EUROPEAN POPULATION CONFERENCE 2014 25-28 June 2014 Budapest, Hungary
DEMOGRAPHIC RESEARCH INSTITUTE BUDAPEST
EAPS

*Session 208:*
*Contraceptive use in low and middle income countries*

# Levels and determinants of unmet need for contraception among Kurdish women in Mahabad, Iran

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**Paper Accepted for Presentation at the European Population Conference, Budapest, Hungary, 25-28 June 2014**

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**Abstract**

*The changes in the concept of unmet need for family planning over time have led to inconsistent results across surveys. In a recent attempt, the MEASURE DHS program revised the definition of unmet need. Applying the revised and original definitions, this study measures the unmet needs for family planning in a representative sample of 700 Kurdish married women at the reproductive ages, interviewed in the 2012 Mahabad Fertility Survey (MFS) in Iran. Based on the revised definition, 10.8 percent of women faced an unmet need for family planning, including 7.7 percent for birth spacing and 3.1 percent for birth stopping proposes. The corresponding estimates for the original definition were respectively 9.6, 6.0 and 3.6 percent. Also, about 10 percent of women who used traditional contraceptive methods, largely withdrawal, wished to use modern methods. Taking into account this unmet need for modern methods, we estimate an overall 20.8 percent of unmet needs for family planning in the city of Mahabad based on the revised definition that is 1.3 percent more than the estimate based on the original definition. According to this study, women's fear of side effects of contraceptive devices has the largest contribution in their no use of contraception. Results of multivariate analysis shows that costs associated with social and familial opposition, women's autonomy, and childbearing desires, have been effective in projection of probability of having unmet need for contraception. Based on these results, in order to meet women's demand for family planning, it is necessary that in addition to continuation of family planning program and improvement in the quality of services, sociocultural costs associated with the use of contraceptive devices reduced by improving in women's status.*

**Key Words:**

*Contraception, Unmet need, Family Planning, Kurdish Women, Mahabad, Iran.*

## INTRODUCTION

Over the past five decades, the standard family planning programs, organized and implemented in developing countries, have been largely focused on addressing individuals' needs for contraceptive services. Given this important objective, the concept of UNMET NEED has played a significant role in the evaluation of the success of these programs. A woman is classified as one with unmet needs for family planning if she is married and fecund, wants no children over the next two years, and uses no contraceptive methods (Sedgh et al., 2007).

The reduction of the unmet need has been defined as one of the United Nations' Millennium Development Goals (UN, 2006). For this reason, the measurement of the concept of unmet needs has been the focus of scholars and stakeholders in the fields of reproductive health and family planning programs. However, the changes in the concept of unmet needs for family planning over time have led to inconsistent results across surveys. In a recent attempt, the MEASURE DHS in collaboration with a group of experts revised the definition of unmet need to insure consistency in the measurement of unmet needs across countries and over time (Bradley et al., 2012).

This study aims to measure the unmet needs for family planning based on the original and the revised definitions of the unmet needs in the city of Mahabad in Iran. A comparison of the estimates, taken from the original and revised definitions of unmet needs, will provide us with insights about the extent of improvement in the measurement of unmet needs. Moreover, we decompose the value of unmet need into its main component including unmet need for child spacing and unmet need for child stopping by reproductive age groups. Finally, we will examine factors correlated with the likelihoods of having an unmet need for family planning in the city of Mahabad.

## DATA AND METHODOLOGY

This study uses data from Mahabad Fertility Survey (MFS), conducted by the authors in the city of Mahabad in Iran during May 2012 among a representative sample of 700 married women aged 15-49. The survey includes a wide range of data about women's contraceptive behavior, fertility, breastfeeding, and different socioeconomic characteristics. The survey also includes data about all the required components for measuring the revised definition of unmet needs for family planning.

In the first part of this study, we measure the level of unmet needs for contraception based on the original and revised definitions of unmet needs. The second section of data analysis contains multivariate analysis of determinants of unmet needs for contraception, using binary logistic regression models. The dependent variable is unmet need for family planning, measured by a binary variable, where "having unmet needs" is coded 1 and "not having unmet needs" is coded 0. Two groups of independent variables are used to measure covariates in Figure 1.

1) Socioeconomic, demographic and cultural variables including socioeconomic status, cultural capital, consanguinity, childbearing desires, fatalism in fertility behavior, tendency to sex preference, women autonomy, attitude towards children's advantages, commitment to big family values.

2) Costs for contraception that measure costs associated with access to family planning, fear of side effects, and familial, social, and cultural opposition to contraceptive use.

## Expected Findings

### Levels of unmet needs for contraception

Results show that contraception is prevalence in the city of Mahabad. According to the information in table 1, 74.3 percent of women were using contraceptive methods at the time of the survey. Results show that modern contraceptive methods are more prevalence comparing to traditional methods, so that only 28.8 percent of respondents were using traditional methods.

**Table 1. Distribution of respondents by contraceptive use, Mahabad, Iran**

| | | Frequency | |
|---|---|---|---|
| | | Absolute | Percentage |
| Using contraception | | 520 | 74.3 |
| | Modern methods | 370 | 71.2 |
| | Traditional methods | 150 | 28.8 |
| | Total | 520 | 100.0 |
| Non-users | | 180 | 25.7 |
| **Total** | | **700** | **100.0** |

The contraceptive non-users were asked why they did not use a contraceptive method. Results in Table 2 show that 44.4 percent of contraceptive non-users did not use a method because they were pregnant or suspected to pregnancy, wanted a child or recently have

given a birth. Also 27.9 percent of nonusers reported that were infecund for different reasons and hence they did not use contraception. However, 27.7 percent of the rest of non-users did not use a contraceptive method for the fear of illness or illness, or because of socio-cultural obstacles such as spouse's and reltives' oppositions and religious beliefs. Clearly, this last group of women faces unmet needs for family planning.

**Table 2. Percentage distribution of currently married women age 15-49 currently NOT using a contraceptive method by reasons, Mahabad, Iran 2012**

| Reasons of not using a contraceptive method | Number of women | Percent |
|---|---|---|
| Pregnancy | 62 | 34.4 |
| Primary sterility | 23 | 12.8 |
| Menopause | 19 | 10.6 |
| Fear of illness * | 15 | 8.3 |
| Spouse's opposition to contraception * | 11 | 6.1 |
| Want children | 9 | 5.0 |
| Secondary sterility | 7 | 3.9 |
| Suspected pregnancy | 6 | 3.3 |
| Relatives' oppositions to contraception * | 6 | 3.3 |
| Irregular intercourse with husband * | 4 | 2.2 |
| Religious beliefs * | 4 | 2.2 |
| Difficulty in using a particular form of contraception* | 3 | 1.7 |
| Breastfeeding * | 2 | 1.1 |
| Recently given birth | 2 | 1.1 |
| Woman's opposition to contraception * | 2 | 1.1 |
| Disruption of normal body function * | 2 | 1.1 |
| Hysterectomy | 1 | 0.6 |
| No intercourse with husband | 1 | 0.6 |
| Illness * | 1 | 0.6 |
| Total contraceptive non-users | 180 | 100.0 |

**Note**: * shows women with unmet needs for family planning.

Overall, unmet need for family planning, measured based on the original definition, is equal to 9.57 percent (Table 3). Given that the survey did not collect contraceptive calendar data, the overall level of unmet needs for contraception in Mahabad, measured based on the revised definition, differ little (1.28 percent) from the estimated level based on the original definition of unmet needs.

To validate our estimated levels of unmet needs for contraception, in table 4 we compare levels of unmet needs for family planning estimated from data in MSF survey, conducted in Mahabad, with those calculated from data in 160 Demographic and Health Surveys (DHS), conducted in 67 developing countries (Bradley et al., 2012).

**Table 3. Unmet needs for contraception among married women aged 15-49 in the city of Mahabad, Iran**

| Index | Original definition | Revised definition | difference |
|---|---|---|---|
| Unmet needs for spacing births | 6.00 | 7.70 | +1.70 |
| Unmet needs for stopping births | 3.57 | 3.15 | -0.42 |
| **Total unmet needs** | **9.57** | **10.85** | **+1.28** |

Results in table 4 show that generally the estimated levels of unmet needs for family planning in Mahabad are far lower than the corresponding levels for other countries based on 160 Demographic and Health Surveys (DHS). However, when comparing the estimated level of total unmet needs, calculated based on the revised definition of unmet needs, with the one, estimated according to the original definition, we observe close positive differences (i.e., 1.2 percent in Mahabad vs 1.7 percent in 160 DHS).

**Table 4. Percentages of unmet needs for family planning in Mahabad and 160 DHS**

| Unmet needs | original definition | | revised definition | | difference | |
|---|---|---|---|---|---|---|
| | MFS | 160 DHS | MFS | 160 DHS | MFS | 160 DHS |
| Total unmet needs | 9.57 | 21.1 | 10.85 | 22.8 | +1.28 | +1.7 |
| Unmet needs for birth spacing | 6.00 | 11.9 | 7.70 | 12.2 | +1.7 | +0.3 |
| Unmet needs for birth stopping | 3.57 | 9.1 | 3.15 | 10.5 | -0.42 | +1.4 |

Also, the estimated levels of unmet needs for birth spacing, based on the revised definition, were slightly higher than the estimates, based on the original definition, both in Mahabad and countries with 160 DHS. While the estimated levels of unmet needs for birth stopping, based on revised definition, was higher than the one based on the original definition, our estimated level of unmet needs for birth stopping, based on the revised definition, was slightly lower than the estimate based on the revised definition. This could be partly due to the lack of contraceptive calendar data in the 2012 MSF survey.

**Multivariate analysis**

Table 5 shows the results of multivariate analysis of having an unmet need for contraception in three models. Results in Model 1 show that only costs for contraception and fertility desires are significantly associated with having an unmet need for contraception. That is, with increasing the perceived costs for contraception, the odds of having an unmet need rise by a factor of 1.13. In contrast, women who want no more children are 67.2 percent less likely to have an unmet need for contraception, in relative to those who want more children. The effects of contraceptive costs and childbearing desires remain significant, even after controlling for other factors in Models 2-3. However, the net effect of childbearing desires increases from Model 2 to Model 3, when controlling for cultural capital and socioeconomic status. Namely, women wanting no more children are almost 96

percent less likely to have unmet needs for contraception, compared with those who want more children. The odds of having unmet needs for contraception is higher among women having less autonomy in family decision making and among those having positive attitudes toward children's advantages. Also, the odds of having unmet needs for contraception is lower among women at the higher socioeconomic status. Cultural capital had no significant effect on having an unmet need for contraception.

**Table 5. Odds ratios of having an unmet need for contraception among married women in Mahabad, Iran**

| Covariates | | Model 1 | | Model 2 | | Model 3 | |
|---|---|---|---|---|---|---|---|
| | | Sig | Exp(B) | Sig | Exp(B) | Sig | Exp(B) |
| Perceived costs for contraception | | ** | 1.131 | * | 1.075 | * | 1.088 |
| Childbearing desires | Yes (ref) | | | | | | |
| | No | ** | 0.328 | ** | 0.365 | ** | 0.370 |
| Fatalism in fertility behavior | | ns | 1.037 | ns | 1.022 | ns | 1.030 |
| Tendency to sex preference | | ns | 1.033 | ns | 0.961 | ns | 0.972 |
| Women Autonomy | | | | ** | 0.876 | ** | 0.873 |
| Attitude towards children's advantages | | | | ** | 1.125 | ** | 1.143 |
| Commitment to big family values | | | | ns | 1.021 | ns | 1.032 |
| Consanguinity | Relative (Ref) | | | | | | |
| | Non relative | | | ns | 1.72 | ns | 1.200 |
| Cultural Capital | | | | | | ns | 0.972 |
| Socioeconomic status | | | | | | ** | 0.191 |
| Constant | | 0.011 ** | | 1.363 ns | | 0.456 ns | |
| Overall percentage | | 79.9 | | 82.6 | | 83.3 | |
| Chi-Square | | 57.054 ** | | 97.928 ** | | 112.980 ** | |
| -2 Log Likelihood | | 657.151 | | 616.277 | | 601.225 | |
| Nagelkerke's R Square | | 0.122 | | 0.204 | | 0.233 | |

*p < 0.05; **p < 0.01; ns not significant

The value of Nagelkerk R Square in Model 3 indicates that all covariates could explain 23.3 percent of variations in the odds of having unmet needs for contraception among married women in Mahabad.

## CONCLUSION

Based on the original definition of unmet needs for family planning, we estimated that 9.6 percent of currently married women have unmet needs for contraception. This estimate rises to 10.9 percent when we apply the revised definition and measurement of unmet needs. Other results, based on the revised definition of unmet needs, indicate that the levels of unmet need for birth spacing and birth stopping are estimated at 7.7 percent and 3.1 percent, respectively. The results of this study emphasize the need for offering reproductive health services and improving the quality of services in order to provide greater health for mothers and children and a better achievement of reproductive health goals.

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