

Contraceptive behavior among ever-married reproductive age women in the estate sector in the district of Ratnapura, Sri Lanka

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ABSTRACT

Background: Modern family planning (FP) methods remain the most effective means of reducing unmet need and its consequences including unplanned pregnancies. **Objective:** The objective of this study was to determine the contraceptive practice and unmet need for FP among 15–49-year-old ever-married women in estate sector in Ratnapura district. **Materials and Methods:** A community-based descriptive cross-sectional study was conducted using interviewer-administered questionnaire to assess contraceptive behavior among 15–49-year-old ever-married women in estate sector. **Results:** Contraceptive prevalence for the study group ($n = 818$) was 67.7% (95% confidence interval [CI]: 64.5–71.5) with the prevalence of 65.4% (95% CI: 62.0–68.7) for modern methods and 2.3% (95% CI: 1.5–3.4) for natural and traditional methods. The prevalence individual methods were 22.75% for female sterilization, 14.91% for injectables, 14.06% for oral contraceptives, 6.36% for intrauterine devices, 5.38% for subdermal implants, 1.85% for condoms, and 0.01% male sterilization. The prevalence of unmet need for FP was 16.3% (95% CI: 13.8–18.7) ($n = 133$) while that for spacing was 6.6% (95% CI: 5.4–7.8) ($n = 53$) and for limiting was 9.7 (95% CI: 8.2–11.2) ($n = 80$). Unmet need for modern methods was 18.8% (95% CI: 15.9–21.3) ($n = 152$). Reasons for unmet need were infrequent sex (21.5%), fear of side effects (18.6%), and low perceived risk of pregnancy (16.6%). **Conclusions:** Although contraceptive prevalence is high in estates, existence of high level of unmet need with reasons related to lack of awareness indicates the need of intervention studies to reduce unmet need and its consequences.

KEY WORDS: Contraceptive Practice; Unmet Need; Reproductive-aged Females

INTRODUCTION


Family planning (FP) refers to the constellation of activities aimed at fertility control for timed and planned conception, undertaken by a heterosexual couple of childbearing years to achieve the desired birth spacing and family size.^[1]

Contraceptive prevalence is the percentage of women who are practicing or whose sexual partners are practicing any

form of contraception and usually measured for married women aged 15–49 years.^[2]

Unmet need is defined as the percentage of all fecund women who are married or living in union and thus presumed to be sexually active but are not using any method of contraception, either do not want to have any more children or want to postpone their next birth for at least 2 more years or do not know when or if they want another child. Unmet need for modern methods of FP includes all in the unmet need group and those who are using natural and traditional methods at the time of survey.^[3] Unmet need for FP describes the discrepancy between need and practice of contraception among women in reproductive age.

The use of appropriate contraceptive method helps the user to avoid unwanted pregnancies, thus reducing the risk of

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induced abortion which is considered as the number one killer of the women in reproductive age in developing world. Most of these induced abortions in the developing world are unsafe, thus leading to have a series of complications, the terminal entity being the maternal death.^[4]

Due to the presence of functioning reproductive system, sexually active women are subjected to the risk of pregnancy every month if they are not using effective FP method according to the stated guidelines. Among all pregnancies worldwide, nearly 50% are mistimed or unwanted. Having an unplanned pregnancy is one of the major disadvantages in a woman's life because it leads to lot of consequences; the most disastrous being the induced abortion. According to the WHO estimates in 2003, a woman dies every 8 min due to complications arising from unsafe abortions. Worldwide, approximately 42 million pregnancies are voluntarily terminated, 22 within the national legal system and 20 outside it.^[4]

The use of modern contraceptive methods has shown a great impact in reducing induced abortions in the developing world. Worldwide, on-going FP services and supplies are currently meeting the needs of >500 million women preventing annual incidence of 187 million unintended pregnancies including 60 million unplanned births and 105 million induced abortions. This prevents 2.7 million fewer infant deaths and 215,000 pregnancy-related deaths annually. Therefore, FP services are preventing 75% of the annual toll of abortions occurring in developing world. Beyond their medical impact, FP programs also have far-reaching social, economic, and psychological benefits for women, families, and nations as well.^[5]

If every woman in the developing world with an unmet need for a modern method began using FP, an additional 52 million unintended pregnancies could be avoided annually, preventing 22 million abortions; of which 60% occur now in the developing world. Although providing these services and supplies would cost an additional \$3.9 billion per year, savings from preventing clandestine abortions and their complications would make it negligible. It has been estimated that in a typical low-fertility Latin American country, every dollar spent on FP saves \$12 in health and education costs from averted pregnancies, abortions, births, and complications.^[5]

In Sri Lanka, since the introduction of modern FP methods in 1953 by FP Association and incorporation of FP services into government Maternal and Child Health Programme, in 1965, contraceptive prevalence rate (CPR) has steady increased from 34.4% in 1975 to 70.0% in 2000, leading to the reduction of total fertility rate (TFR) from 5.0 in 1964 to 1.9 in 2000. Unmet need in Sri Lanka has been first assessed in 1987 in Demographic and Health Survey (DHS) and was 22.7% for any method and 56.9% for modern methods. By 2000, it has fallen to 18.2% for any method and 38.7% for modern methods.^[6]

Simultaneously, the rate of induced abortions, although it highly restricted by law was 0.147 per 1000 women in the reproductive age by 2000, which is a common phenomenon in countries during demographic transition.^[7] It has been resulted from high rate of unmet need for modern methods coupled with incorrect use of modern methods, especially oral contraceptive pills and condoms.^[8] In Sri Lanka, 43% of maternal deaths were due to unintended pregnancies in 2003, while abortion-related complications have become the second leading cause of maternal deaths in 2006 accounting for 12% of the total.^[6] As revealed by Thalagala in 2010, provision of FP services cost only 1% of the cost of managing abortion-related complications. This would have a great economic impact for the country as well.^[9]

The preventive health services in Sri Lanka are delivered through the health unit system with no cost to the client at service delivery point. In Sri Lanka, estate sector comprises 5.4% of the total population and contraceptive prevalence of 64.7% (national level 68.9%) and unmet need of 11.1% (national level 7.3%) while TFR is 2.5 and wanted FR is 2.1 (national levels 2.3 and 2.1, respectively), thus indicates high risk of unwanted pregnancies and their consequences in the estate sector.^[10] The district of Ratnapura, estate population, consists of 10.58% of total population.^[11] No history of conduction of a separate study to assess contraceptive practice there.

Objectives

General objective

The objective of this study was to determine the contraceptive practice, prevalence of unmet need for FP, and reasons of unmet need for FP among 15–49-year-old ever-married women in the estate sector in the district of Ratnapura.

Specific objectives

The specific objectives of this study were as follows:

1. To determine the contraceptive practice among 15–49-year-old ever-married estate women in the district of Ratnapura.
2. To determine the prevalence of unmet need for FP among 15–49-year-old ever-married estate women in the district of Ratnapura.
3. To determine the reasons of unmet need for FP among 15–49-year-old ever-married estate women in the district of Ratnapura.

MATERIALS AND METHODS

This is a community-based descriptive cross-sectional study conducted to assess the contraceptive prevalence and unmet need for FP among 15–49-year-old ever-married females in the estate sector in the district of Ratnapura; excluding

those who are not at risk of pregnancy: Women who have undergone hysterectomy, bilateral oophorectomy verified based on diagnosis cards or clinic records, those who attained menopause (no menstruation for the past 6 months and not pregnant and not on hormonal therapy) and women who cannot give informed consent by themselves or by the partner.

The sample size for contraceptive prevalence survey was calculated using the latest prevalence rate of that in the estate sector available in DHS 2006/7 (64.7%).^[10] Considering the feasibility of community survey, cluster sampling method was adopted with correction for the design effect, which is dependent on the rate of homogeneity (roh) of the variable chosen within clusters and the cluster size.^[8] As Bennet pointed out, sociodemographic variables have relatively high roh and thus fixed at 0.2 for this study.^[12,13]

Primary sampling unit was the estate. A list of all estates in the Ratnapura district with their populations was obtained from the Plantation Trust. Selection of clusters was based on probability proportion to size (sampling technique) of each estate. The cluster size was 10 as revealed feasible in the pre-test. Final sample size was 840. The study was conducted under the ethical permission of ethics review committee, National Institute of Health Sciences, Kalutara, Sri Lanka. One eligible female from one household was selected and interviewed with the informed consent. The total number of women participated for the study was 818.

The study instrument was an interviewer-administered questionnaire which has been developed and used by another

study to assess the use of FP and unmet need in the district of Kalutara; in all three commonly used languages; Sinhala, Tamil, and English. Standard and internationally accepted definitions were used in measuring contraceptive prevalence and unmet need which enabled comparison of results with national and international studies.

Data were collected by health volunteers selected from those who completed advanced level examination, trained for data collection in a 3-day training program by the principal investigator. They were provided with an interviewer guide to facilitate the procedure of data collection. The survey was conducted at participants' residences, during weekends and evenings with maximum of three visits to achieve the highest possible coverage. Data collection was completed within 15 weeks starting from February 1, 2014, with response rate of 97.3%. A subsample of 50 women was reinterviewed within 2 weeks of initial data collection to assess the repeatability of responses.

The contraceptive prevalence and the prevalence for each method and prevalence of unmet need were expressed as percentages with their 95% confidence interval (CI).

RESULTS

The overall contraceptive prevalence for the study group was 67.7% (95% CI: 64.5–71.5) (*n* = 554). The prevalence for modern methods of contraceptives was revealed 65.4% (95% CI: 62.0–68.7) while that for natural and traditional methods was 2.3% (95% CI: 1.5–3.4) [Tables 1 and 2].

Table 1: Contraceptive prevalence of the study group

Method	<i>n</i>	Prevalence (%)	95% CI
Modern methods	535	65.4	62.0–68.7
Natural+traditional	19	2.3	1.5–3.4
Overall	554	67.7	64.5–71.5
Not using a method	264	-	-
Total	818	100.0	-

95% CI: 95% confidence interval

Table 2: Prevalence of individual family planning methods

Current method	Frequency (%)
Oral contraceptives	115 (14.06)
Depot medroxyprogesterone acetate	122 (14.91)
Intrauterine device	52 (6.36)
Female sterilization	186 (22.75)
Vasectomy	1 (0.01)
Condoms	15 (1.85)
Implants	44 (5.38)
Natural/traditional methods	19 (2.3)
Total	554 (67.7)

Table 3: Distribution by the prevalence of unmet need for family planning (*n*=818)

Prevalence of Unmet need	Frequency (%)	95% CI
Unmet need	134 (16.3)	13.8–18.7
For limiting family	80 (9.7)	8.2–11.2
For spacing	54 (6.6)	5.4–7.8
For modern methods	152 (18.6)	15.9–21.3

95% CI: 95% confidence interval

Table 4: Distribution by reasons for unmet need of family planning

Reasons (<i>n</i> =134)	Frequency (%)
Infrequent sex	29 (21.6)
Fear of side effects	25 (18.7)
Low perceived risk of pregnancy	22 (16.4)
No accessibility	15 (11.2)
Opposition from the husband	14 (10.4)
Do not know about FP	10 (7.5)
Other reasons	19 (14.2)
Total	134 (100.0)

FP: Family planning

The prevalence of unmet need for any method of FP was 16.3% (95% CI: 13.8–18.7) ($n = 133$) while that for spacing was 6.6% (95% CI: 5.4–7.8) ($n = 53$) and for limiting was 9.7% (95% CI: 8.2–11.2) ($n = 80$) [Table 3].

Unmet need for modern methods of FP was 18.8% (95% CI: 15.9–21.3) ($n = 152$)

The main reasons for not using FP methods were infrequent sex (21.5%), fear of side effects (18.6%), and low perceived risk of pregnancy (16.6%) [Table 4].

DISCUSSION

The contraceptive prevalence for the study group was 67.7% with 65.4% for modern methods. The prevalence of overall unmet need for FP was 16.3% while that for the modern methods was 18.8%. Reasons for non-use of FP were infrequent sex (21.5%), fear of side effects (18.6%), and low perceived risk of pregnancy (16.6%).

The study design of cross-sectional survey is known to provide information regarding characteristics of a given health-related status which helps generate hypothesis to be tested using analytical designs. Simultaneously, assessment of community prevalence helps for planning health-care needs and to evaluate the effectiveness of preventive programs.^[14]

The CPR of 67.7% was much higher than the prevalence identified in DHS 2006/7 (64.4%) in the estate sector island wide. This may be due to having very low levels of contraceptive prevalence in estates of other districts.^[10] However, the CPR in the overall district of Ratnapura was 74.4%, much higher than the level in the study population. This signifies the fact that, even with high level of contraceptive prevalence, the levels in estates are usually lower than the district levels.

Considered the use of modern methods, its prevalence in the study group is 65.4% with a very small percentage using traditional methods (2.3%). In DHS 2006/7, this factor has

been revealed that unlike rural and urban sectors, much higher percentage is using modern methods in the estate sector. In DHS 2006/7, CPR was 64.7% while that of modern methods was 61.2% (difference is 3.5%). The use of modern methods in the estate sector is always high as seen in the study group. The most interesting factor is that the prevalence for natural and traditional methods has decreased from 3.5% to 2.3%. This very low prevalence of natural and traditional methods in estates has been revealed by DHS 2006/7 also compared to rural and urban setting where the prevalence of natural and traditional methods around 16% [Table 5].

Considered individual methods, female sterilization was the most popular among the participants being 22.75%. However, compared to DHS 2006/7, it has decreased dramatically from 39.9%. Non-availability of services for permanent methods might have been the reason for this reduction because female sterilizations are not provided routinely in most curative institutions at the moment. Instead of permanent methods, modern temporary methods are becoming more popular. In 2006/7 DHS, the prevalence for oral contraceptives was 5.4%, Depo-Provera was 9.8% while that for intrauterine devices was 2.5% which has increased up to 14.91%, 14.06%, and 6.36%, respectively. In 2006/7, none used subdermal implants, but in the current study, it was 5.38%. This upward trend of temporary methods may be due to non-availability of permanent methods and increased demand as well as availability of temporary methods in the estate sector. The same trend is seen in the whole country at the moment. Due to limited supply of Depo-Provera, the prevalence of intrauterine devices and subdermal implants also has increased island wide in the past few years [Table 5].

However, the use of condoms (1.85%) has not much changed and very low in the estate sector while male sterilization being the lowest (0.01%) since it is not routinely being performed now and the incentives given earlier for permanent method acceptors now has been withheld.

Considered natural and traditional methods, very low prevalence exists in estates compared to national figures. Since practice of these methods requires the support by the

Table 5: National prevalence of individual family planning methods

Method	Estates DHS 2006/7 (%)	National DHS 2006/7 (%)	Current study (%)
Oral contraceptives	5.4	8.1	14.06
Depot medroxyprogesterone acetate	9.8	14.8	14.91
Intrauterine device	2.5	6.5	6.36
Female sterilization	39.9	16.3	22.75
Vasectomy	1.5	0.7	0.01
Condoms	1.9	5.7	1.85
Implants	0.0	0.3	5.38
Natural/traditional methods	3.5	15.9	2.3
Overall prevalence	64.7	68.4	67.7

DHS: Demographic and Health Survey

male partner, by the culture of estates having high alcohol addiction, contribution from male partners might have become minimum.

The main reasons for unmet need were infrequent sex (21.5%), fear of side effects (18.6%), and low perceived risk of pregnancy (16.6%). The reasons described in the DHS 2006/7 for none use included 37.5% for menopausal/subfecund states, 20.5% for health concerns and side effects, 8.1% for opposition to use, and 21% for infrequent sex.^[10] All these information warrant the need of specially designed interventions to address the common reasons to increase contraceptive use to prevent unintended pregnancies among the non-users.

However, the prevalence of unmet need for FP (16.3%) was very high compared to the national level (7.3%) and estates (11.1%), respectively, found in DHS 2006/7. Simultaneously, the relationship detected in DHS for unmet need for spacing (6.3%) and limiting (4.9%) has been reversed that unmet need for limiting (9.7%) exceeds that of spacing (6.6%). This shows the need for both permanent and temporary methods made available in the estate sector. Further, the pattern follows that of the rural and urban sectors where unmet need for limiting being higher than that of spacing in DHS 2006/7.

Compared to 2006/7 prevalence, unmet need had increased in spite of increasing contraceptive practice among the estate sector. This indicated the desire for planning the family but not getting the necessary action for that widening the gap between the desire and the practice of fertility control. Thus, it has become an urgent intervention to address this high unmet need among estate population where socioeconomic status is poor compared to other parts of the country.

Unmet Need for Modern Methods

Computation of unmet need for modern methods was based on the assumption that the unmet need for modern methods is a combination of unmet need for any method and those who are using natural and traditional methods at the time of the study.^[3] Proportion using natural and traditional methods was 8.9%, and hence, the unmet need for modern methods was 18.6% (95% CI: 15.9–21.3).

In comparison with the past trends, unmet need for modern methods has increased in the estate sector. It was 14.6% in estate sector in 2006/7 DHS. Although the prevalence of natural and traditional methods has come down, this is mainly due to increase in unmet need for any method in the present study.

Considered the other countries in the region, where the prevalence of traditional methods was high, the unmet need for modern methods is also very high. In the Philippines, when the unmet need for any method was 17%, the unmet need for modern methods was to 33%. In Moldova, the respective figures were 7% and 31%.^[3]

Reasons for Unmet Need

There were 133 (16.3%) women with unmet need for any method. The main reasons for unmet need were infrequent sex (21.5%), fear of side effects (18.6%), and low perceived risk of pregnancy (16.6%). However, according to the study conducted in Kalutara district in 2010, the common reasons for unmet need were low perceived risk of pregnancy (36.2%), fear of side effects (30.5%), and less frequent sexual intercourse (19%).^[15] These two studies giving more compatible findings reveal the existence of poor transmission of information from health-care personnel to the public on risk of unwanted pregnancies, value of modern FP methods, and the need of practicing FP in sexually active women in reproductive age.

The DHSs conducted in 13 developing countries in 1999–2000 reported reasons for unmet need as 30–40% for low risk of conception, 20–30% for opposition for FP, 30% for health concerns side effects, and 4% for high cost and non-availability.^[16]

It is important that due relevance is paid to the above reasons when formulating health intervention programs in the community in increasing the use of FP by the public. Delivering continuous counseling services to address the behavior change in relation to FP would be the most effective method of addressing unmet need with constant referral to the above reasons to increase awareness on the need to practice FP. It is also important that the requested services are made available, especially facilities to obtain permanent sterilization for the estate sector.

Limitations of the Study

Many of the estate participants are speaking Tamil so that those who are fluent in Tamil have to be data collectors. Most of the participants (64.3%) were working in the estate and data collection had to be conducted only in weekends.

CONCLUSIONS

The high prevalence of unmet need both for limiting and spacing coupled with reasons such as fear of side effects and low perceived risk of pregnancy while their sexual contact is infrequent warrants the need of specially designed intervention studies. Hence, intervention studies aimed at increasing community awareness and changing contraceptive behavior becomes the first to be addressed in further research in the estate sector.

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