Determining the factors associated with Unmet need for family planning: a cross-sectional survey in 49 districts of Pakistan

Waqas Hameed¹, Syed Khurram Azmat¹, Mohsina Bilgrami¹, Muhammad Ishaqe¹

¹Marie Stopes Society Pakistan. (Correspondence to Hameed W: waqas.hameed@mariestopespk.org)

ABSTRACT

Introduction & Background:
Around 137 million women in the developing world who would like to avoid childbearing are unable to do so, despite a huge increase in contraceptive access and use globally. Ironically, the prevalence of unmet need in Pakistan is among the highest in the world despite being one of the first countries in South Asia to launch national family planning program. The aim of this paper is to estimate the prevalence of unmet need for contraception and to identify the factors associated with it.

Methods:
A cross-sectional survey was conducted in forty nine districts of Pakistan across all four provinces from September 2008 to March 2009. Using an adapted version of PDHS questionnaire, interviews were conducted with approximately 10,000 married women of reproductive age in each district. Sample was later weighted according to district population at the time of analysis to control over and under representation. Logistic regression analysis was used to assess the association between risk factors and unmet need.

Results:
The total unmet need for contraception was 23.5%. Multivariable analysis showed that unmet need was found significantly higher in Balochistan and Sindh province compared to Punjab. The unmet need was quite prevalent among the specific groups that include older age women, low or uneducated women, those who have higher number of living children, had no history of miscarriage or abortion, those who are not exposed to mass media once a week, and among the women in lowest wealth quintiles.

Conclusion:
Despite all the efforts made to increase in uptake of contraceptive method the contraceptive prevalence rate has hardly changed over the last decade. However, several groups of women continue to have high unmet need for family planning. Thus, the family planning programmes may need to shift their focus from increasing uptake of contraceptives to satisfying unmet need for contraception with special focus on those underserved marginalized groups and areas with highest levels of unmet need.
To estimate the prevalence of unmet need for contraception and to indentify the factors associated with unmet need for family planning.

**OBJECTIVE**

In addition, the contraceptive prevalence is stagnant over the last decade after a sharp increase in the earlier decade (10). Nationally, the current CPR is only meeting 54% of the total demand for contraception, and except for Punjab province the proportion of met demand is below 54% across other provinces. In spite of low stagnated CPR, the TFR has gradually reduced from 5.4 to 4. Conversely, 1 of 4.1 TFR is an unwanted pregnancy; and this gets aggravated among the rural, uneducated, and poorest groups (10). Consequently, an estimated 890,000 induced abortion occurred annually in Pakistan whereby one in seven pregnancies is terminated by induced abortion (11).

The relationships among unmet need, abortion, and contraceptive prevalence are not clear. However, large number of induced abortions worldwide are a strong evidence that millions of women want to control their fertility but have not used effective contraception (12-16).

A study in Pakistan revealed fear of side effects and spousal, cultural and social acceptance as the decisive obstacles to limit contraceptive use, rather than the monetary and related direct costs of obtaining supplies (17,18). However, limited access to quality services is also a reason (19) sharing with an intrinsic resistance to FP pertaining to cultural conservatism, religious influences and the low status of women (20). Integration of FP services with other health services at all first-level care facilities is also recommended to be a long-standing, cheap and practical way to reduce the unmet need (21).

This paper attempts to identify the factors associated with unmet need for family planning. The information is expected to be used by key stakeholders at a national and international level to devise strategies in order to increase the coverage among particular groups, and to maximizing the efficiency and effectiveness of different family planning programs. Since, Pakistan has both - low CPR and high unmet need, therefore programs can possibly increase the use by just meeting the need to potential users, keeping prime focus to the groups with highest need. Addressing this need can have immediate effect in reducing TFR and unintended pregnancies.

**METHODS & MATERIALS**

The Marie Stopes Society (MSS) established a Community Based Distribution Program in 49 districts, across all four provinces of Pakistan. The model is an adapted version of original Willows Foundations model with the aim to provide door-to-door short-term contraceptive services and referrals to MSS static clinic for long term and other reproductive health care.

MSS employed 10 female workers under two supervisors in each district, covering a total population of around 68,000 in their catchment, per district. Workers hired, had a minimum secondary education, previous experience of data collection; later they underwent 8 day training on questionnaire and reproductive and family planning information. Based on programmatic requirement, each worker had to register and follow at least 1000 married women of reproductive age (MWRA) (15-49) within an allocated geographical area in a census-like manner where all MWRA in the household who gave informed consent were included in the survey. Thus, 10,000 MWRA were to be registered in each district; approximately a total of 490,000 completed interviews were recorded at the end of baseline survey that took place from Aug 2008 to Feb 2009 in three different phases. After data entry and cleaning 474,969 records were used for the analyses purposes.

The questionnaire used in the PDHS 2006-07 surveys was adapted and used. We included variables pertaining to socio-economic status: possession of household assets, source of drinking water, women education, number of household members; Reproduction: parity, current pregnancy, desire for children, history of abortion; and Contraception: knowledge, ever use and current use of contraceptives and their sources.

A detailed guideline was developed to monitor the proceedings. Data monitoring was carried out by different managers and research teams sitting at sites including field level, district level, regional level (provincial office) and national level to assess adherence to standard protocol, completeness and accuracy or forms, logical errors, interview with data collectors about questionnaire understanding. All the data were entered in each district office by two operators under supervision. Net 2003, MS Access 2007 was used for data entry and SPSS 19.0 for analysis.

Statistical techniques include simple frequencies and
proportions for continuous variables were used. Using logistic regression, crude odd rations at 95% confidence interval (CI) were calculated to see the association between risk factors and the dependent variable. All the variables that showed p-value of = 0.25 were included for multivariable analysis. Weighted estimates were calculated adjusting the sample according to population size of the districts. The risk factor i.e. family status was not included for multivariable regressions as it was derived from the original variable that is ‘number of living children’. Principal component analysis was used to create the socio-economic index (22) using; whether household has electricity, roof, wall and floor material, household water source and the ownership of goods (television, radio, refrigerator, bicycle, car, room cooler, washing machine, motor cycle, and water pump).

**Definition of Unmet need for contraception:**
Sexually active or fecund women who want to either limit or delay childbearing or and are not currently using any method for family planning are defined to have unmet need for family planning.

**FINDINGS**

Of the women interviewed, 66.0% belonged to Punjab, 28.9% aged >25 to =30 years, 49.3% had no formal education, 27.5% had 5 or more alive children, and 59.0% had completed family. Moreover, nearly one out of ten (11.4%) women had a history of abortion or miscarriage; self-reported pregnancy at the time of survey was 11.5%. Nine out of ten (91.9%) were aware of at least one contraceptive method and 45.3% reported to have ever user any method. In addition, 38.7% reported to being current users of any contraceptive method at the time of survey where majority were using condoms (10.0%), followed by withdrawal (9.8%), female sterilization (8.9%), IUD (3.1%), injection (2.4%), and pills (2.1%). Nearly one-fourth (23.5%) of the women wanted to delay or avoid pregnancy but were not practicing any contraception (unmet need for contraception).

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Majority (34.4%) reported ‘RCC’ as the material used for household roof, followed by ‘T-iron, wood or brick’ at 30.1%. Moreover, ninety nine percent had electricity, while 90.1% owned television and 73.2% had water pumps at their houses. Hand pump/tube-well was the main source of drinking water for more than half of the respondents and 95.4% reported to use flush for their toileting needs. Nearly one-fourth responded to read a newspaper or magazine once a week and almost equal proportion listen to a radio, whereas nine out of ten watch television at least once a week.

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**UNIVARIATE ANALYSES**

The Univariate analyses (Table 2) shows that the unmet need was significantly associated with almost all indicators except history of abortion or miscarriage. Higher unmet need was found in Sindh and Balochistan province as compared to Punjab (odds ratio, 1.35 and 1.39, respectively). Women of older age are more likely to be living with unmet need compare to younger age women; similarly having higher number of children increases the odds of unmet need. In comparison to women who did not have any child, the odds of unmet need are 6.9 (95% CI: 6.6-7.3) times higher among women already has a son(s), 4.5 (95% CI: 4.3-4.7) time higher who has a daughter(s), and 13.4 (95% CI: 12.8 14.0) higher for those who have a completed family.

Exposure to mass media (TV, radio or magazine) at least once a week also showed significant association with unmet need (odds ratio, 1.47). In comparison to the women living in fifth or highest wealth quintile, unmet need was
found higher among the women living in the first or lowest wealth quintile. Unmet need showed significant association with the levels of education and the study results showed that the unmet need was highest among the women with no formal education and lowest among the women with higher education.

Women who do not read newspaper/magazine, do not listen to radio, or do not watch television at least once a week are (1.7, 1.1, 1.3, respectively) times more likely to be living with unmet need compared to those who are practicing this. Similarly, the odds of unmet need among women who have never heard or use any contraceptive method are higher than those who are aware of or have ever used any method.

**MULTIVARIATE ANALYSES**

In the multivariate analysis, variables like reading newspaper/magazine, listen to radio and watch television were combined and kept in the model. Moreover, variable of family status was dropped and only the variable 'number of living children' was included to avoid multicollinearity. The adjusted odds ratio estimated from the multivariable are reduced for almost all of the variables but stayed highly significant. In addition, women having no history of abortion or miscarriage turned significant with the adjusted odds of 1.10 (95% CI: 1.08 – 1.13). The unmet in Sindh and Balochistan stayed significantly higher compare to Punjab: women of Sindh had 1.31 times and Balochistan had 1.28 times higher odds compare to Punjab. Unmet need showed significant association with the levels of education and the study results showed that the unmet need was highest among the women with no formal education and lowest among the women with higher education. Women over the age of 35 years have the adjusted odds ratio of 2.05 (95% CI: 2.00 – 2.10) compare to under 25 years women. Similarly, women with 5 or more children are almost thrice (AOR 2.89) more likely to be living with unmet need compared with women having two or less children.
Although the national unmet need for contraception has reduced from 33% in 2001 to 25% in 2006-7 (10) with marginal increase in the CPR from 28% to 29.6%. After controlling for different risk factors, the multivariate analyses showed that the unmet need is still significantly higher among different sub-group of population that older age group, low educated, large number of living children, exposure to mass media, lower wealth quintiles and history of abortion or miscarriage. Moreover, geographically higher unmet need was found in Sindh and Balochistan as compared to Punjab and KPK.

Women with male children are more likely to have unmet need indicating the preference of having son in their family. Similarly, women are more likely to be living with unmet need once she has completed son(s) and daughter(s) in her family.

The relationship of socio-demographic characteristics with unmet need has changed overtime. In 1991, women from the poorest households had the lowest unmet need; over time unmet need among these women rose substantially, and they now have the highest unmet need (23). In 1991, 40 percent of women surveyed wanted no more children, this increased to 52 percent in 2007 (24). In addition, findings of this study also substantiate the findings of the latest nationally representative survey which reported that unmet need was highest among the poor, those living in rural areas, and women with no education (10).

Interestingly, the present study showed that women with history of miscarriage/abortion had lower unmet need as compared to women with no history of miscarriage/abortion. While high unmet need of contraceptives also results in danger to the lives of women as many women seek induced abortions in case of unwanted pregnancies. Abortion in Pakistan is used as a mean of birth control and avoiding unwanted pregnancies. Due to restrictive abortion laws, abortions are usually conducted by unskilled providers under clandestine conditions that further bring various severe consequences from life time disabilities to death increasing the maternal mortality rate (25).

This study also highlights significant provincial disparities with highest unmet need in Sindh followed by Balochistan. High levels of unmet need in Sindh may be explained with reference to largely rural population base in the province; whereas in Balochistan low literacy levels, rigid tribal setups, and poor road infrastructure, the lack of financial, technical and community resources explain the high unmet need (26). In addition, there is a lack of service delivery outlets and due to population growth pressure is increasing on the existing ones day by day. Furthermore, the service centers are not professionally staffed and their insensitive attitudes are vital hindrances for women to seek family planning services (25).

This study also indicates that married women of reproductive age having more media exposure had low unmet need in comparison to the women who had less media exposure and thus high unmet need. Family planning programs can use effective communication channels to address barriers affecting contraceptive use and to bring about a behavioral change. Effectively crafted, evidences-based messages can explain the true risk of pregnancy for women who are breastfeeding or have sex infrequently, address concerns about contraceptive side effects and health risks (27).

The findings of the study highlight the need for initiating family planning interventions that expand excess to high quality family planning services in rural areas as well as among the poor, women with no education and, among the couples achieving complete family size and wanting no more children.

**DISCUSSION**

Although the national unmet need for contraception has reduced from 33% in 2001 to 25% in 2006-7 (10) with marginal increase in the CPR from 28% to 29.6%. After controlling for different risk factors, the multivariate analyses showed that the unmet need is still significantly higher among different sub-group of population that older age group, low educated, large number of living children, exposure to mass media, lower wealth quintiles and history of abortion or miscarriage. Moreover, geographically higher unmet need was found in Sindh and Balochistan as compared to Punjab and KPK.

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The findings of the study highlight the need for initiating family planning interventions that expand excess to high quality family planning services in rural areas as well as among the poor, women with no education and, among the couples achieving complete family size and wanting no more children.

**CONCLUSION**

Despite all the efforts made to increase in uptake of contraceptive method the contraceptive prevalence rate has hardly changed over the last decade. However, the several groups of women continue to have high unmet need for family planning which includes older age, low or uneducated, having higher number of ‘alive children’, women not exposed to mass media once a week, women among the lowest wealth quintiles and women in Balochistan and Sindh province. Thus, the family planning programmes may need to shift their focus from increasing...
contraceptive prevalence rate to satisfying unmet need with special focus on the groups and areas with highest levels of unmet need. Yet, the shift should not neglect serving continuing contraceptive users.

References:


27. PATH-UNFPA. Outlook 25th Anniversary issue 2008;25(1).