RESEARCH PAPER

CONTRACEPTIVE PREVALENCE, PREVALENCE OF UNMET NEED FOR FAMILY PLANNING AND ITS CORRELATES AMONG EVER MARRIED FEMALES OF 15-49 YEARS AGE GROUP IN KALUTARA DISTRICT, SRI LANKA IN 2010

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Abstract

Background: Correct use of modern contraceptives remains the most effective method of reducing unmet need and avoiding unplanned pregnancies and their consequences.

Objective: To determine the contraceptive prevalence, prevalence of unmet need for family planning and its correlates among 15 – 49-year-old ever married women in the district of Kalutara, Sri Lanka.

Method: A community based descriptive cross sectional study was conducted to assess the prevalence of family planning and unmet need for family planning among 1200 ever married females in 15-49 age group, selected by cluster sampling technique. Correlates of unmet need were assessed by case control analysis which included bivariate and multivariate logistic regression.

Results: Overall contraceptive prevalence was 69.4% (95%CI: 66.1-72.7) with a prevalence of 60.5% (95%CI: 51.9-69.1) for modern methods and 8.9% (95%CI: 3.3-14.5) for natural & traditional methods. Prevalence of unmet need was 9.4 % (95%CI: 7.7-11.1) with 1.5 % (95%CI: 0.79-2.2) for spacing and 7.9% (95%CI: 6.3-9.5) for limiting. Unmet need for modern methods was 18.7% (95%CI: 16.1 - 20.6). High risk of unmet need was found to be associated significantly with age above 35 years, education below grade 05, unemployment, less frequent sex, not willing to use modern methods in future and lack of counseling services.

Conclusions: Although contraceptive prevalence is high in Kalutara district, existence of high prevalence of unmet need and the risk associated with poorly educated, unemployed women in older age groups indicates the need of a specific programme to prevent unwanted pregnancies

Key words: Prevalence, Unmet need, Family Planning, Reproductive age, Married females

Introduction

Unmet Need for Family Planning (FP) refers to the percentage of all fecund women who are married or living in union and thus are presumed to be sexually active but not using any method of contraception, who either do not want to have any more children or want to postpone their next birth at least for two years or do not know when or if they want another child[1].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[2]. Unmet need for FP describes the discrepancy between need and practice of contraception among women in reproductive age.

Use of appropriate contraceptives prevents unplanned pregnancies, reducing the need for induced abortion. Unsafe abortion has become the number one killer of reproductive aged women in developing countries. Even though abortion is criminalized in Sri Lanka except to save the mother's life[3], daily estimation of induced abortion is around 700, which accounts for 75% of live births per day[4]. Due to its clandestine nature, most abortions in the developing world are unsafe, resulting a series of complications, the most disastrous being a maternal death. Even in Sri Lanka, septic abortion has become the second leading cause of maternal deaths in 2006, 2008 and 2010[5]. According to Demographc Heath Survey (DHS) 2006/7, 17.2% of births among participants in the previous 5 years were unexpected[6]. This would be an underestimate because already born children are less likely to be stated as unwanted. The gravity of unplanned pregnancies would be much higher than DHS estimates, because the added number of abortions has not been counted in it. As revealed by Thalagala, 73% among 365

abortion seekers were found to have unmet need for FP.

Materials and Methods

This study consisted of two components; prevalence survey followed by assessment of correlates of unmet need. The study population consisted of ever married females (legally or customarily) in the 15-49 year age group in Kalutara district, excluding those who are not at risk of pregnancy: women who have undergone hysterectomy, bilateral oophorectomy verified based on diagnosis cards or clinic records and those who attained menopause (No menstruation for last six months and not pregnant and not on hormonal therapy).

The sample size for prevalence survey was calculated using the latest prevalence rate of unmet need available in DHS 2000 (18.2%). 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, socio demographic variables have relatively high roh and thus fixed at 0.2 for this study[9]. The clusters were Public Health Midwife (PHM) areas selected using probability proportion to size of each PHM division in the district. According to the pretest, feasible size of the cluster per day was found to be 20. Final sample size of 1200 was selected from 60 clusters. One eligible female from one household was selected and interviewed with informed consent.

Since the association of correlates has not been measured in the DHS 2000, sample size calculation for case control study was based on the study conducted in the Medical Officer of Health (MOH) area, Gampaha, Sri Lanka, which reported 7.8 fold risk of unmet need among women

with less than primary education compared to those had above primary education[10]. For the ratio of four controls per case, required sample size was 360 (72 case and 288 controls). The study was conducted under ethical approval from the Ethical Committee of the Faculty of Medicine, University of Kelaniya, Ragama, Sri Lanka.

The study instrument was a pre tested Interviewer Administered Questionnaire (IAQ). 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 was collected by trained Public Health Nursing Sisters (PHNS) of all MOH areas facilitated with provision of interviewer guide to ensure uniform administration of the questionnaire. The survey was conducted at participants' residences, during weekends with maximum of three visits to achieve highest possible coverage. Data collection was completed within 12 weeks with a response rate of 93%. A sub sample of 55 women was re interviewed within two weeks of initial data collection to assess the repeatability of responses. The study was conducted from January to April 2010.

The prevalence of contraception & unmet need were expressed as percentages with their 95% confidence interval (95% CI). Statistical associations between categories were evaluated by chi-square test with Yate's correction where sample size was small and the expected value in one of the cells in 2 by 2 analyses was ≤ 05.

A two tailed probability of <0.05 was considered as significant. The association between correlates was expressed as odds ratios (OR) and 95% CI. Effect of confounding was controlled by multivariate analysis using logistic regression.

Results

Contraceptive Prevalence Rate (CPR) among participants was 69.4% (95% CI: 66.1-72.7) with 60.5% (95% CI: 51.9-69.1) for modern methods and 8.9% (95% CI: 3.3-14.5) for natural & traditional methods (Table 01). Among users, the highest prevalence was for Depo Medroxy Progesterone Acetate (18.6%); while 12.7% had female sterilization. Condoms were used by 10.5% while 9.3% used oral contraceptives, 9.1% used intrauterine devices and 0.4% had vasectomy (Table 2). Among all, 6.1% were using natural and 2.8% were using traditional methods. None used implants. Among modern methods users, 103 of 677(15.2%) did not follow the method correctly while all natural method users did not adhere to correct use. Hence among all participants, only 574 were using a modern FP method correctly giving the community prevalence of correct use of modern FP methods as 51.3%.

Table 1: Contraceptive prevalence of the study group

Method	N	Prevalence	95% CI
Modern methods	677	60.5%	57.6-63.4
Natural + Traditional	100	8.9%	7.2-10.6
Overall	777	69.4%	66.1-72.7
Not using a method	342	-	-
Total	**1119**	**100.0%**	**-**

Table 2: Prevalence of individual family planning methods

Current method	Frequency	
Oral contraceptives	104	9.3%
Depo Medroxy Progesterone Acetate	208	18.6%
Intrauterine device	102	9.1%
Female sterilization	142	12.7%
Vasectomy	4	0.4%
Condoms	117	10.5%
Implants	0	0.0%
Natural methods	31	2.8%
Withdrawal /Abstinence	69	6.1%
Non users	342	30.6%
Total	**1119**	**100.0%**

The prevalence of unmet need for FP was 9.4% (95% CI: 7.7-11.1) with 1.5 % (95% CI: 0.79-2.2) for spacing and 7.9% (95% CI: 6.3-9.5) for limiting (Table 3). Unmet need for modern methods was 18.3% (95% CI: 16.1– 20.6). Reasons for unmet need for family planning are given in table 4. Considering the correlates of unmet need, significantly increased risk of unmet need was found to be associated with the age of the participant being more than 35 years (p=0.01; 95% CI=1.12-2.88), having education less than primary level (p=0.03; 95%CI=1.08-4.50) reduced sexual contact (p=0.01; 95% CI=1.21-2.97), expecting to limit the family (p=0.001; 95% CI=1.35-4.38), not expecting to use a modern FP method in future (p=0<0.001; 95% CI=2.14-5.4) being unemployed (p=0.03; 95% CI=1.09-4.17) and not having counseling in FP (p=0.04; 95% CI=1.01-3.0) (Table 5).

Table 3: Distribution by prevalence of unmet need of for family planning

Prevalence of Unmet need	Frequency	%	95%CI
Overall	**(N=1119)**		
Unmet need	105	9.4	7.7 – 11.1
Using a method	1014	90.6	88.9-92.3
For limiting family	88	7.9	**6.3-9.5**
For spacing	17	1.5	0.79-2.2
For modern methods			
Non users	105	-	-
Users of traditional methods	31	-	-
Uses of natural methods	69	-	-
Unmet need	205	18.3	16.1 - 20.6

95% CI=95% Confidence Interval

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Table 4: Reasons for unmet need for family planning

Type of reasons	Frequency	%*
Don't know about contraception	4	3.9%
Fear of side effects	32	30.2%
No accessibility	4	3.9%
Les frequent sexual contact	20	19.0%
Opposition from the husband	6	5.8%
Low perceived risk of pregnancy	38	36.3%
Opposition from the religion	1	0.9%
Total	**105**	**100.0**

Table 5: Correlates identified from logistic regression analysis

Independent variables					95% C.I.	
	Coefficient	SE	p-value	OR	Lower	Upper
Age in years						
<35				1.00		
≥35	0.59	0.24	0.01	1.80	1.12	2.88
Level of education						
≥ Grade 5				1.00		
Below grade 5	0.79	0.36	0.03	2.21	1.08	4.50
Frequency of sexual intercourse						
More than once a week & once a week				1.0		
1-2 times per month & Less than once month	0.64	0.23	0.01	1.90	1.21	2.97
Wanted to have any more children						
Yes				1.0		
No	0.89	0.30	0.001	2.43	1.35	4.38
Wanted to use a modern Method in future						
Yes				1.0		
No	1.22	0.24	< 0.001	3.49	2.14	5.4
Employment Status of the respondent						
Employed with salary				1.0		
Not employed(Housewife)	0.76	0.34	0.03	2.13	1.09	4.17
Type of counseling						
Counseling				1.0		
No counseling	0.56	0.28	0.04	1.74	1.01	3.00

Analysis Type: Stepwise Selection method

Discussion

The assessment of community prevalence by a cross sectional survey provides a 'snapshot' of the existing situation helping generate hypotheses. The use of "Westoff Model" for calculation of the prevalence of unmet need for FP and internationally accepted age span for reproduction facilitated the comparison of our findings with national and international studies[1].

The CPR of 69.4% in the study was close to that of DHS 2000 (70%), but higher than that of DHS 2006/7 (68.4%),

probably due to inclusion of Eastern province with low CPR in DHS 2006/7 which had disturbed infrastructure due to the civil war. Considering individual methods, prevalence for all temporary methods have increased while that of permanent methods show decline probably due to difficulty of getting permanent methods from government hospitals while the cost for them in the private sector is unaffordable for mostclients even though they want to limit their families.

The overall prevalence of unmet need for FP was 9.4 % (95% CI: 7.7-11.1) with 1.5% (95% CI: 0.8-2.2) for spacing and 7.9% (95% CI: 6.3-9.5) for limiting. Compared to findings in DHS 2000 (18.2 %), it was very low[11]. When exploring these findings, we have to interpret the findings in relation to CPR, Total Fertility Rate (TFR) and Wanted Fertility Rate (WFR), because the level of unmet need is an inter play of two factors; fertility preference and use of contraception. Since CPR remains unchanged (69.4%), increased desire to have more children should be the reason to have low unmet need. This possibility was confirmed by the findings of DHS 2006/7 having WFR of 2.1, a 0.3 increase from its 2000 value with reduction of unmet need from 18.2% to 7.3%. Reduction of CPR from 70% to 68.4% might have increased TFR from 1.9 to 2.3. However, factors influencing the increased WFR and reduced unmet need are not clear, but the internal conflict of the country, which was at its maximum during that period, might have changed attitudes to have bigger families. The gap between TFR and WFR widened from 2000 to 2006/7 (from 0.1 to 0.2)[12]. This may be due to reduced Total Abortion Rate from 0.147 to 0.087 from 2000 to 2006/7; due to the unavailability and high cost of illegal abortion services[13]. As revealed by Rajapaksha, abortion ratio among a nationally represented sample of urban and rural reproductive aged women was 741 per 1000 live births with abortion

rate of 45 per 1000 population of reproductive aged women by the year 2000[4]. Even in the present study, pregnant and post-partum mothers contributed tor 12.3% of unmet need reflecting the occurrence of unplanned births without aborting.

In the study, unmet need for limiting is higher than that of spacing; 7.9% and 1.5% respectively. Over time, unmet need for spacing decreased from 11.6% in 1987 (overall 22.7%), to 6.2% in 2000 (overall 18.2%)[12]. This is supported by the findings in MOH area Gampaha, where unmet need for spacing was 2.6% (overall 12.6%)[10]. Compared to spacing, the proportion of unmet need for limiting continued to increase mainly in the older age group. This has been reinforced by Rajapaksha& De Silva who showed that the highest proportion (39%) of abortion seekers had two or more children while 55% have decided not to have children further[14].

Simultaneously, unmet need for modern methods in the study is also low (18.3%) due to low prevalence of natural and traditional methods (8.9%) in the study group than that of the DHS 2006/7 (16%). The presence of a high proportion of educated and employed women in the Kalutara district compared to the national population may have contributed to this reduction.

However, the reduced unmet need (7.3%) and CPR (68.4%) with increased TFR (2.3) in DHS 2006/7 indicate a dramatic change in attitudes of Sri Lankans to have more children. This paradoxical relationship observed between the TFR and the unmet need requires further research.

In comparison, the level of unmet need in Sri Lanka was much lower than other countries in the South Asian region (India:

12.8%, Pakistan: 24.9%, Nepal 24.6% with an overall unmet need of 17%[1]).

Reasons for unmet need

Among 105 women with unmet need in the study sample, reasons identified for unmet need for FP were low perceived risk of pregnancy (36.2%; n=38), fear of side effects (30.5%; n=32) and infrequent sexual intercourse (19%; n=20). In DHS 2006/7, reasons only for non use of modern methods have been assessed while reasons for unmet need have not been assessed thus making direct comparisons impossible. Reasons described in DHS 2006/7 for none use included, 37.5% for menopausal / sub fecund states, 20.5% for health concerns and side effects, 21% for infrequent sex and 8.1% for opposition to use either by the partner or other family members or by religion.

Correlates of unmet need for family planning

In the present study, risk of unmet need for FP is 1.8 times higher when women exceed 35 years. A significant relationship could not be elicited between unmet need and the sector of residence (p =0.41), but it was lowest in rural sector. However, in most developing countries with low educational status of women and poorly developed health service infrastructure, unmet need is greater in rural areas than in urban areas[15]. Well established community health services provided by the primary health care workers would have contributed to lowering unmet need in rural areas in Sri Lanka. Further, risk of unmet need was 2.21 times higher among those who had education below grade 5. In Sri Lanka, primary education is compulsory and provided free of charge. The proportion of women with no schooling is extremely low in the younger age groups compared to older age groups due to social norms of giving education to

children being considered a must. Since unmet need was higher in both characters in old age and low education, it is obvious that those who were in the latter part of the reproductive age with low educational status were at high risk of having unmet need. This is further supported by the fact that, the unmet need for limiting (7.9%) is very much higher compared to spacing (1.5%) in the present study, giving a clear picture of correlates (older age, low education & decision to limit the family).

A significant positive association was elicited between unemployment status and unmet need (p =0.03, OR = 2.13), (95% CI − 1.1- 4.2). Employed women are more likely to plan their families avoiding many births, especially due to lack of support in looking after children.

Neither parity nor the number of children demonstrated a significant association with unmet need. Even the age of the last child being older than 5 years was not elicited as a significant correlate of unmet need. However, with the given trend of increasing unmet need for limiting with advancing age of the mother would probably lead to the youngest child being older.

Unmet need was observed to be related to the future expectations in not using a modern FP method (OR 3.49, 95% CI=2.1-5.4). This was an unfavorable decision leading to a high rate of unwanted pregnancies. However, there was a significant positive association between the desire of not having any more children and unmet need (OR = 2.4; 95% CI: 1.4-4.4), providing a rational explanation for having a higher proportion of unmet need for limiting (7.9) than for spacing (1.5).

Less frequent sex was a significant correlate of unmet need (OR= 1.9; 95% CI − 1.2-3.0). The more sexually active a couple is, the higher the use of FP is. Most

non users had the fear of conception resulting in less sexual activity and they should be motivated to use an effective method. Frequency of sexual activity is a very sensitive area where, unless experienced and tactful, most counselors / FP service providers are not able to elicit. Therefore it is important to include these as subheadings to be discussed when delivering health education.

We identified that not having counseling on FP was a correlate of unmet need (OR=1.74; 95%CI=1.01 − 3.0). The more they were subjected to counseling, the more they were using modern methods. Therefore, effective counseling is an important intervention to reduce unmet need.

Conclusions

Although contraceptive prevalence is high in the district, existence of high prevalence of unmet need for limiting pregnancies with incorrect use of FP methods indicates the need of designing intervention studies to identify methods of reducing unmet need as well as unplanned pregnancies in the country.

Conflicts of interest

Author s declare no conflicts of interest

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