

Dissertation on

**CROSS SECTIONAL STUDY OF UNMET NEED OF
CONTRACEPTION AMONG RURAL MARRIED
WOMEN OF REPRODUCTIVE AGE (15-49 Yrs.)**

Submitted in partial fulfillment for

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**Institute of Community Medicine
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CERTIFICATE

This is to certify that the dissertation work on "**CROSS SECTIONAL STUDY OF UNMET NEED OF CONTRACEPTION AMONG RURAL MARRIED WOMEN OF REPRODUCTIVE AGE**" is the bonafide work done by **Dr.A.KASTHURI** in the Institute of Community Medicine, Madras Medical College, Chennai-600 003 during the year 2006-2009 under my supervision and guidance in partial fulfillment of the regulation laid down by **The Tamil Nadu Dr.M.G.R Medical University**, for the M.D., Community Medicine examination to be held in March 2009.

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DECLARATION

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I. INTRODUCTION

India is the second most populous country in the world next to china. Despite this the massive population base of around 1100 million at present and coupled with a natural increase of 1.7 percent in India is a matter of serious concern. The National Population policy -2000 document clearly stated that population growth in India continues. Even though the growth rate of several other developing countries is even higher than that of India, it must be remembered that the population base of India is very large and therefore even a low growth rate leads to substantial addition to the population in absolute numbers. If the current trend continues, India will overtake china in 2045 and will become the most populous nation in the world.¹

National population policy 2000, stated that stabilizing the population is an essential requirement for promoting sustainable development with more equitable distribution. It also stressed that the population growth in India continues to be high on account of the large size of population in reproductive age group and high fertility rate due to unmet need of contraception. The immediate objective of the policy was to address the unmet need of contraception. The middle term objective is to bring the total fertility rate to replacement level by 2010, through vigorous implementation of inter sectoral operational strategies. The long- term objective is to achieve a stable population by 2045 at a level consistent with the requirement of sustainable economic growth and development².

Among the socio demographic goals of the NPP 2000, those relevant to population control being

1. Addressing the unmet need for reproductive and child health services, supplies and infrastructure and
2. Achieve universal access to information / counselling and services for fertility regulation and contraception with a wide basket of choice

It must be seen that all the recent programs aim at unmet need of contraception, which is a powerful concept. The essential components of the RCH were prevention of unwanted pregnancies by promoting contraception for both spacing and limiting children, providing services for safe motherhood, improvement in child survival. Women are considered to have an “unmet need” of contraception, if they are sexually active and would prefer to avoid becoming pregnant, but nevertheless using any method of contraception. This concept points to the gap between some women’s reproductive intentions and their contraceptive behaviour. It poses a challenge to family planning programs. By responding to the concerns of women unmet need, programs can serve more people and serve them better programs .To develop such a strategy, we need to understand the various reasons for unmet need , based on qualitative and survey data , to determine the size and composition of this group , to identify the high priority subgroups and deliver information and services to meet the specific needs of each selected subgroup.²

II. OBJECTIVES

1. To find out the prevalence of contraceptive usage (Both temporary and permanent) among the rural married women of age group 15-49 years.
2. To calculate the unmet need of contraception among nonusers.
3. To find out the factors associated with the non usage of contraception.

III. JUSTIFICATION

1. Though the fertility rate in India, has decreased to 2.76, it is still above the replacement level.³
2. Though 42.3% of eligible couple uses one or other method of family planning, they discontinue them³. The reason for which has to be identified, so that remedial measures taken to stop discontinuance.
3. There is still an unmet need of 14.1%, which has to be addressed to achieve more success in our effort to control population.³
4. Unmet need of contraception can lead to unintended pregnancies, which poses risk for women, family, and societies. Reducing which can prevent 20-35 per cent of all maternal deaths ³
5. Rural area has higher unmet need (14.1%)when compared to their urban counterpart, i.e (9.7%) due to various factors, resulting in large family size.³
6. As per the 2001 census, 72.22% constitute the rural population in more than 550,000 villages.⁴
7. Finding factors which lead to unmet need in rural population and addressing them helps achieve the national goal.⁵
8. The national policy on population and development focuses on meeting, rather than trying to change, people's needs and aspirations. We have set a goal to reduce the unmet need to zero by the year 2015 in the five year review of the International conference on population and development.⁵

IV. REVIEW OF LITERATURE

CONCEPT AND MEASUREMENT OF UNMET NEED

The *concept* of unmet need can be applied to all sexually active, fecund women and perhaps even to men. Its *measurement* has been limited largely to married women. Essentially, women who respond that they want to postpone or avoid childbearing and also report that they are not using contraception (including use by their partners) are defined as having an unmet need. Today, the main information source for measuring unmet need has been the Demographic and Health Surveys (DHS), which has been conducted in 55 countries more than once. In addition, the Family Planning and Reproductive Health Surveys (FP/RHS) have estimated unmet need in national surveys. While the FP/RHS formulation of unmet need is not strictly comparable with that used in the DHS.⁶

STANDARD FORMULATION OF UNMET NEED

In this formulation the unmet need group includes all fecund women who are married or living in union—and thus presumed to be sexually active - who are not using any method of contraception and who either do not want to have any more children or want to postpone their next birth for at least two more years. Those who want to have no more children are considered to have an unmet need for *limiting* births, while those who want more children but not for at least two more years are considered to have an unmet need for *spacing* births.⁷ The data often exclude unmarried women, whose level of sexual activity (and therefore risk of pregnancy) vary greatly and are not measured.

Unmarried youth who are sexually active represent a large and growing segment of the population of many countries, but their needs have been measured only in sub-saharan Africa and few other countries.⁸

PREVALENCE OF UNMET NEED FOR CONTRACEPTION WORLDWIDE

Contraceptive use is uneven both among and within countries. It varies according to wealth, education, ethnicity, rural or urban residence and the strength of national family planning programmes. In most countries women aged younger than 30 years had greater need for contraception for spacing. Unmet need for limiting rose with number of children, particularly after four children. Unmet need tended to decline with increased levels of education among women in countries other than sub-Saharan African ones.⁹

DHS results in 53 countries reveal that in 16 of 25 countries outside sub-saharan Africa, unmet need is 15 percent or lower, while only three of 28 sub-saharan countries have levels that low. Unmet need was higher in sub-Saharan African countries (29%) than other countries (19%). Demand for contraception in sub-Saharan Africa was mainly for limiting childbearing rather than ending childbearing. In Africa, only 20 per cent of married women use modern contraception, In some parts of the continent, the proportion drops to under 5 per cent.(10) Unmet need for spacing is 70% or more is found in 10 of the 14 sub-Saharan African countries (Burkina Faso, Cameroon, Malawi, Namibia, Niger, Nigeria, Senegal, Sudan, Tanzania, and Zambia.) unmet need ranges from 15% in Zimbabwe to 37% in Rwanda.¹¹

In North Africa and the Near East, unmet need is close to the 20% average for the developing world in every country except Turkey, where it is 11%—with Thailand's, the lowest level recorded.¹²

Unmet need for contraception varied from 14% or lower in Colombia to 36% or higher in Kenya,¹³ Malawi, or Rwanda. Asian unmet need varied widely. Among Asian countries surveyed, unmet need varies from 11% in Thailand to 32% in Pakistan¹⁴. In 6 of the 11 countries in Latin America and the Caribbean surveyed by the DHS, unmet need is below 20%. In Bolivia, Guatemala, and Mexico, however, the level is between 24% and 29%.¹⁵

UNMET NEED IN RURAL INDIA

In most developing countries, rural, uneducated and poor married women are more likely to be at risk for unplanned pregnancy than are urban, educated or non poor married despite improvements in access and use in some regions in recent decades, large numbers of women continue to have an unmet need for contraception.¹⁶

It is estimated that if all unwanted birth could be eliminated, total fertility would drop to the replacement level. Moreover, several studies report that the desire to limit family size and to space the next birth are the main reasons mentioned by majority of abortion seekers, clearly highlighting that there is substantial unmet need of contraception in India. According to NFHS-3, unmet need in India is 14.1%, indicating more than 40 million married women has unmet need of contraception. Unmet need for spacing is 6.9% and for limiting 7.2%. Meghalaya has the highest unmet need in India, with 23.2%

for limiting and 11.8% for spacing. Next comes Nagaland comes next with 10% for spacing ,and 16.1% for limiting. Jharhand measures an unmet need of 23.1%,and in Delhi it is 7.8%,Uttar Pradesh has an unmet need of 21.2%, and in Tamilnadu it is 4% for spacing and 4.5% for limiting.

Anju puri et al, in Delhi, surveyed 243 women, 65.4% of them were not using any form of contraception. Thus a total of 49.8% women were identified to have unmet need of contraception in the study group.¹⁷

PUBLIC HEALTH IMPORTANCE

Why are we concerned?

1. Unmet need can lead to unintended pregnancies:

Unmet need, poses risk for women, their families, and society. In developing countries, about 20% of pregnancies are unintended- that is, either unwanted or mistimed (or wanted later). One particular consequence of unintended pregnancies is unsafe abortion. In addition, unwanted births pose risks for children's health and well being and contribute to rapid population growth in resource strapped countries.^{18,19}

2. Unsafe abortion: a leading cause of maternal mortality

Lack of access to family planning is a major factor behind the 76 million unintended pregnancies every year in the developing world. These lead to 19 million annual unsafe abortions, causing some 68,000 deaths. Research shows that one in ten pregnancies will end in an unsafe abortion, with Asia, Africa and Latin America accounting for the highest numbers.²⁰

Access to safe and effective contraception reduces the incidence of induced abortion. In several countries of Central and Eastern Europe, abortion rates declined rapidly with the establishment of family planning services and an increase in the availability of contraception.²¹

3. GAP IN CHILD BEARING INTENTIONS

For more than 30 years, surveys in less developed countries have asked women about their child bearing intentions and use of family planning. These surveys have long shown an inconsistency in women's responses: A significant number of women say that they do not want another child but not using any method of contraception. This gap between women's preferences and actions inspired many government to initiate or expand family planning programs in order to reduce unintended pregnancies and lower their country's fertility rate .The term "unmet need" has served to gauge family planning need in less developed countries.^{22,23,24}

VARIATIONS OF UNMET NEED WITH AGE

According to NFHS -3 unmet need decreases with age, 27% in 15-19 yrs to 2% in 45-49 yrs. Younger women had greater unmet need for spacing than limiting, and for older women the reverse pattern is evident. Rural women have higher unmet need than urban. According to NFHS-3, unmet need for spacing in the age group 15-19 yrs is 25.1% ,20-24 yrs is 14.9 % ,25-29 yrs 6% ,30-34 yrs 2.1%, 35-39 yrs 0.1%, 45-49 yrs 0.1%. Unmet need for limiting is highest in the age group 25-29 yrs 9.9% and is least in the age group 45-49 yrs.

According to Bhattacharya, study done in Calcutta In the unmet need group of 15-19 years, the proportions of limiters and spacers are equal (50%), but in the later age groups 20-24 years, 25-29 years and 30-34 years, the proportions of limiters are 48%, 86%, 100% respectively, increasing significantly with advancement of age with proportionate decrease of spacers. Studies show that clear relationship emerges between women's age and level of unmet need when unmet need is divided into its spacing and limiting components.²⁵

UNMET NEED AND EDUCATIONAL STATUS:

According to NFHS -3 unmet need for spacing is 5.5% for women with no education and for limiting it is 8.1%. And for those who have completed <5 yrs complete unmet need for spacing and limiting is the same 5.2%. For those who have completed 5-7 yrs unmet need for spacing is 7.3% and that for limiting is 5.2%, for those who have completed 8-9 yrs completed unmet need for spacing is 7.7% and for limiting it is 5.7%, for those who have completed 10-11 yrs for spacing it is 7.0% and for limiting it is 5.2%, and 12 or more yrs complete it is 6% for spacing and 4.7% for limiting.

In a study in Delhi, Prevalence of unmet need is high among illiterate women (46.1 %) and primary literacy group (52.1%), compared to that in the higher educational groups. Contraceptive use rate increases significantly as educational status gets improved, the use rate being 36.5% in illiterate, 43.4% in the primary group, more than 50 % in middle & secondary group and 100% in the Higher Secondary & above. With higher educational level, proportion of

spacer in the unmet group is significantly increasing from 33% in the illiterate group to 100% in the highest educational status group with reciprocal decrease in the proportion of limiter.²⁶

Studies in Turkey have shown that better educated women have somewhat less unmet need than women with little or no education. Unmet need for family planning varies by woman's education, but only within a narrow range of 14 to 17 percent.²⁷

UNMET NEED AND SOCIO-ECONOMIC STATUS

Unmet need for spacing is high in the lower socio-economic class i.e 7.7% and that for limiting it is 10.5%, for the middle socio-economic class it is 6.5% and 6.3% respectively, and for higher socio-economic class it is 3.9% and 4.1% respectively as seen in NFHS -3 .

UNMET NEED AND RELIGION

Unmet need is high in Muslims i.e 10.2% for limiting and 8.6% for spacing. For Christians 6.4% for spacing and 6.1% for limiting. For Hindu it is 6.1% for limiting and 5.8% for spacing. In a study in Delhi, unmet need was high in Muslims 74% compared to 44% in Hindus.²⁸

UNMET NEED AND NUMBER OF LIVING CHILDREN IN THE FAMILY

Unmet need for limiting births is low (18.30%) in women having one child and is gradually increases with each additional child. That in case of

women having one child, the unmet need for spacing is seen to be highest (26.5%) and gradually decreases with each additional child. Ram et al study, 92% of the mothers with unmet need had 2 or more children.²⁹

PRESENCE OF MALE CHILD IN FAMILY

Male child Syndrome" is still a widely prevalent concept. Ram et al, found the fact that acceptance of family planning methods after delivery of at least one male child was significantly higher (53.25%) than those with no male child (6.18%)²⁹. These findings are comparable with a study conducted in rural area of South Delhi which revealed that contraceptive prevalence increased from 37.5% in those who were having no male child to 63% with three or more male children.

REASONS FOR UNMET NEED OF CONTRACEPTION

Although the Indian government has recently shifted away from its long-standing policy of promoting female sterilization as the primary form of family planning, the reality is that government health service providers still offer women very little information about and access temporary methods of contraception. Many women also face family opposition to the use of temporary contraceptives. Without the option of using temporary contraception, many women resort to abortion. Of these, the vast majority either do not realize that abortion is legal.³⁰

1. HEALTH CONCERNS AND SIDE EFFECTS

In many countries concerns about health and contraceptive side effects cause much unmet need. These concerns come from a variety of sources, including women's own experiences with using contraception, experiences of friends, and the rumors that often result as these experiences are told and retold throughout communities.³¹

Elizabeth et al, In a longitudinal study, followed 259 for 18 months, to study the patterns of menstrual bleeding following the use of contraception, amenorrhoea, infrequent bleeding and frequent bleeding were reported by 41%, 23% and 17.5% respectively. Non menstrual side-effects comprised breast tenderness in 18.75%, acne in 10%, headache and dizziness in 3.75%. Depressive mood disorders, pelvic pain and loss of libido were mentioned each by two of the women 2.5%.^{32,33}

In NFHS-3 10% is attributed to health reasons/fear of side-effects for non-use of contraception.

2. LIMITED KNOWLEDGE

Inadequate knowledge of contraceptive methods, and incomplete or erroneous information in 56% about where to obtain methods and how to use them are the main reasons for not accepting family planning^{34,35}. Khan, in a KAP study found that, compared to acceptance of 90%, only 54% actually practiced contraception.³⁶

In a study done by Srivastava, awareness rate was found to be 82.2%.³⁷

Awareness of specific reversible methods that are suitable for young women was even more limited among young women compared to other women. For example, only three fifths of married adolescents were aware of condoms, compared to nearly three fourths of women between 20-34 years.^{38,39}

As might be expected, lack of awareness of *any* contraceptive method is most likely to explain unmet need in countries with little contraceptive use, as in sub-Saharan Africa. This is because, if a woman does not know about contraception itself, she cannot cite other reasons for not using it, such as lack of availability or side effects.⁴⁰

The researchers created a "knowledge index" consisting of three items: (1) mentioning a modern contraceptive method without being prompted; (2) being aware of its source; (3) and having an opinion about its side effects. In general, the level of unmet need is lower in countries where this knowledge index is higher. In five of the six sub-Saharan countries studied and in Peru, less than 50% of women with an unmet need could mention even one method, identify its source, and discuss its side effects.⁴¹

3. LIMITED AVAILABILITY OF SERVICES

To use contraception, women must not only know about the existence of contraception itself but also what services are offered where and when. In South Korea, 85% of women who did not know where to obtain contraceptives had unmet need.⁴²

In the age group of 15-19 yrs 78.2% knew of a place, where to get a contraception, and in the age group 25-29 yrs 85% knew, whereas in the age group 40-44 only 76.5% knew the place. In poor, rural areas, supplies of temporary contraceptives at primary health centers and local clinics are frequently inadequate or absent. In most areas, contraceptive use is assumed to mean female sterilization. Significant challenges remain to making temporary methods readily available and accessible.⁴³

4. SOCIAL AND CULTURAL NORMS

Family and gender-based constraints on women in India also are likely to limit women's use of temporary contraceptives. These include social pressures for early marriage and early childbearing, lack of decision making power in the household, limited physical mobility which impedes their ability to access services, and physical violence and coercion in sexual and family relations⁴⁴. Only 2 percent of women in International Centre for Research on Women's study said they could leave home to obtain contraceptives without consultation or approval from others in the household.

5. LITTLE PERCEIVED RISK OF PREGNANCY

When a woman believes that she is unlikely to become pregnant, she is unlikely to be interested in contraception. Biddlecom et al, found that women with unmet need are much less likely than contraceptive users to think that they can ever become pregnant.⁴⁵

Women with unmet need for limiting births are much more likely than potential spacers to think that they face little risk of pregnancy-probably because most women with unmet need for limiting are older. Among limiters who do not intend to use contraception, for example, 32% say that they are not exposed to the risk of pregnancy compared with only 15% among spacers.⁴⁶

While many women may be right about their inability to conceive, other women face a risk of unintended pregnancy because they do not understand the menstrual cycle or do not know about reproductive physiology in general. In Jamaica, it is found that only 30% of women of reproductive age knew when, during the menstrual cycle, that pregnancy is most likely⁴⁷. In Nigeria a study of women found that only 2% could identify the "safe period" of the month.⁴⁸

6. OPPOSITION FROM HUSBANDS

Many women do not use contraception because their husbands are opposed. In seven sub-Saharan countries contraceptive use among women whose husbands disapprove of family planning averages only 40%⁹. In a study in Delhi, 19.8% of women said opposition from husband as the main reason for not using a contraception⁴⁹.

In Kenya, among women who had stopped using contraception for reasons other than having another child, 12% had stopped because their *husbands* wanted another child or had forced them to discontinue for another reason⁵⁰.

As Moni Nag has noted, a woman may have unmet need for family planning because of the high "social cost of challenging the opposition from her spouse or anyone else in her social influence group"⁵¹. For instance, in Trishal, Bangladesh, women with unmet need were more likely than contraceptive users to oppose family planning themselves, but they also were more likely to say that their husbands opposed it and that the community opposed it. Husbands' attitudes may affect not only whether or not wives use contraception but also the choice of a method and how long it is used⁵².

In Botswana only 47% of women with an unmet need think that their husbands approve of family planning compared with 82% of contraceptive users. In Pakistan the difference is even more striking - 32% compared with 83%.⁵³

Also, women with unmet need are much less likely than contraceptive users to have talked with their husbands about family planning. For example, in Ghana only 44% of women with unmet need had discussed family planning with their husbands in the preceding year compared with 72% of contraceptive users⁵⁴. In India the level of unmet need for limiting births was significantly lower among couples who had discussed family planning than among those who had not, but discussion made little difference to unmet need for spacing-possibly because temporary methods were not readily available.

7. OPPOSITION FROM FAMILIES AND COMMUNITIES

Although less important than husband's opposition, lack of support by extended families and community leaders also prevents some women from

using contraception. In Philippines, only 50% of women with unmet need consider contraception socially acceptable⁵⁵. Bhattarcharya et al, found 32% of unmet need attributed to opposition from husband and families. Ram et al noted in Kolkata that 12% of women had suggested the reasons for unmet need to be opposition from family members.

8. RELIGIOUS REASONS

In countries like Bangladesh, Nigeria, Pakistan, and Senegal - religious opposition is one of the main reasons. In each of these four countries more than 10% of women with unmet need who do not intend to use contraception cite religious objections⁵⁶. In the study of Trishal, Bangladesh, only 50% of women with unmet need thought that their religion approved of family planning.⁵⁷

PREVAILING CONTRACEPTIVE PRACTISES

According to NFHS -3 contraceptive prevalence varied widely among states, from less than 31.4% in Bihar, Meghalaya and Uttar Pradesh to more than 67% in Delhi, Maharashtra and Gujarat. In India, as the vast majority (66%) of ever-users are sterilized, In rural areas of Lalganj block of Vaishali district, Bihar state, only 6.8% of the women used reversible forms of contraception such as the IUD, oral pills, and condoms.

According to NFHS -3 the incidence of sterilization increased significantly as age increased; 11.6% of women aged 21-30 years had undergone the procedure, compared to 51% of women aged 31-40 years. Married women aged 15-20 years were using no contraception. In fact, no

woman surveyed had used any contraception before her first pregnancy. 40.3% of women aged 21-30 years and 41.1% aged 31-40 had 2 or more living children, but used no contraception. Also the use of modern spacing methods (OCP, IUD, condom) is considerably lower in rural areas when compared to their urban counterparts 9.8% used pills and 4.0% used IUD, other 10% condoms.

In spite of the cafeteria approach adopted, it is still clear that until recently the program remained skewed towards promoting non-reversible methods, particularly female sterilization. In India female sterilization account for two-third of contraceptive use. Current use increases with age and peaks at (79%) 35-39 yrs of age.⁵⁸

REASONS FOR NEVER USE OF CONTRACEPTION

Most women with unmet need who cite a health concern about a particular method have never used that method themselves. Sometimes they have heard about medical problems that others experienced with use of contraception. Sometimes people's fears are based on rumors. In Kenya 3% women said pills accumulating into life-threatening masses in the stomach and other bizarre effects thought to accompany contraceptive use⁵⁹. In Nepal 5% women said that they would not consider sterilization because it was said to cause weakness and so require additional nutritious foods that they could not afford⁶⁰. Thus several reasons can combine to contribute to unmet need-poor-quality services or methods lead to real health problems that, in turn, become

the basis for exaggerated rumors, which are spread and believed by many people who have little direct knowledge of contraception⁶¹

REASONS FOR DISCONTINUATION OF CONTRACEPTION

The tendency to discontinue contraceptive use seems to be more common in rural areas than in urban areas. Many women have discontinued contraceptive use, not because they wanted to become pregnant, but because they experienced side effects and health problems attributed to contraceptives³. As contraceptive use increases and becomes a more established behaviour, prevalence is no longer a sufficient marker of programme success. Contraceptive continuation may become more important than acceptance in increasing contraceptive prevalence.⁶²

Information on method-specific discontinuation rates, not unexpectedly, higher discontinuation rates for pills and condoms than intra-uterine devices (IUDs).⁶³

According to NFHS -3 the one-year discontinuation rate of any method of family planning estimated from contraceptive use episodes is 27%. In other words, out of 100 contraceptive users, more than one in four discontinues use of that method within 12 months of adoption. Discontinuation rates for any spacing method 39% and any modern spacing method 42%. Among the spacing methods, discontinuation rates are highest for injectables 53% followed by pills 49% and male condoms 45%. For pills, IUD, the most common reason for discontinuation.

In Nepal found that 15% of women in the unmet need group had discontinued use, slightly more than 50% of them because of side effects or health concerns. Another study in Nepal, where contraceptive prevalence was just 23%, found that about 25% of the unmet need group had discontinued contraceptive use because of side effects⁶⁴. In Kenya 46% women who discontinued using contraception did so because they experienced side effects and could not find a different method⁶⁵. In Jordan 43% women in focus-group discussions spoke of modern contraception mainly in terms of their side effects and health risks.⁶⁶

In Ghana health concerns and side effects 36% were by far the most common reasons given for discontinuation among women who had used oral contraceptives but had stopped coming to family planning clinics. Discontinuation often leads to unwanted pregnancies. Nearly 50% of the women who had discontinued use became pregnant within 32 months, and more than 60% of these pregnancies were unintended. Some 39% of these unintended pregnancies were aborted⁶⁷.

V. METHODOLOGY

Study design

Community based cross- sectional study.

Study Area

Laksmipuram HSC of Thirunindravoor PHC.

Study population

Married women of reproductive age (15-49) yrs in Laksmipuram HSC.

Inclusion criteria

Married women (15-49) who are permanent residents of the sub-centre, who are enrolled in the eligible couple register.

Exclusion criteria

1. Unmarried women in the age (15-49) of the sub-center.
2. Married women who are temporary residents of the sub-centre.

Sample size

Though many studies have been carried out at various settings at many places, resulting in various rates of unmet need, the rate of prevalence of unmet need for contraception based on **NFHS-3 (2005-2006)** ie 14.1% is considered for calculation of sample size at 95% CI($Z=1.96$) and limit of accuracy kept at 20% of 14.1%.

$$N = \frac{Z^2 pq}{d^2}$$

$$N = \frac{(1.96)^2 \times 14.1 \times 85.9}{(2.82)^2}$$

$$= 585$$

This has been rounded off to 600.

Sampling procedure

Initially Trinindravoor PHC was randomly selected in Ponthamalle HUD of Thiruvallur district. It has five sub- centre namely Kosavanpalayam, Thirunindravoor, Lakshmipuram, Nemilicherry, Dasapuram. Among these, Lakshmipuram HSC is randomly selected by lottery method. List of all married women of reproductive age with their register no (Lakshmipuram HSC) is obtained from eligible couple register from VHN. It has 1933 married women of reproductive age. These 1933 women were enlisted serially and this constitutes the sampling frame. From this 600 women were selected by simple random technique using table of random numbers.

Development of interview schedule

An interview schedule was prepared based on the model survey questionnaire recommended by the WHO.⁶⁸ The questionnaire was pretested among 40 married women in HSC Nemilicherry. Based on observations made during the pre testing, the questionnaire was modified. The developed schedule has four parts comprising of the background characteristics of the respondent,

marital status and fertility, knowledge and attitude to contraception and use of contraceptives and perceived availability and accessibility of contraceptives (Annexure II).

Data collection

Data collection was done by house-to-house visit. The investigator along with a VHN approached at least 15 respondents everyday. Mostly the women who were to be interviewed, had been informed previously. Even then unable to find a women, she is revisited at the next possible time and interviewed. After obtaining their informed consent orally, relevant information was obtained from the respondent using the pretested structured questionnaire. Questions were asked in the local language and the questionnaire filled on the spot. At the end, any misconception or queries were clarified and the respondent was thanked for sparing the time.

Data analysis

Data was coded and analysed as percentages and chi-square using statistical software SPSS 16.

VI. DEFINITIONS

Contraception

Contra- in latin for against and ception is for the act of conceiving or becoming pregnant. Contraception is the use of any method or system that allows sexual intercourse and yet prevents conception.

Family planning

A way of thinking and living that is adopted voluntarily, upon the basis of knowledge, attitude and responsible decisions by individual and couple, in order to the promote the health and welfare of the family group and thus contribute effectively to the social development of the country.

Unmet need

In this formulation the unmet need group includes all fecund women who are married or living in union - and thus presumed to be sexually active- who are not using any method of contraception and who either do not want to have any more children or want to postpone their next birth for at least two more years. Those who want to have no more children are considered to have an unmet need for *limiting* births, while those who want more children but not for at least two more years are considered to have an unmet need for *spacing* births.

Temporary contraceptives

Refers to any modern method used to prevent pregnancy, which, if its use was discontinued, would have no permanent impact on a woman's or

man's fertility. When not specified as temporary, "contraception" refers to both temporary and permanent methods. This distinction is particularly significant in India, where female sterilization is the primary method of contraception used.

Fecundity

The power or quality of being able to produce offspring.

Contraceptive prevalence rate

Percentage of eligible couple effectively protected against childbirth by one or other methods of family planning.

Eligible couple

Currently married couple wherein the wife is in the reproductive age (15-49).

Ever user

Married women who had ever used any method of contraception (modern or traditional) to delay or avoid pregnancy.

Never user

Married women who had never used any method of contraception (modern or traditional) to delay or avoid pregnancy.

Current user

Married women who are currently using any method of contraception (modern or traditional) to delay or avoid pregnancy.

VI. RESULTS

The study was conducted in Lakshipuram HSC of Thirunindravoor PHC of Poonamallee HUD of Thiruvallur District. 600 women participated in the study.

6.1.1 AGE OF RESPONDENTS

Age of respondents at the time of study ranged between 17-47. 28.2% were in the age group of 20-24 yrs. 26.2% were in age group of 25-29 yrs.

Table 1: DISTRIBUTION OF AGE OF RESPONDENTS

AGE GROUP	FREQUENCY(N=600)	PERCENTAGE
15-19	63	10.5
20-24	169	28.2
25-29	157	26.1
30-34	91	15.2
35-39	73	12.1
40-44	38	6.4
45-49	9	1.5

6.1.2 AGE AT MARRIAGE

Age of the respondent at the time of marriage ranged between 13-23 . Among the study group 49% had marriage <18 yrs. 27.5% had marriage between 18-21 yrs, 23.5% had marriage >21 yr.

Table 2: FREQUENCY OF AGE AT MARRIAGE

AGE AT MARRIAGE	FREQUENCY (N=600)	PERCENTAGE
<18 YRS	294	49
18-21 YRS	165	27.5
>21 YRS	141	23.5

6.1.3 EDUCATIONAL STATUS

Among the study group, majority have studied primary or high school with 75.9.% contributing to both.

Table 3: EDUCATIONAL STATUS OF RESPONDENTS

EDUCATION	FREQUENCY N=(600)	PERCENTAGE
ILLITERATE	69	11.5
PRIMARY	224	37.4
HIGH SCHOOL	231	38.5
SECONDARY SCHOOL	61	10.1
GRADUATE	15	2.5

6.1.4 REPRODUCTIVE STATUS

At the time of study only 8.2% were pregnant, 35.8% had 2 children, 55.1% had more than two children.

Table 4: FREQUENCY OF NUMBER OF CHILDREN IN THE FAMILY

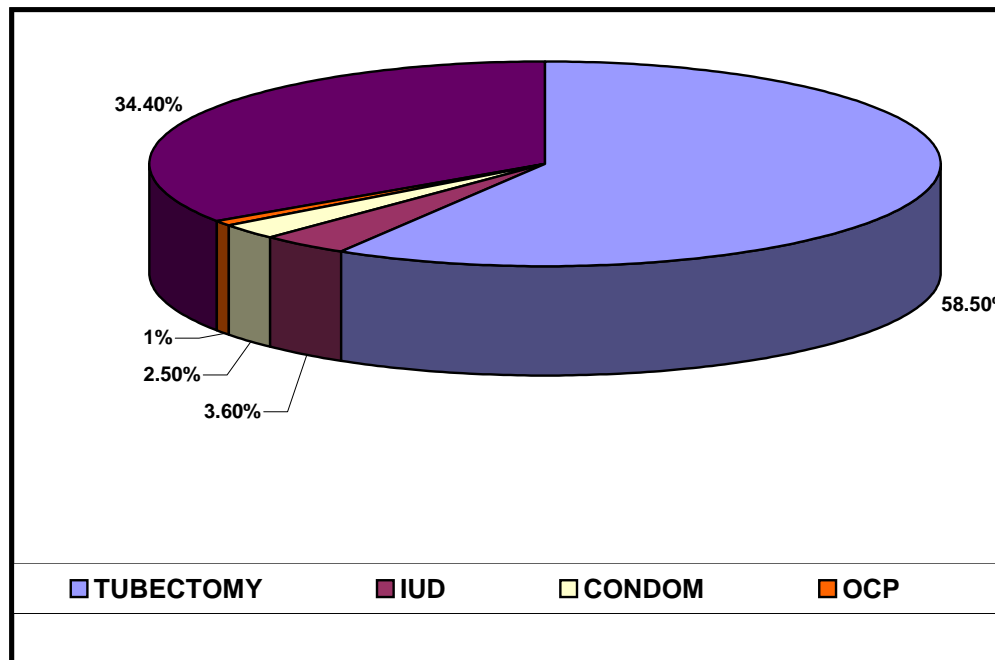
NO OF CHILDREN IN FAMILY	FREQUENCY(N=600)	PERCENTAGE
NIL	11	1.8
1	44	7.3
2	215	35.8
2+	330	55.1

6.2 PREVALENCE OF CONTRACEPTIVE USE

Contraceptive prevalence is the percentage of currently of reproductive age who are effectively protected against childbirth by one or other approved methods of family planning.

Among the study population of 600, prevalence of contraceptive use was found to the extent of **65.6%**. The percentage of women who used any temporary method of contraception in the past was 5.5% and there were 28.9% never users. Induced abortion as a routine method of contraception is undesirable, but it is practiced in certain circumstances under the provisions of MTP act 1972. In this study it was found that 15.7% of women had induced abortion at least once as a method of contraception. Among the study population, permanent method of contraception was found among 352 respondents while only 42 adopted temporary method. Tubectomy was highest with 89.17% of contraceptive users (352) and vasectomy was found in none. Among the temporary method users 21 used IUD, 15 used condoms, 6 used OCP (Figure 1).

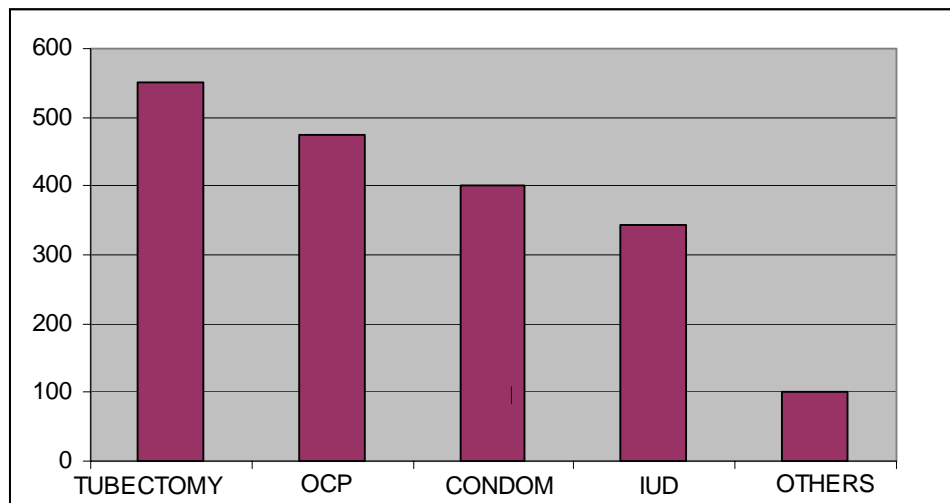
Figure 1: CONTRACEPTIVE PREVALENCE AND METHOD USED



6.3 KNOWLEDGE ABOUT CONTRACEPTIVES

Knowledge about contraceptive was seen in 92.33% (554) of the respondents, while only 7.67% (46) were unaware of any method. Among the respondents many stated to have known more than one method. Tubectomy was known among 550 respondents, while 399 knew condom. (Fig. 2).

Figure 2: KNOWLEDGE ABOUT CONTRACEPTIVES)



METHODS KNOWN

TABLE 5: SHOWING CONTRACEPTIVE USAGE AND KNOWLEDGE STATUS

Knowledge	Contraceptive user	Contraceptive non user	Total
Present	391	163	554
Absent	3	43	46
Total	394	206	600

$$\chi^2 = 77.29891, DF = 1, P = 0.00000$$

There is significant difference between contraceptive users and non-users with knowledge status.

6.4 REASONS FOR STOPPING

Among the 33 respondents who had reported to have used contraceptives and have now stopped, the reasons were to become pregnant in 12 among them, 20 for health reasons and 1 due to non-approval of husband.

6.5 REASONS FOR NOT USING A CONTRACEPTIVE (NEVER USERS)

Among the 173 respondents who were never users, the reasons attributed to non-usage are as follows.

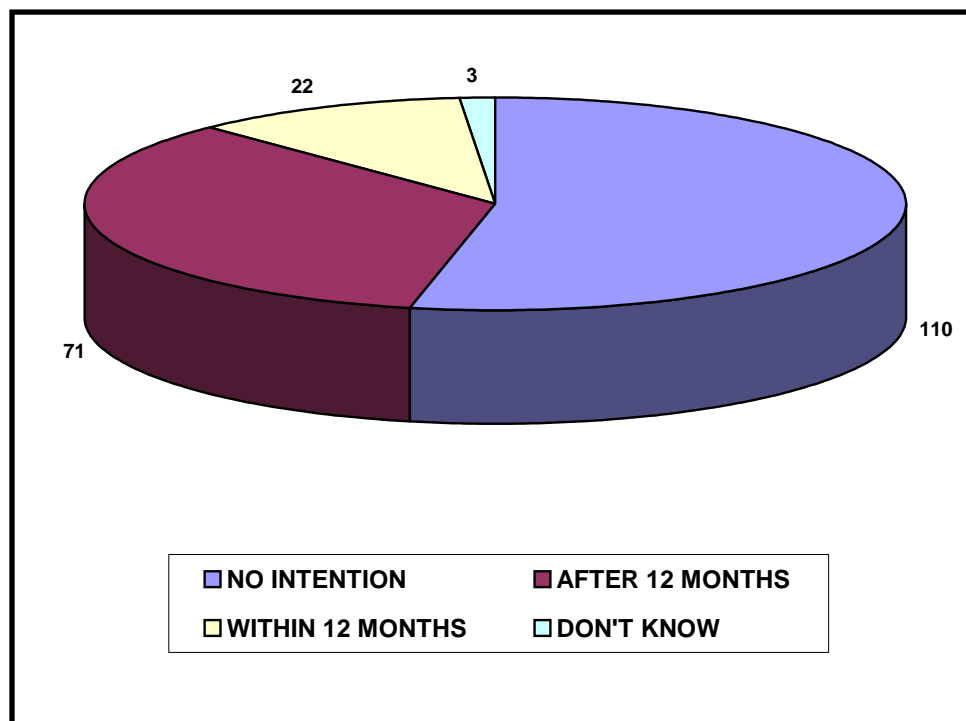
Table 6: DISTRIBUTION OF REASONS AMONG NEVER USERS

REASON	RESPONDENT (173)
Breast feeding / postpartum	22
Want to become pregnant	46
Lack of knowledge	26
Opposition from partner	15
Fear of side effect	59
Religious belief	3
Don't know	2

6.6 INTENTION TO USE IN FUTURE

Among the non users (206), only 93 intended to use a contraceptive in future. And among them only 22 intended to use within 12 months.

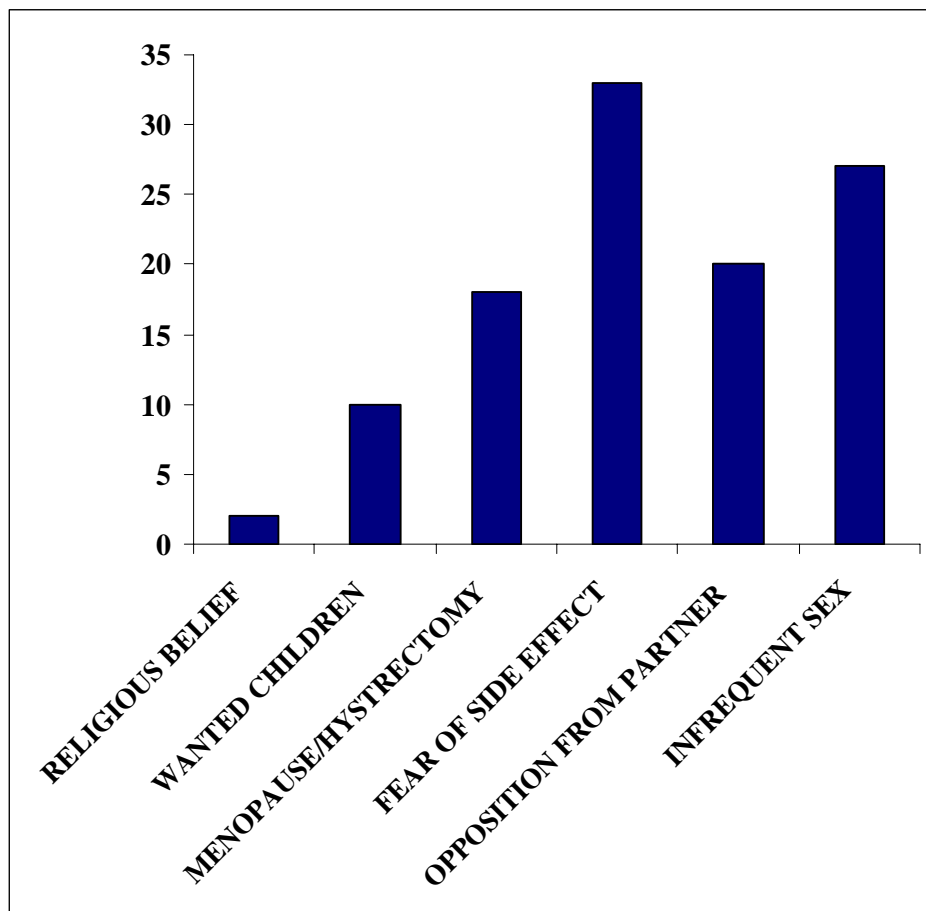
Figure 3: INTENSION TO USE CONTRACEPTIVE AMONG NON USERS



6.7 REASONS FOR NOT USING A CONTRACEPTIVE METHOD AT ANY TIME IN FUTURE

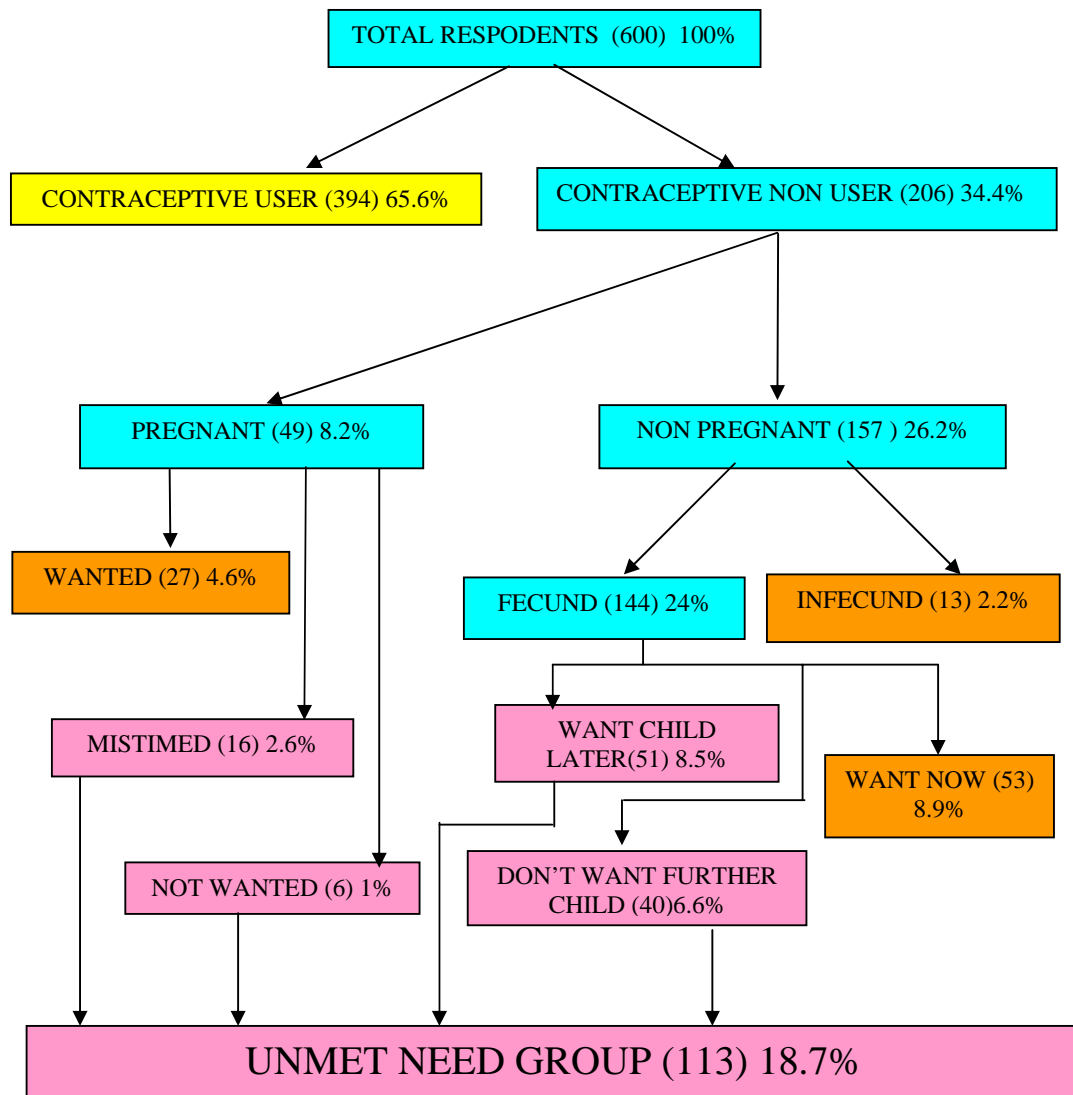
Among the reasons for no intention to use a contraceptive are as follows

Figure 4: DISTRIBUTION OF REASONS FOR NON INTENTION TO USE



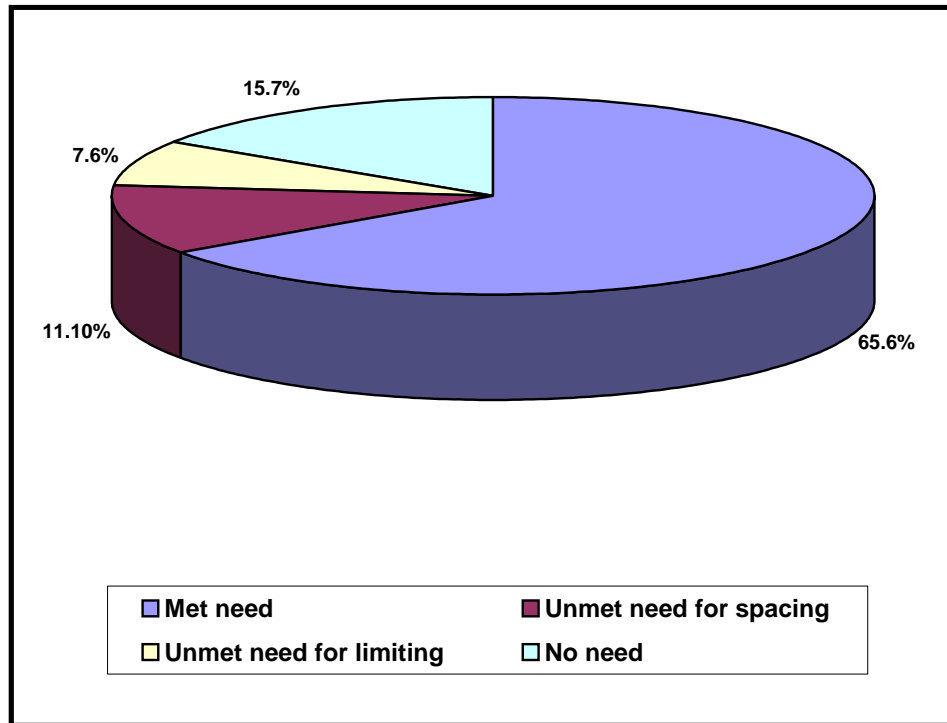
6.8.1 UNMET NEED FOR CONTRACEPTION

Fig. 5: SCHEMATIC DERIVATION OF UNMET NEED



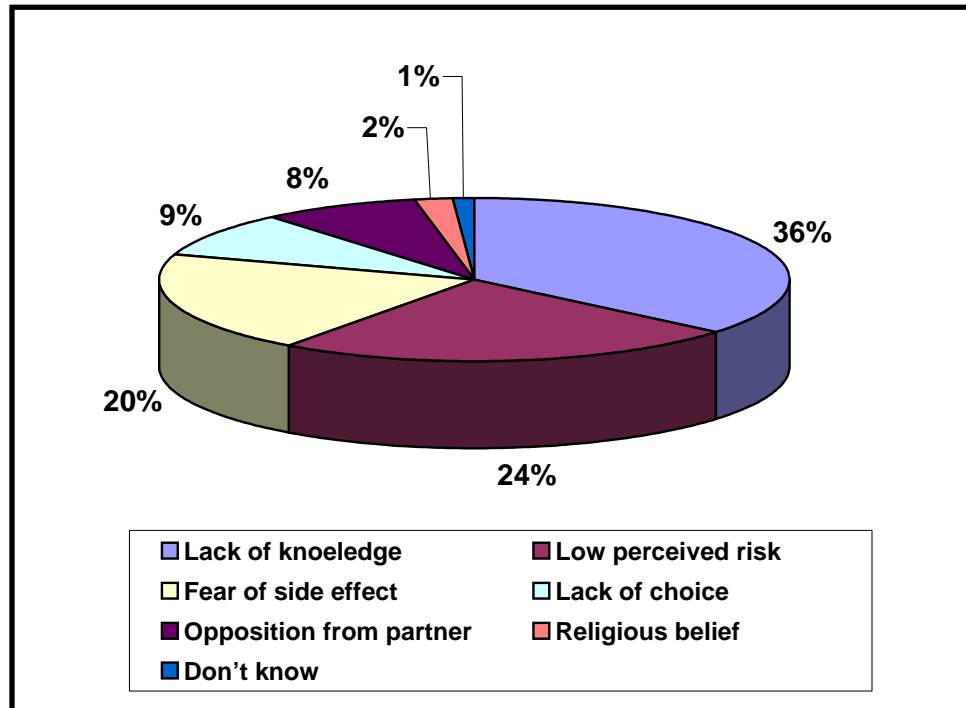
The prevalence of unmet need for contraception was found to be 18.7% (113/ 600) among the study group as derived in Figure 5.

Figure 6: DIFFERENT NEEDS OF RESPONDENTS AS PERCENTAGE



6.8.2 Among the reasons stated for unmet need lack of knowledge and fear of side effect were seen in more cases. Lack of knowledge and health reason /fear of side effects were the main reasons for unmet need in 36% and 20% respectively. Low perceived risk is seen in 24% and 8% had opposition from partner. Religious reasons is seen in 2% of individuals. It is observed that none of the respondents stated any difficulty in access to family planning methods indicating a well located health system in this part of PHC.

Figure 7: REASONS FOR UNMET NEED



6.8.3 AGE AND UNMET NEED

There exists a statistical significant difference between the met and unmet need groups with age (table 7).

Table 7: DISTRIBUTION OF UNMET NEED AMONG DIFFERENT AGE GROUP

Age group in years	Met need	Unmet need	Total
15-19	19	26	45
20-24	94	52	146
25-29	118	21	139
30-34	70	9	79
35-39	61	4	65
40-44	28	1	29
45-49	4	0	4

$$\chi^2 = 74.10, \quad \text{d.f} = 6 \quad \text{P} = 0.00000$$

There exist's a significant difference between met need and unmet need with different age groups.

6.8.4 AGE AT MARRIAGE AND UNMET NEED

Among the met need groups age at marriage below 18 yrs. is found in 191 of the respondents and age at marriage between 18-21 yrs. is seen in 108 and age at marriage above 18 yrs. is seen in 95 of them and among the unmet need group age at marriage below 18 yrs. seen in 51 of them and age at marriage between 18-21 yrs. is seen in 32 of them and age at marriage > 21 yrs. seen in 30 of them.

Table 8: UNMET NEED AMONG DIFFERENT AGE AT MARRIAGE

Age at marriage	Met need	Unmet need
<18 YRS	191	51
18-21 YRS	108	32
> 21 YRS	95	30

$$\chi^2 = 0.44350, \quad DF = 2 \quad P = 0.80112$$

There is no significant difference between met need and unmet need with age at marriage.

6.8.5 NUMBER OF LIVING CHILDREN IN THE FAMILY AND UNMET NEED

No. of contraceptive usages is high in family with more than 2 children when compared to those with 1 or 2 child.

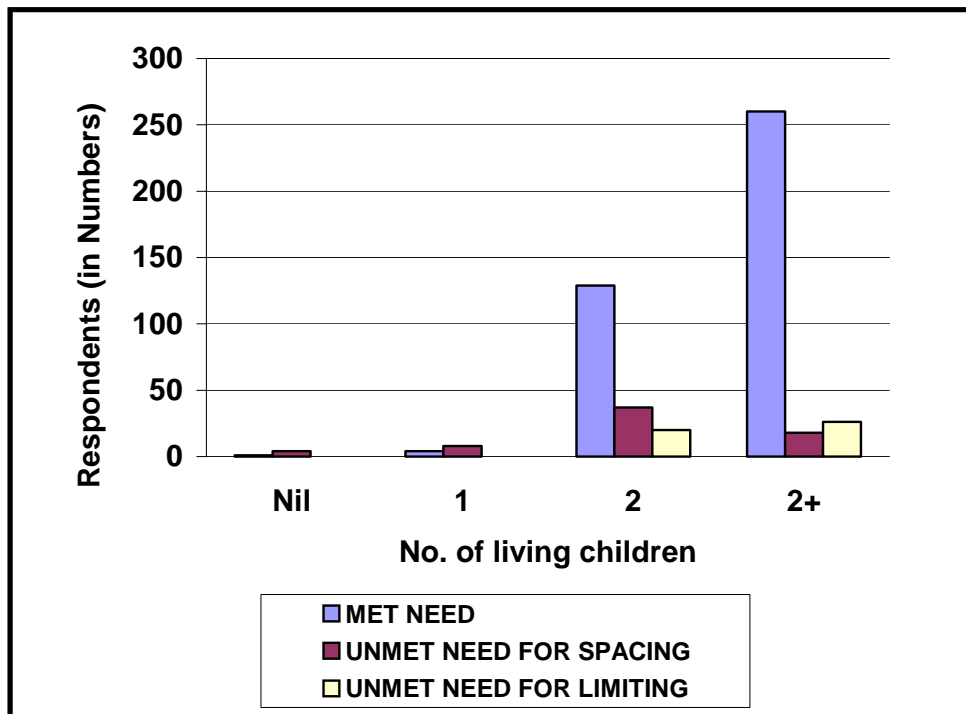
Table 9: NEEDS AMONG FAMILIES WITH DIFFERENT NUMBER OF CHILDREN

Number of children in the family	Met need	Unmet need
Nil	1	4
1	4	8
2	129	57
2+	260	44

$$\chi^2 = 41.47755, \quad DF = 3 \quad P = 0.00000$$

There is significant difference between met need and unmet need with number of children in the family.

Figure 8: UNMET NEED FOR SPACING AND LIMITING WITH LIVING CHILDREN



NUMBER OF LIVING CHILDREN

6.8.6 PRESENCE OF MALE CHILD IN FAMILY AND UNMET NEED

Among the met need groups 249 had a male child in the family where as in the unmet need groups presence of male child in the family is seen in only in 57 of them.

Table 9: NEEDS AMONG FAMILIES WITH MALE CHILD

Presence of male child in family	Met need	Unmet need
Yes	249	57
No	145	56

$$\chi^2 = 5.97117, \text{ DF} = 1 \quad \text{P} = 0.01454$$

There is significant difference between met need and unmet need with male child in the family.

6.8.7 EDUCATION AND UNMET NEED

Table 11: NEEDS AMONG DIFFERENT EDUCATIONAL CATEGORY

Educational category	Met need	Unmet need
Illiterate	41	8
Primary	159	34
High school	139	50
Secondary	47	14
College	8	7

$$\chi^2 = 10.49425, \text{ DF} = 4, \text{ P} = 0.03288$$

There is significant difference between met need and unmet need with educational status.

6.9 PERCEIVED AVAILABILITY

Among the 600 respondents, 88.6% (531) knew where to get a contraceptive. Among them 484 said they could get it from government health post 32 from private doctors and hospitals and 15 from pharmacy. Among them 88% felt their preferred place was convenient.

Table 12 : PERCEIVED AVAILABILITY AMONG DIFFERENT NEED GROUPS

Perceived availability	Met need	Unmet need
Yes	383	66
No	11	47

$$\chi^2 = 130.49536 \quad \text{DF} = 1 \quad \text{P} = 0.00000$$

There is significant difference between met need and unmet need with perceived availability.

VII. DISCUSSION

The contraceptive prevalence rate in India is fifty six percent (2005—2006). In Tamilnadu 60.8% of currently married women were using some method of contraception as per NFHS 3. In this study, the current use of contraceptive is seen in 65.6% of the respondents which is higher than the state average in 2006.

Among the contraceptive users, it is found that majority (58.5%) have undergone tubectomy, and OCP is least used (1%). This matches with the highest used method as per NFHS-3. The reason for lesser usage of oral pill has to be further investigated. Condom usage is seen in just 2.5% of the total respondents, inspite of increased IEC activities. This could be because of the shift in usage of condoms more as a prevention for HIV rather as a contraceptive.

India has the largest number number of married women with unmet need, 14.1%. The unmet need for contraception in Tamilnadu is 9.1% (NFHS-3). In this study, the unmet need of contraception is 18.7 %, which is higher than that of state data in 2006. This shows that there is greater demand for family planning, which has to be targeted to achieve a higher contraceptive usage to decrease the net reproduction rate to less than 1.

The overall awareness for any contraceptive is 92.3% among the respondents. There is significant difference between the contraceptive users and non users with the knowledge status. K.Bhasin et al, found an awareness of 94.4% in East- Delhi and significant difference among contraceptive users and non-users.

Many studies indicate that lack of sufficient knowledge contribute to more than two-third of all unmet need . In this study also we find 36% women with unmet need attributed lack of knowledge as a reason, while 20% fear of side effects/ health reasons .Lack of choice as a reason is also noted, the reason for which have to be identified.

Opposition from husband is also found to be a reason for unmet need. This shows the influence of husbands in decision making regarding the fertility of their wives. It is noted that 15 said opposition from husband, families and communities as a for their unmet need. Ram et al noted in Kolkata that 12% of women had suggested the reasons for unmet need to be opposition from husband and family members.

It is seen that greater proportion of unmet need for spacing (59/67) is seen in age group 20-29. In the age group 30-39, 30 respondents have an unmet need for limiting. There is significant difference between met need and unmet need ($p = 0.0000$) and also between unmet need for spacing and limiting ($p = 0.0000$) among different age groups. Bhattacharya et al, found a significant difference between unmet need with age.

There is no significant difference among met need and unmet need with age at marriage.

With regards to the number of living children in the family, unmet need for spacing is seen in families with nil or one child whereas there is no unmet need for limiting within the family with less than 2 children, which points to the preference of family size of atleast 1. The difference between the met and

unmet need within this group is significant statistically. Kansal et al, also found a significant difference between number of living children and unmet need.⁶⁹

Even though none of the respondents stated preference for male child as a reason for unmet need, observation of prevalence of met and unmet need among the families with atleast one male child and no male child, there seem to be a significant difference ($p = 0.01454$).

There is significant difference among respondents with different levels of education. Ingle GK et al, found a significant difference between met need and unmet need with different levels of education.⁷⁰

VIII. SUMMARY

Recent programs have strategies, which focuses on meeting, rather than trying to change people's needs and aspirations.

A descriptive cross –sectional study among a sample of 600 currently married women of reproductive age group (15-49) at Lakshmipuram HSC, (Trinindravoor PHC), chosen by simple random method.

A structured pre tested proforma, recommended for survey of family planning programs was used for the study. The developed schedule has four parts comprising of the background characteristics of the respondent, marital status and fertility, knowledge and attitude to contraception and use of contraceptives and perceived availability and accessibility of contraceptives (Annexure II).

Contraceptive prevalence rate among the study population was 65.6%. Among the users tubectomy was the commonest method with 58.5% usage, while IUDs, condom and OCPs were used in 4%, 2.5%, 1%. Unmet need for contraception is found to be 18.7%.

Knowledge of atleast one contraceptive was seen in 92.3% of them with most of them knowing tubectomy instantaneously.

There were 5.5% Respondents, who had used any method of contraception in the past of currently not using any. Among them beside the reason to have a child in 36.36%, health reasons were seen in 60.6%.

There were 28.9% respondents who had never used a contraception within this group. There were reasons of opposition from husband family members in 8.6%, lack of knowledge and fear of side effect was seen in 49.13% of them.

The unmet need for contraception was seen in 18.7% of the Total respondents giving a total need for planning in the area as 84.3% (65.6 + 18.7) ie. contraceptive usage and unmet need.

Among the reasons for unmet need, lack of knowledge and fear of health reasons contributes to 60%. The other reasons that were found were opposition from partner, lack of choice, low perceived risk and religions reasons.

IX. RECOMMENDATIONS

In general data on unmet need provide overall direction by helping to pin point the obstacles in society and weakness in services that need to be overcome. From this study the following are recommended.

1. A minimum period of two–three years (between the first and second pregnancies) can be fixed by the government for availing benefit schemes, provided by the government.
2. Women need to be counselled on the full range of available methods so that they can choose the method that best matches their individual circumstances and intentions and can change methods when they need to.
3. Women who are post partum, breast feeding, or approaching menopause need counselling on their likelihood of becoming pregnant and on the family planning methods that might be appropriate for them.
4. Women need correct information on contraceptive methods, especially on side effects and its management.
5. Programs should be planned so as to improve interpersonal relations between clients and providers and to ensure periodic follow-up of clients to reduce the number of women who stop using contraception.

X. LIMITATIONS

1. Only one subcenter is chosen for the study.

ABBREVIATION

DHS	-	Demography and health survey
NFHS	-	National Family health survey
IUD	-	Intra uterine devices
OCP	-	Oral contraceptive pills
MTP	-	Medical termination pregnancy

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ANNEXURE – II

QUESTIONNAIRE FOR COMMUNITY SURVEY OF FERTILITY AND USE OF FAMILY PLANNING METHODS AMONG REPRODUCTIVE AGE (15-49 YEARS)

Name : _____ Age: _____ No.: _____

Name of spouse: _____

Address _____

Introduction

"How do you do? I am (name) _____ of (name of organization). I am conducting a survey on the need for family planning services in your community. I have several questions to ask you. I know you are very busy. But it will not take very long. And I would appreciate it very much if you would help us by answering these questions: I assure you that your answers will be kept confidential and used solely for research purposes.

First I would like to know how many people are living in this household, then we will move on to several other questions".

A. Background characteristics of respondent

A1. In what month and year were you born? MM _____, YY _____

A2. How old were you on your last birthday? _____ Years.

A3. Have you ever attended school? Yes _____, No. _____

If yes, Primary (1-5), Middle (6-8), High (9-10), Secondary (11-12), College.

Can you read a letter or newspaper easily, with difficulty or not at all?__

A4. What is the average monthly income of your family? _____

B. Marital Status and fertility

B1. What is your current marital status?
Single, Married, Divorced, Widowed, Separated _____

B2. At what age did you get married?

B3. Have you ever been pregnant? Yes _____, No _____ (→C1)

B4. How many children you have given birth to, including those who have survived only briefly? _____ No. of sons: _____

B5. When was your last child born? _____ or age _____

- B6. Did you breast-feed your last child at all? Yes ____, No ____ (→B8)
- B7. Are you still breast-feeding? Yes ____, No ____, Child died ____
- B8. Have your periods returned? Yes ____, No ____
- B9. Have you had a period in the last four weeks? Yes ____ (→C4), No. ____
- B10. Are you pregnant now? Yes ____, No ____
- B11. Judging from your partners and your physical condition can you become pregnant whatever you want to? Yes ____ No. ____ Not sure
- If no or not sure, why? Partner has been sterilized ____, respondent sterilized ____, Others reasons (specify) _____
- B12. Do you want to have (more) children? Yes__ (1), No__(2), Not sure (3) If yes, how long do you want to wait before having the next child? ____ Months

C. Knowledge and attitude to contraception and use of contraceptives

- C1. Do you know about any methods hat are used to prevent women from getting pregnant too often or having more children than they want? (Interviewer: do not suggest any methods)
Yes ____, No ____ (→D8)
- C2. What methods do you know about? (Note down any methods mentioned in columnl of **table 1**)
- C4. Have you ever used any of the methods we have talked about? Yes____ No. ____ (→C7)
- C4. Are you currently using any method? Yes ____, No ____

Table 1. Record the knowledge and history of use of contraception

Method	Knowledge of method (C2)	History of use (C3)	Preferred method (C9)
Condom			
Oral contraceptive pill			
Injectables			
IUDs			
Tubal ligation			
Vasectomy			
Rhythm (safe period)			
Withdrawal			
Induced abortion or menstrual regulation			
Avoidance of sexual intercourse			
Others (specify)			

- C5. If yes, which method?

- C6. If no, what was the main reason you stopped using it?
1. To become pregnant
 2. Method failed/got pregnant
 3. Infrequent sex
 4. Partner disapproved
 5. Health Concerns
 6. Method not available
 7. Inconvenience
 8. Others (specify) Husband away, lack of privacy
 9. Don't know.

Check Q B10 and C4 if either partner is sterilized or currently using any method (→D1)

- C7. What are the main reasons that you are not using a method to avoid pregnancy?
1. Want to become pregnant
 2. Infrequent sex
 3. Postpartum/breast-feeding
 4. Menopause/sub fecund
 5. Lack of knowledge
 6. Difficult access to methods
 7. Religious beliefs.
 8. Opposition from partner
 9. Fear of side effects
 10. Opposed to family planning
 11. Others (specify)
 12. Don't know
- C8. Do you intend to use another method to avoid pregnancy at any time in future?
Yes _____, No _____ (→D1) Don't know ((→D1)
- C9. Which method would you prefer to use? (Table 1 column 3)
- C10. Do you intend to use that method in next 12 months? Yes____, No. ____, Don't know
- C11. What is the main reason do you think you will not use a family planning method at any time in future?
1. Infrequent sex/no sex
 2. Menopausal/hysterectomy
 3. In fecund / sub fecund
 4. Want as many children
 5. Husband opposed
 6. Others opposed
 7. Lack of knowledge
 8. Side effects
 9. Cost
 10. Difficult to get
 11. Afraid of sterilization
 12. Others

D. Perceived availability and accessibility of sources of contraceptives

D1. Do you know where to get contraceptive supplies?

Yes_____, No _____,

D2. What is that?

1. Health center
2. Pharmacy
3. Traditional healer
4. Private physician
5. Other

D3. Which place would you prefer to go? Note the first place mentioned)

D4. Is the cost reasonable? Yes _____ No_____

D5. What are all the methods available there?

Condom

Oral contraceptive pill

IUDs

Tubal ligation

Vasectomy

Induced abortion or menstrual regulation

Others (specify)

D6. Is the place convenient? Yes No

E. Concluding the interview

"Thank you very much. You have been helpful. Is there any thing you would to add?"