women were using MC, and therefore were excluded from the study. A total of 528 women received the FP intervention.

INTERVENTION

Eight health assistants; 6 residing in Kotebe Awraja and 2 residing in the neighbouring awraja (Yeka) as well as 8 TTBA from Kotebe awraja were selected to provide the intervention and serve as community guides respectively.

Modern Contraception Intervention.

The home visitors (HA) introduced themselves as family

planning educators sent from the Kotebe Awraja Health Station. They were trained to maintain an informal atmosphere and to permit a two-way free communication. The sessions generally started with a discussion of the health of the family, which is a culturally acceptable manner in which to initiate a conversation.

Questions on the reproductive history of the woman was used as the entry point to the actual family planning education. The content of the education focused on the advantages of family planning as; 1) a means of preventing unwanted birth, 2) birth spacing, and 3) in controlling family size. The subsequent advantage that birth spacing have to the mother, children and the entire family with respect to both promotive and preventive aspects of health was discussed. The ill effect of a large family size to all members of the family and that of the nation economically was stressed.

Next an explanation of alternative MC methods, i.e. birth control pills, the IUD and the condom were given. The efficacy of MC methods in preventing unwanted pregnancy as compared to traditional methods commonly believed to prevent unwanted pregnancy was discussed. For women who expressed an interest in the birth control pill but were afraid of side-effects, reassurance on the safety of the pill was given. (in those who qualified for MC pills in accordance with the checklist in Appendix B)

Women or couples who decided to initiate MC, were allowed their choice with the appropriate explanation. Instruction for follow up was given. For those who did not initiate MC during the

first visit a repeated visit was paid. In those who had the second visit, unresolved issues pending from the last visit were discussed. Those who did not initiate MC at this point were recorded as failing to initiate. (for detailed intervention information refer to Appendix A)

Husband involvement. A similar procedure and intervention content was to be followed when husbands were involved (experiment group). Interventionists were informed to be cautious in the event that husbands were aggressive, in which case they should channel the discussion towards more general topics.

MEASUREMENT

Baseline measurements. Prior to group assignment, a baseline survey using a questionnaire including items on knowledge about and attitude towards MC, demographic, socio-economic, reproductive characteristics of women as well as of their husbands whenever appropriate was conducted. (refer to appendix C).

Outcome measurement. Initial MC initiation, at the conclusion of the home visit was provided if the women in the control or the woman or the husband in the experimental group requested for a method, and were provided with two cycles of BCP, or two dozen of condoms or a set of packed copper T. Women were informed that they were free to come by the health station or outreach centers when ever they want but were requested to bring their foil BCP holder (both the used cycle and the second one) all women with intent to use MC were expected to come for their refill. The date of the

visit and the type of MC provided were recorded. Verified initiation was determined later if the woman came to the health station or outreach for a refill of her contraceptive materials, or return the IUD feedback slip indicating its insertion at the event of which the position of the IUD was checked.

CONDUCT OF TRIAL

Training. Formal training of 8 female health assistants on FP took place at the FGAE. This covered a brief review of the male and female reproductive system, anatomy and physiology, the process of conception, the different methods of birth control and counseling, observing while individual and group health education was provided at the FGAE clinic for new clients, observation of provision of MC and providing MC to new and old clients, with the exception of IUD insertion. Practise in recording information was also provided.

Formal training was given by the FGAE and health station staff to the TBA's with special emphasis on FP. Training of interviewers for two mornings included demonstration and roll playing, mainly to acquaint them with the questionnaire and stress the importance of confidentiality. There was also training of interventionists with demonstration and roll playing for three mornings. These last two training sessions were done at the clinic by the principle investigator and the roll playing was conducted in the presence of the principle investigator and the supervisor.

Pilot Study. Interviewers had to interview 8 subjects each

from 1 zone not included in the study. TTBA accompanied interviewers as guides, since they were to accompany the interventionists at the second stage of the study. The supervisor accompanied each interviewer into two houses.

Interventionists had to give MC health education to 4 members of the study group; two members from each group accompanied by the supervisor and TTBA. The objectives of the pilot study were; 1) to improve interviewing and intervention technique, 2) to determine the time required for each interview, 3) to determine how long each intervention period would last on average, 4) to determine the appropriate daily workload, and 5) to determine how well the assumption of eligables corresponds with the actual available number of subjects. After the pilot survey some questions were rewritten; two questions dealing with income and number of children who died were omitted.

It was estimated that each interview took 10 minutes on average. Each intervention took 60 minutes on average. Due to the fact that the study was conducted during the rainy season and on weekends or after 4 PM, the weekly interview capacity was estimated to be 20 per week per interviewer and the number of intervention visits at 10 per week per HA.

Monitoring. Interviewers handed in their completed interview paper to the principal investigator on the day following the interview. The supervisor accompanied the interventionists for the first 10 days of the study. Interventionists were required to bring their record book each week on a friday to the principal

investigator. Interventionists were free to come to the supervisor and/or the principal investigator whenever they saw the need.

Unannounced checkups were done on 5% of subjects claimed to have had the intervention which proved to be 100% accurate.

A time table for the investigation is found in Appendix D.

ANALYSIS

All questionnaires were first checked by the principal investigator for accuracy and the data coded. The data was then entered, also new variables were created by joining some of the data already available. These were:

total live children (TLC): the sum of live male and live female children

knowledge: total # of positive responses contributive to small family size in response to Q #23 A and C

attitude: total # of positive attitude towards small family size in response to Q # 23 B and D

Data was edited and analyzed using EPI-INFO version 5.0 statistical package. Comparison of means was conducted between the two groups. The appraisal of randomization of the group assignment was ascertained by comparison of the descriptive characteristics of the two intervention groups.

Main group effects were tested using bivariate analysis (chi-square and t-tests).

RESULTS

Almost 95 percent of the study group were Orthodox Christian and 85 percent of the wives were housewives. The language of origin of two-thirds of the husbands and wives was Amharic while that of the rest was mostly Oromigna. Also two-thirds of the husbands were government employees. There was no difference between the two groups in these categorized variables.

QUALITY OF RANDOMIZATION

Table 1 presents a summary of comparison of means between the experimental and the control group for continuous variables descriptive of demographic, reproductive and knowledge/attitude characteristics. There was no significant difference between groups with the exception of the number of wife's siblings. There was 0.6 higher number of wife's siblings in the control group. Even though this variable resulted in a statistically significant value at $p < .007$ it failed to show importance in influencing the outcome of the field trial when viewed collectively for all the study groups, as well as in the different groups separately.

The continuous variables in table 1 were next categorized in order to have a more detailed examination of their distribution within the two treatment groups. These are summarized in table 2 (socio-demographic variables) and table 3 (reproductive characteristics). As observed from table 2, the majority of the wives in the study were between the age groups of 25 and 39 while the majority of the husbands were between the age groups of 35 and 44.

The level of education of almost 70 percent of the women in the study was 6th grade or below, while 70 percent of the men in the study group have completed 5th grade or higher. Husbands in the study group were both older and higher educated than wives as may be expected.

Moving to the reproductive characteristics of the couples in the study groups (table 3) it is noted that only 6.6 percent of the women have no living children. The number of women having one to two children, three to four children, five or more children is evenly distributed.

Apart from 7 women (1 percent) who replied in accordance to "God's will", the majority of the women (65 percent) desire to have 4 children. Almost 15 percent of the women have not heard of any MC method prior to this intervention while about 40 percent of women knew of only one MC method mainly the BCP.

Comparison of categorical variables between the two groups is summarized in table 4. There was no significant difference between the two groups.

Based upon the results of the comparison of the continuous and categorical variables between the two intervention groups, the quality of randomization was ascertained and the possibility of bias in assigning couples to one group or the other, that is selection bias was ruled out for those variables measured.

Table 1. Summary of Bivariate Comparison of Experiment and Control Groups for Continuous Variables

Variable	Experiment Group X = ISD	Control Group X + ISD	F statistic	P.Value
wife's age (years)	30.8 ± 6.7	31.5 ± 6.8	1.78	0.18
Husbands age	39.8 ± 8.2	41.0 ± 8.9	2.55	0.11
W.Educ (years)	5.2 ± 3.8	5.2 ± 3.9	0.01	0.92
H. Educ (years)	7.3 ± 4.1	7.3 ± 4.4	0.04	0.84
# W. Siblings	5.0 ± 2.6	5.6 ± 2.9	7.18	0.007
# H. Siblings	4.5 ± 2.8	4.5 ± 2.8	1.50	0.22
# of Births	3.9 ± 2.4	4.0 ± 2.5	0.08	0.78
# Alive male children	2.0 ± 1.5	1.8 ± 1.4	0.08	0.32
# Alive female children	1.6 ± 1.3	1.8 ± 1.6	2.25	0.13
Total # living children	3.6 ± 2.2	3.6 ± 2.3	0.10	0.74
Age of last child (in months)	40.1 ± 47.9	42.0 ± 51.6	0.01	0.80
# of MC aware of	1.05± 1.1	1.06± 93.0	1.08	0.17
Desired # of children in	4.0± 1.2	4.0 + 1.7	0.23	0.64

Table 2. Comparison of Baseline Socio-Demographic Variables Between the Experimental and Control Group

Variable	Experiment Group N(%)	Control Group N(%)
Wives' Age (years)		
< 25	50(18.7)	40(15.3)
25 - 29	57(21.3)	51(19.5)
30 - 34	66(24.7)	65(24.9)
35 - 39	62(23.2)	69(26.4)
40 - 49	32(12.0)	36(13.8)
Husbands' Age		
< 30	20(7.5)	24(9.2)
30 - 34	30(14.6)	28(10.7)
35 - 39	63(23.6)	57(21.8)
40 - 44	72(27.0)	58(22.2)
45 - 49	37(13.9)	44(16.9)
≥ 50	36(13.5)	50(19.2)
Wives' Educ (years)		
0 - 1	42(15.7)	46(17.6)
2 - 3	74(27.7)	77(29.5)
4 - 6	71(26.6)	54(20.7)
7 - 8	28(10.5)	32(12.3)
≥ 9	52(19.5)	52(19.9)
Husbands' Educ (years)		
0 - 2	35(13.1)	42(16.1)
3 - 4	46(17.2)	34(13.0)
5 - 8	87(32.6)	82(31.4)
9 -12	81(30.3)	78(29.9)
≥ 13	18(6.7)	25(9.6)

Table 3. Comparison of Reproductive Characteristics of the Study Group

Variable	Experiment Group No(%)	Control Group No(%)
Total # of Births		
0	16(6.0)	18(6.9)
1	36(13.5)	25(9.6)
2 - 4	110(41.2)	113(43.3)
5 - 6	56(21.0)	59(22.6)
≥ 7	49(18.4)	46(17.6)
# Live Male Children		
0	42(15.7)	40(15.3)
1	76(28.5)	86(33.0)
2	65(24.3)	70(26.8)
3	39(14.6)	28(11.1)
≥ 4	45(16.9)	36(13.8)
# Live Female Children		
0	60(22.5)	59(22.6)
1	80(30.0)	74(28.4)
2	60(22.5)	50(19.2)
3	41(15.4)	42(16.1)
≥ 4	26(9.7)	36(13.8)
Total # Live Children		
0	16(6.0)	19(7.3)
1 - 2	74(27.7)	80(30.7)
3 - 4	89(33.3)	71(27.2)
≥ 5	88(33.0)	91(34.9)
# Desired Children		
0 - 3	48(18.3)	53(20.5)
4	180(68.4)	165(64.0)
≥ 5	35(13.3)	40(15.5)

Table 3 (cont.)

Age of Last Child (Month)		
0	16(6.0)	18(6.9)
1 - 2	16(6.0)	18(6.9)
3 - 6	26(9.7)	27(10.3)
7 - 12	45(16.9)	42(16.1)
13 - 24	43(16.1)	43(16.5)
25 - 36	32(12.0)	19(7.3)
37 - 60	31(11.6)	35(13.4)
61 -348	58(21.0)	59(22.6)
# Wife's Siblings		
0 - 1	18(6.7)	19(7.3)
2 - 4	102(38.2)	69(26.4)
5 - 6	79(29.6)	77(29.5)
≥ 7	68(25.5)	96(36.8)
# Husband's Sibling		
0 - 1	42(15.8)	30(11.5)
2 - 4	101(38.0)	100(38.5)
5 - 6	62(23.3)	73(28.1)
≥ 7	61(22.9)	57(21.9)
# MC Methods Aware of		
0	51(19.1)	21(8.0)
1	89(33.3)	114(43.7)
2	65(24.3)	66(25.0)
≥ 3	62(23.2)	60(23.0)

Table 4. Summary of Bivariate Comparison of Proportion Between ExerimentandControlGroups.

Variable	Experiment Group NO (%)	Control Group NO (%)	rr	(95% CI)
Subjects language				
Amharic	171(64.0)	169(64.8)	1.01	(0.9,1.2)
Oromigna	96(36.0)	92(35.2)		
Husbands language				
Amharic	167(62.5)	165(63.2)	1.01	(0.9,1.2)
Oromigna	100(37.5)	96(36.8)		
Occupation				
Unemployed	* 43(16.1)	38(14.6)		
Self employed	60(22.5)	61(23.4)	0.93	(0.7,1.2)
Government empl.	164(61.4)	162(62.1)	0.95	(0.8,1.2)
Barriers				
0	* 19(07.1)	33(12.6)		
1	207(77.5)	186(71.3)	1.44	(1.0,2.1)
2	4(15.5)	42(16.1)	1.35	(0.9,2.1)
Knowledge				
0	* 33(12.4)	27(10.3)		
1	72(27.0)	60(23.0)	0.99	(0.8,1.3)
2	162(60.7)	174(66.7)	0.88	(0.7,1.1)
Attitude				
0	* 87(32.6)	85(32.6)		
1	129(48.3)	128(49.0)	0.99	(0.8,1.2)
2	51(19.1)	48(18.4)	1.02	(0.8,1.3)
Husbands support				
1	164(61.4)	148(56.7)	1.01	(0.9,1.3)
0	103(38.6)	113(43.3)		

* referent group.

MAIN GROUP EFFECTS

Tables 5 and 6 present findings which are brought about as a result of intentionally administering two different approaches of FP intervention. These two tables bring out the main results of the study. Table 5 shows almost 50 percent of those in the experiment group became interested in using MC, requested, and received a method of their choice (if qualified) with the intent to use it while only 33 percent of those in the control group did the same.

Table 6 which is the final outcome of the study when intent to use MC was verified one to two months later following the home visit. It shows that in 25 percent of those in the experiment group initiation of MC was verified as compared to 15 percent of those in the control group. Those in the experiment group were 1.61 times more likely to initiate MC when compared to those in the control group with $p < .007$ and 95 % CI (1.13,2.30). It was noted that both in the experiment and control group only in 50 percent of the couples with intent to use MC, initiation of MC was verified one to two months later.

Table 5. Intent to use MC at Conclusion of Home Visit.

Group	yes N	yes (%)	no N	no (%)	Relative Risk	(95% CI)
Control	86	(33.0)	175	(77.0)		
Experimental	125	(46.8)	142	(53.2)	1.42	(1.15,1.76)

chi-square p <.01

Table 6. Frequency and Percent of Couples With Verified Initiation of MC

Group	Verified Initiation Yes N (%)	No N (%)	Relative Risk	(95% CI)
Control	40 (15.3%)	221 (84.7%)		
Experimental	66 (24.7%)	201 (75.3%)	1.61	(1.13,2.30)

chi-square $p \leq .007$

CHARACTERISTICS ASSOCIATED WITH OUTCOME

An attempt was then made to identify those variables in addition to the different approaches to family planning health education associated with the decision to initiate MC ($p<.05$). All variables except Q #2. kebele, Q #3. Zone, Q #4. house number and Q #9. religion were subjected to this analysis. The results in table 7. show that the intervention package has worked best with those couples in the younger age group both in those with young wives as well as in those with young husbands. It was also more effective in those couples whose wife's educational level is higher, of parity 1-4, in those couples with younger age of last living child, with couples whose husbands are supportive of MC usage and in those couples whose wife's could identify higher number of barriers for her use of MC.

A stratified summary of relative risk calculations for main group effects were run on husband's and wife's age, husband's support, and parity. In each case the summary relative risk remained significantly above unity and MH chi-square <.05.

Table 7. Variables Associated with MC Initiation

Variable	Initiated MC yes N(%)	no N(%)	Relative Risk	(95% CI)
Wife's age***				
40-49	4(6.3)	64(93.7)		
35-39	18(13.7)	113(86.3)	2.37	(0.8,6.6)
30-34	30(22.9)	101(77.1)	3.81	(1.4,10.6)
25-29	28(25.9)	80(74.1)	4.41	(1.6,12.0)
< 25	26(28.9)	64(71.1)	4.91	(1.8,13.4)
Wife's educ*				
≥ 9	26(25.0)	78(75.0)		
7-8	16(26.7)	44(73.3)	1.07	(0.6, 1.8)
4-6	14(1.2)	111(98.8)	.45	(0.3, 0.8)
2-3	31(20.5)	120(79.5)	.82	(0.5, 1.3)
0-1	19(21.6)	69(78.4)	.86	(0.51,1.5)
Parity**				
≥ 7	15(15.8)	80(84.2)		
5-6	21(18.3)	94(81.7)	1.16	(0.6,2.1)
2-4	49(23.0)	174(77.0)	1.39	(0.8,2.4)
1	20(32.8)	41(67.2)	2.08	(1.2,3.7)
none	1(2.9)	33(97.1)	0.19	(0.03,1.4)
Total live children*				
none	1(2.9)	34(97.1)		
1-2	35(22.7)	119(77.3)	7.95	(1.1,56.1)
3-4	37(23.1)	123(76.9)	8.11	(1.2,57.1)
≥ 5	33(18.4)	146(81.6)	6.4	(0.9,45.3)
Age of last child (mo.)***				
61-348	8(6.8)	109(93.2)		
37-60	10(15.2)	56(84.8)	2.22	(0.9,5.3)
25-36	9(17.6)	42(82.4)	2.58	(1.1,6.3)
13-24	26(30.2)	60(69.8)	4.42	(2.1,9.3)
7-12	29(33.3)	58(66.7)	4.88	(2.3,10.1)
3-6	15(28.3)	38(71.7)	4.14	(1.9,9.2)
0-2	8(23.5)	26(76.5)	3.44	(1.4,8.5)
none	1(2.9)	33(97.1)	0.43	(0.1,3.3)

Table 7 (cont.)

Husband's Age**				
≥ 50	11(12.8)	75(87.2)		
45-49	7(8.6)	74(91.4)	.68	(0.3,1,6)
40-44	33(25.4)	97(74.6)	1.98	(1.1,3.7)
35-39	25(20.8)	95(79.2)	1.63	(0.9,3.1)
30-34	16(23.9)	51(76.1)	1.87	(0.9,3.8)
< 30	14(31.8)	30(68.2)	2.50	(1.2,5.0)
Husband's Support***				
yes	81(30.3)	231(69.7)	2.24	(1.5,3.4)
no	25(11.6)	191(88.4)		
# Barriers To Use Identified**				
none	3(6.8)	49(93.2)		
one	80(20.4)	313(79.6)	3.53	(1.2,10.8)
>two	23(27.7)	60(72.3)	4.80	(1.5,15.2)

*p <.05, **p <.01, ***p <.001

DISCUSSION

This randomized field trial of family planning education to determine the relative efficacy of two FP programs has demonstrated that as hypothesized providing the FP program to couples has a positive effect on the couples initiation of modern contraception. This effect has been accomplished in the event of a randomization which was efficient, and a bias of group assignment of individuals has been absolutely ruled out. The experiment and the control groups were similar at the initial stage of the study. There after all inputs were strictly controlled to be the same for both groups except the main issue of the study which was including husbands in the experiment group and excluding husbands from the control group. Given this background the different level of MC initiation in the two groups could be mainly attributed to the two different FP program approaches.

The finding of the main group effect of the study as observed in table 6. is consistent with those of Fisek et al. conducted between 1974 and 1976 in Turkey (21). It also provides a quantitative information on the effect of husbands approval and husband-wife communication which were both variables found to be strongly associated with users of MC both in Agonafer's and Kibreab's study in Ethiopia.

Further more results of this study were achieved using existing health personnel; health assistants and TTBAs who were available at an awraja level. Similar conditions prevail in all parts of Ethiopia and districts of most African countries. The inclusion of TTBAs in the study had several short term as well as long term objectives. The training of 8 TBAs was aimed to avail the awraja with knowledgable TBAs as almost 40 percent of the urban and 95 percent of the rural population of pregnant women in the awraja still deliver at home (8). Another immediate objective of utilizing TTBAs was to facilitate easier access to women in the same awraja, the same or neighbouring zone in which the TTBAs were residing. Assigning TTBAs as guides was also to prompt a shorter period of time to develop trust between the providers and the receivers of the intervention due to familiarity. The experience gained by the TTBAs through accompanying interviewers as well as the interventionists is expected to reinforce the training that the TTBAs had as well as demonstrate to them as to how health education in general and that of FP health education in particular is best delivered to a community on a one to one basis in the preparation of yet another long term objective.

As TTBAs were selected by the office of revolutionary Ethiopian women's association (REWA) through the office of the awraja adminstration, the

communities support to them is ascertained, and their association with the health professionals during the entire four months period of the study is expected to contribute to the community's view of these individuals as extensions of the health institution there by paving the way to use them for future community based FP education and service which in not yet started in any part of Ethiopia as an integral part of PHC. Findings in this study other than the main group effect which revealed an association level of $p < .05$ have also been of interest and were assessed. A higher percentage of women (76 percent) who initiated MC were in the age group of 20 to 34 years. This finding is consistent with Dow et al.(22) in Zimbabwe as well as Brown et al.(23) Zambia in which 74 percent and 79 percent of new acceptors were within the same age group respectively. These two studies differ from the present study in that whereas 80 to 93 percent of the subjects in these studies claimed to be in union during the time of the study 100 percent of individuals in the present study were married and residing with their husbands during the time of the study. Even though 60 percent of the women in this study were within the age group of 20-34 years this intervention like other interventions was most effective to women in these age groups. MC initiation was also higher in couples with higher level of wife's education.

Again this is similar to other studies done by Agonafer (11) and Fikreab (12) in which a higher proportion of users of MC were more educated than non-users in the same country as well as that of Dow et al. (22), Brown et al. (24). The finding differ from Brown et al. (23), study of Zaire in which on average new acceptors had less than 3 years of schooling. The relationship education level and of the decision for spacing or limiting family size is complex. The level of education specially of women is related to several other factors such as younger age, employment outside the home, younger age of last child besides the most important association of the ability to comprehend family planning intervention programs and take a reasonable decision and act upon it.

The association of lower parity and lower number of living children with MC initiation leads one to speculate that most of the new initiators are birth spacers in view of the fact that a high percentage of wives desire to have four children. An interesting finding specially for this area was that between MC initiation and the age of the last living child. Age of last child was 6 months or below in 23 percent of initiators and 12 month or below in 50 percent of initiators. Given the tradition of breast feeding for 2 years in 80 to 100 percent of the urban and rural population of the awraja (8) this finding signifies that the belief that BCP decreases both the

quantity and quality of breast milk is fading along with the popular belief that breast feeding is an effective means of birth control. The most probable explanation here is that the intervention was effective to replace these information with a more logical and scientific ones.

Husband's support was directly associated with MC initiation while age of husband's was inversely associated. Considering the high percentage of women in the study group to be housewives and completed 6th grade or below, there decision making power is jeopardized and there status in expected to be low therefor the support of their husband becomes vital.

The association of younger age of husbands with MC initiation of the couple may be similar to the one that younger age of the wives may have; that is the young age is associated with higher education of husbands who may tend to also have educated wives, or due to the fact young people are more receptive to innovation.

One unexpected finding was that women who identified more barriers to their contraception use were more likely to initiate it. The possible explanation of this finding is that the ability to identify barriers allows the women to openly discuss the problem with a health professional and to evaluate it in the light of contradictory information. The common barriers in this study were 1)

wanting to be pregnant (45 percent), 2) fear of side-effects (41 percent),and 3) lack of knowledge (17 percent). It should be noted that even though 39.1% of women reported that their husbands' were not supportive of the use of MC, only 2% 11 women cited this as a barrier. All these factors were identifed as barriers both by Agonafer and Fikreab though in not in the same rank as among other reasons their study population also differ from that in this study.

CONCLUSION AND RECOMMENDATIONS

In view of the findings presented and discussed it is concluded that including husbands in a family planning education program plays a very important role in the initiation of MC by the couple. These findings can be generalized to other urban as well rural Ethiopian married couples as Kotebe awraja urban area is populated by a mixture of both urban and rural population. Kebele 01 and 02 are urban while kebele 03 is rural which was under PA till March 1989. These results may be equally relevant to those Ethiopian cultures where the husband's role in decision making is dominant, and the husband is the breadwinner of the family, as is the case in many rural populations.

The fact that 40 percent of married women between the age group of 16 to 19, and 25.7 percent of married women in the study who were between the age group of between 20 to 24 initiated MC has implications for the health of women and fertility rate. When contraception is begun during the teenage years, many of the risks associated with early pregnancy are minimized. In addition, the widespread use of contraception at a young age may result in a reduction of the high fertility rate. As the gap between the economic demand of having too many children and the economic contribution of these children widens, more and more couples in the younger age group

will be likely to adopt MC if properly informed.

The association level of $p < .05$ of the wives education level with initiation of MC would justifiably lead one to conclude that the best means of spacing children as well as control fertility is education. Even though there is an association between wife's education and initiation of MC, one should not wait for the educational level of women to rise to the favourable level before FP programs of a larger scale is implemented. Unless the population is controlled here and now immediately, the higher education level for women will only be a dream.

The following recommendations are made, directly based upon this study;

1. Future family planning programs should focus on males as well as on women as their target groups.
2. A study of the continuation of use of MC on the same group be conducted at intervals of 6 months for the following two years to assess the effect of the intervention on continuation of use in comparison of the two groups.
3. Effectiveness study should be conducted with the collaboration of the regional health dept. NGOs and FGAE before this program in implemented at a much larger scale.

4. The possibility of utilizing TTBAs in a community based FP health education and service along with other PHC programs should be exploited.

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ABBREVIATIONS

CBR	Crude birth rate
CDR	Crude death rate
CPR	Contraceptive prevalence rate
Educ	Education
Empl	employment
FGAE	Family Guidance Association of Ethiopia
FP	Family planning
HA	Health assistant
IM	Infant mortality
MC	Modern contraception
MM	Maternal mortality
MMR	maternal mortality rate
Mo	Month
SD	Standard deviation
TFR	total fertility rate
UN	united nations
X^2	chi square

APPENDIX A

Family Planning Intervention Protocol

All women in the study were told during the baseline interview that they would receive a home visit from a health professional within the following 15 days and when the time is close the exact date and time would be arranged in accordance with their convenience and that of the health educators by a local TTBA prior to the visit by the health worker. In most cases the TTBA's knew the couples.

The following is more or less an arbitrary guideline, there could, however be some individual differences due to the circumstances of the visit and couple. The atmosphere was to be kept informal to accommodate for the expected variation as well as to facilitate for a two-way free communication. A TTBA in consultation with the interventionist fixed an appointment using her list of women. HAs were told to be there on time, as this would indicate to the lady that they have a purpose. When they actually went to the homes they introduced themselves as the health educators sent from Kotebe clinic to provide health education on FP to married women in the awraja. Further instructions included: 1) tell the women that you have obtained her name from the list of household at the kebele and that

upon checking in the list of FP clients at the clinic her name was not there and that is why you are at her house (if it is necessary show your ID card), 2) describe that the purpose of the visit is to give health education on FP to the lady (in the control group) or the couple (in the experiment group), 3) obtain information from the women or couple on their reproduction history.

Family planning is referred to as a practice which helps individuals and couples to, 1) avoid unwanted birth and bring about wanted (planned) births when couples are best prepared both health-wise and economically, and 2) to prevent birth from taking place once the couple has decided their family is complete.

Women or couples were told birth spacing has several advantages to the mother. If mothers space their births at least by two years, they will recuperate from the nutritional, physical and emotional stress that they sustained from the last delivery. Using a modern contraceptive method properly would safely protect them from unwanted pregnancies. The risk of unwanted pregnancy that mothers go into, by using ineffective and inferior traditional birth control methods. Using ineffective methods may results in a pregnancy that is not wanted and in some cases, individuals resort to illegal abortion at the risk of their lives. Mothers will have more time to attend to family responsibilities

other than caring for infants if they space thir pregnancies. They may have time for self actualization or self improvement.

Birth spacing also has advantages to the children. Health benefit of spacing for child next to the last one is much more secure and the child survival will improve as weaning will be delayed, mothers may have more time to provide attention and attend to the health and emotional needs of their child since they are free from pregnancy and all its demands during the last child's critical growth period. The child has a better chance of feeling wanted.

Birth spacing has advantages for the whole family. MC use would limit the total number of children hence the economical burden on the family to feed, cloth, provide shelter education and health care would correspondingly decrease.

The birth of a child should be the happiest moment for the mother, father and the family as a whole and children have the right to receive the best possible care and grow up with a sense of belonging.

On a national scale, the country has a limited amount of resources, the larger the population the smaller the share per head. The larger the population the greater is the shortage of food, fuel, shelter, schooling, health care, and employment which will

encourage poverty, disease and crime.

There are several modern ways of control birth. Three of the most commonly used in Ethiopia are the pills, condom and IUD.

This is the pill which if taken properly is 100% protective from pregnancy. One pill a day just before you go to bed on any other convenient time daily.

This is the copper T. the type of IUD we have in the country now. This could be inserted in the uterus by a trained medical staff after some routine check up, and once it is inserted it may be kept for 2 years or more. It is also 100% protective from pregnancy.

This is the condom. The type of a barrier that would need your husbands co-operation to be placed on his male organ before he ejaculates. Show demonstration picture. Condoms are disposable and can be used only once.

Encourage women or couples to ask questions if they need clarification of the subject discussed.

If a woman was interested to initiate MC, she was asked for her choice. If she chooses the pill; use the check list and if she qualifies provide her with two cycles of the pill and tell her on which one to start, on day what of her period. Tell the woman to come at the end of the first cycle when she still has her period to kotebe clinic or at one of the two outreach centers in

the awraja for refill (see checklist, Appendix B). If she wants an IUD (Copper T) provide her with one. Tell her not to prick or open the cover as this will spoil it and make it unfit for use. Give her a referral slip to higher 13 HC. with a request for feed back already prepared and handy with the interventionist. Tell the client to bring back the feed back slip to the Kotobe clinic after the IUD has been inserted for check up as well as to confirm that the IUD has been used properly and the couple could be considered as initiators. Arrangement has already been made with higher 13 HC and Yeka MCH clinic for this purpose. If the lady in the control group or the husband in the experiment group wants condom, provide them with 24 pieces of condoms, advise woman to come for refill when there are at least 4 pieces left. Write down all important points in your small book immediately. Record the day's work in the big book at the end of the day. If women doesn't initiate at the first session make an appointment for a second visit. Record the next appointment in the small note book.

At the second session discussion should be started from where you stopped last time. Points that need clarification should be clarified. If woman wants to initiate MC use check list and provide her with one. If women still doesn't fill comfortable to initiate record as failure.

When those who initiate come in contact with the clinic or outreach keep a record and match with the one in the interventionist big record book.

An interventionist has a schoolbag with a small notebook, a ballpoint pen, an ID card, a referral and feed back slip, a sphygmomanometer, a stethoscope, enough cycles of birth control pills, 100 pieces of condom, five sets of copper T., 10 sachets of ORS and five tubes of tetracycline eye ointment. The last two items were kept handy in case health assistants come across children who were in need of the items.

APPENDIX B

Modern Contraception Checklist

For women who want contraceptive pills use the Checklist.
If all answers are negative (No reply) then give the oral pills.
If any answer is positive (Yes reply) then REFER to H.C. or Hospital.

CHECKLIST	No	Yes
Is she pregnant?	____	____
Age above 35 with smoking habits	____	____
Yellow skin or yellow eyes	____	____
Mass in the breast and/or discharge from nipple (eg.blood)	____	____
Severe pains or swellings in the legs	____	____
Symptomatic varicose veins in the legs	____	____
Severe chest pains (sudden with breathlessness)	____	____
Excessive shortage of breath after slight exercise	____	____
Bleeding between periods and/or after intercourse	____	____
Severe headaches and/or visual disturbances	____	____
Any other serious, chronic disease	____	____
High blood pressure above 160 (systolic) and/or 90 diastolic	____	____

APPENDIX C

COMMUNITY BASELINE SURVEY OF

MARRIED WOMEN BETWEEN 15 AND 49 YEARS

No. of Questionnaire _____

ID number of Interviewer _____

Date of Interview _____ _____

_____

Day Month Year

1. I.D. number of interviewee Enter number _____
2. Kebele " " _____
3. Zone " " _____
4. House number " " _____
5. Age of interviewee " " _____
6. Age of husband of interviewee " " _____
7. Mother's tongue or language of origin of interviewee

   1.___Amharic 2. __ Oromigna 3.___ Guragegna

   4.___Tigrigna 5.___ Other specify _____
8. Mother's tongue or language of origin of husband of interviewee.

   1.____ Amharic 2.____ Oromigna 3.____ Tigrigna

   4.____ Guragegna 5.____ Other specify _____

9. What is your religion?

   1._____ Orthodox Christian 2.____ Muslim

   3._____ Catholic 4.____ Other specify_____

10. What is the level of your education? enter number of years _____

11. What is your husbands level of education ? enter number _____

12. What is your occupation?

   1.____ Housewife 2.____ Farmer

   3.____ Self employed 4.____ Government employee

   5. ____ Other specify _____

13. What is your husbands occupation?

   1.____ Jobless 2.____ Farmer

   3.____ Self employed 4.____ Government employee

   5.____ Other specify _____

14. How many siblings do you have?

   1. Total _____ 2. Male _____

   3. Female _____

15. How many siblings does your husband have ?

   1. Total _____ 2. Male _____

   3. Female _____

16. Have you ever had a child?

   1. _____ No 2. ____ Yes

   If no go to question 19

17. How many are alive?

    1. Total _____ 2. Male _____

    3. _____ Female

18. How old is your last child?

    enter number _____

19. Tell me if there are contraceptive methods that you know about.

    1. ____ Pill 2. ____ Loop 3. ____ Cond

    4. ____Other specify _____

20. If you had a married daughter, in child bearing age how many children in total would you wish her to bear? (enter number _____

21. Tell me at least 3 reasons you consider to be a barrier for your use of MC.

    1. _____ Wanting to be pregnant now.

    2. _____ Afraid of side effect

    3. _____ Lack of knowledge on MC

    4. _____ No MC service in the vicinity

    5. _____ Too shy to go to a health institution to receive the service

    6. _____ Other specify _____

22. Does your husband support the usage of MC

    1. _____ No 2. _____ Yes

23. Comparing large families i.e. having five or more children with small families i.e having four and less than four children

A. Couples who have large families are more educated.

1. ____ False 2. ____ True

B. Husbands play the role of decision making in large families.

1. _____ False 2. ____ True

C. Couples with 5 or more children are mainly of low socio-economic status.

1. ____ False 2. ____ True

D. Married women should continue to reproduce through out their reproductive age if they want to sustain their marriage.

1. _____ False 2. ____ True

APPENDIX D

Time table.

I. February 1990 - April 1990.

Preparation of protocol including Baseline questionnaire. Questionnaire was prepared in English by the principal investigator, then translated into Amharic by a paediatrician. It was translated back in to English by another paediatrician, in all some minor changes were made.

Interview and intervention manuals were prepare. Briefing of the study was given to the head of Addis Ababa department of health and his two deputies, Kotebe Awraja Administrative Office, Kotebe Awraja REWA and Family guidance association of Ethiopia.

Fund for training of 8 female health assistants on FP and 8 TBA with special emphasis on FP was secured.

Stationary and other materials were purchased. The MC intervention materials ; Pills, condoms, copper T., sphygmomanometers and stethoscopes for each interventionist in enough quantities were brought to the Kotebe clinic.

II. May 1990

Training of 8 female health assistants on FP, as well as formal training of TBA with special emphasis on FP was conducted. Training of interviewers with

demonstration and roll play, also training of interventionists with demonstration and roll play was conducted at the clinic.

III. June 1990

Pilot study for two weeks after which appraisal and revision of pilot study was done.

1V. July 1990 - November 1990

Interview followed by intervention . Entry into the study. November 15 was the last date for entry into the study. January 20 was the last day for data entry for follow up.

V. December 1990 -February 1991.

Coding, analysis and write-up was mostly done during this period.

DECLARATION

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

Name Almaz Terefe Bsc.

Signature 

Place Addis Ababa University

Date of submission May 10, 1991

This thesis has been submitted for examination with our approval as University Advisor(s).

Dr. Charles P. Larson

Advisor