The Prevalence of Unmet Need and Its Related Factors for Family Planning in Khuzestan Province, Iran: An Epidemiologic Study

Parvin Abedi [1], Malihe Botyar [2*], Poorandokht Afshari [1], Farideh Namvar [3]

1. Department of Midwifery, Reproductive Health Research Center, Ahvaz Jundishapur University of Medical Sciences, Ahvaz, Iran.
2. Department of Midwifery, Faculty of Midwifery, Ahvaz Jundishapur University of Medical Sciences, Ahvaz, Iran.
3. Institute of Tropical Forestry and Forest Products (INTROP), Universiti Putra Malaysia, 43400 UPM Serdang, Selangor, Malaysia.

Article info:
Received: 13 Jan. 2015
Accepted: 25 Mar. 2015

Keywords:
Unmet need, Met need, Family planning, Prevalence, Iran

ABSTRACT

Background: Women with unmet need are those who are sexually active in the reproductive age, but do not use any method of contraception despite they do not want more children. These women are at risk of unwanted pregnancies and abortions that can lead to maternal morbidity and mortality. The aim of this study was to evaluate the prevalence and related factors to unmet need for family planning among reproductive aged women in Khuzestan province, Iran, 2012-2013.

Methods: Samples were selected randomly from nine cities in the province. Data was collected using a questionnaire which was completed by interview. A 46 item questionnaire was designed to collect data about unmet need in family planning. Data were analysed using SPSS ver19. Descriptive statistics, Independent t-test, chi-square, and logistic regression tests were utilized for analyzing data.

Results: Unmet need was 80 (3.42) for limiting and 288 (9.59) for spacing, The prevalence of unmet need in Khuzestan Province was 13%. The unmet need group had more pregnancies and live children compared to the met need group (P<0.05). The women with her husband with primary education compared to illiterate ones, women with university education compared to illiterate ones, women with good knowledge about contraceptive methods compared to those with poor knowledge, were less likely to have unmet need.

Conclusion: The unmet need for family planning in the Khuzestan province is rather high compare to some statistics from other cities as well as in the whole country. Improving awareness about family planning can help women to decide about safer and more reliable contraceptive methods.

1. Background

Women with unmet need are women in the reproductive age that are sexually active, do not desire any child or want to delay their childbearing, do not use any contraceptive methods or use traditional contraceptive methods (United Nations 2010). One of the reproductive health objectives is a reduction of the unmet need for family planning (Alkema et al. 2013). In a study by Rose and Winfery in 2002, results showed that almost 105 million married women have an unmet need for family planning, indicating that the proportion of unmet need is 17%. More recent data has been shown that about 200 million women have an unmet need for family planning in developing countries (Singh et al. 2009,

*** Corresponding Author:**
Malihe Botyar
Address: *Department of Midwifery, Faculty of Midwifery, Ahvaz Jundishapur University of Medical Sciences, Ahvaz, Iran.*
Tel: *+98 (916) 3466616*
Email: *mbotyar@ymail.com*

p. 1-44). By reducing the unmet need for family planning, the rate of unwanted and unplanned pregnancies will decrease as well as induced and unsafe abortions (Morelan et al. 2010). Family planning could save the lives of 25%-30% of 500000 women died from causes related to pregnancy; it can also prevent millions of disabilities and complications that are direct results of high-risk pregnancies (Soltani & Parsai, 2010, p. 379). The estimation of unmet need prevalence for family planning is not easy and definite calculation depends on three key concepts; contraceptive use, the high-risk pregnancy, and tendency to limit, or space between births. Thus, the change in the definition and also the measures of each of these three concepts may change the estimation of unmet needs (Saha et al. 2007).

In 2000, a study in Iran showed a wide variation between different provinces regarding unmet need. Unmet need for family planning varied from 3.6% in Tehran to 31.3% in some rural area in Sistan and Baluchistan Province as well as the average of 7.6% for the whole country (Ahmadi & Iranmahboob 2005). Another study done by Motlagh et al. in 2013 in six large and two small cities in Iran showed that the rate of unmet need for any method of contraception was 2.6% and 22.3% of women used traditional methods of contraceptive. On the whole, the unmet need for the modern contraceptive method was 17.4%, and the rate of unwanted pregnancy was 30.7% (Motlagh et al. 2013). Women who use traditional contraceptive methods are at risk of unmet need for family planning. A study in Nigeria showed that 44% of women, aged 15-45 years, lacked enough knowledge about family planning, and 22% of them did not have access to family planning services. All in all, the risk of unwanted pregnancy among 2978 women was 27% (Sedgh et al. 2006).

In 2000, the rate of unplanned and unwanted pregnancy in Iran was 24.1%, which decreased to 18.6% in 2005 (Khosravi et al. 2010). Studies showed that one-fourth of pregnancies in Iran are unintended and women often take extraordinary and harmful methods to terminate their pregnancy, which not only endanger the life of the mother but also may cause mental and physical disabilities for the fetus (Tatari et al. 2002). Preventing unplanned pregnancies in Islamic countries, including Iran in which abortion is one of their definite misdeeds, can lead to irreparable complications or death in women (Shokravi & Chapman 2004).

There is a shortage of information about the prevalence of unmet need and its related factors for family planning by each province in Iran. Since Khuzestan is a multicultural Province that the age of marriage is lower than other areas of Iran and also the number of desired children in families is higher than other places of Iran, having enough information about unmet need, the policymakers can make better decisions about women's health. The primary aim of this study was to assess the prevalence of unmet need and its related factors for family planning in Khuzestan Province, Iran.

2. Materials & Methods

This was a cross-sectional study in which 3000 reproductive-aged women recruited randomly in Khuzestan Province, Iran. according to information DHS (Demographic and Health Survey) in 2000, unmet need level in Khuzestan province n was %17, the sample size of 3000 subject were considered. The design of this study was approved by the Ethics Committee of Ahvaz Jundishapur University of Medical Sciences. Khuzestan province is located in the southwest of Iran and has 24 townships and 62 cities. According to the latest census, the total population of this province is 4531720. This study started in November 2012 and completed in May 2013.

The stratified sampling method was used for data collection. So, the Khuzestan Province was first divided into five districts (east, north, west, south and center). Then, some cities selected proportional to the number of cities in any region (two cities from north, three cities from west, two cities from east, one city from west, and five health centers from Ahvaz city) and based on the cluster sampling method. According to the latest statistics, there are 662926 married women in their reproductive age in Khuzestan Province. A total of 3000 eligible women in cities as well as rural areas of mentioned regions were selected according to the inclusion criteria. Inclusion criteria were as follows; married women, aged between15 and 49 years. Women who were a widow or divorced were excluded from the study.

The questionnaire consisted of 46 questions, tools 12 The first question was related to demographic data. Questions 13 to 23 related to the identification of female fertility information about contraceptive methods was After questions (24 to 32) were answered if she pregnant. 33 to 34 were asked if women are not pregnant. If Suspicious a pregnancy answered of 35 to 36 questions. From 37 to 46 questions about contraceptive metod and the reasons for not using contraception or if asked.

The questioner for assessing unmet need is a standard tool designed by Iranian Ministry of Health in 2010 and standard questionnaire of demographic and health survey in the Islamic Republic of Iran in 2000. It was based on experts' panel, health professionals, some experts from

Table 1. Sociodemographic characteristics of met needs and unmet needs for family planning.

Variable	Met need n=2609	Unmet need n=390	P value
	Mean±SD or No.(%)		
Age (y)			
<20	109 (4.2)	28 (7.2)	0.001
21-29	1184 (45.4)	175 (44.8)	
30-39	919 (35.2)	154 (39.4)	
40-49	396 (15.2)	34 (8.7)	
Marriage age	20.69±4.27	20.6±4.27	0.67
Women's education			
Illiterate	160 (6.1)	34 (8.7)	0.001
Primary	425 (16.3)	57 (14.6)	
Secondary	496 (19)	81 (20.8)	
Secondary high school	911 (34.9)	158 (40.5)	
University education	617 (3.6)	60 (15.4)	
Men's education			
Illiterate	134 (5.1)	42 (10.8)	0.001
Primary	355 (13.6)	56 (14.4)	
Secondary	510 (19.5)	74 (19)	
Secondary high school	1003 (38.4)	159 (40.8)	
University education	607 (23.3)	59 (15.1)	
Residence area			
Rural	2015 (77.2)	287 (73.6)	0.11
Urban	596 (22.8)	103 (26.4)	
Women's job			0.015
Employed	450 (17.2)	42 (10.9)	
Housewife	2159 (82.8)	348 (89)	
Income ($)	233.8±15.3	214.63±18.6	0.025

Client-Centered Nursing Care

Health Faculty of Tehran University of Medical Sciences, Iran's statistics center, the United Nations Children's Fund, and the World Health Organization. Eligible women were contacted to attend the health centers, and data were gathered through the interview. A full description of the methods and aims of the study and data collection, and Fill out a consent form participate in the study mentioned. For those who did not attend the clinic, one of the researchers went to their home and collected the data. A written informed consent was obtained from each participant prior to data collection. Participants were assured that the information will remain confidential and anonymous.

Data entry and analyzing were done using SPSS ver. 19. Descriptive statistics, Chi-square, Independent t-test, and logistic regression were utilized for analyzing data.

3. Results

Most participants in met and unmet need groups were 20 to 29 years old. Most women were residents of cities (77.2% and 73.6% in the met need and unmet need, respectively). Significant differences were observed between two groups (P<0.05) concerning age, women's and men's education, job, and monthly income (Table

Table 2. The midwifery history of met need and unmet need women for family planning.

Variable	Met need n=2609	Unmet need n=390	P value
	Mean±SD or N0.(%)		
Number of pregnancy			
0	210 (8.1)	22 (5.6)	0.04
1-3	1868 (71.6)	303 (77.5)	
>4	530 (20.3)	66 (16.9)	
The age of first pregnancy	19.95±7.17	20.56±6.55	0.11
Number of live children			
0	399 (15.3)	53 (13.6)	0.005
1-3	1810 (69.4)	300 (76.7)	
>4	399 (15.3)	38 (9.7)	
Abortion			
Induced abortion	29 (6.6)	3 (3.9)	0.38
Unintended	416 (93.4)	73 (96)	

Client-Centered Nursing Care

1). Most women in two groups reported 1-3 pregnancies and 1-3 live children. There were significant differences between met and unmet need groups regarding the number of pregnancies and children (P=0.004 and P=0.005, respectively) (Table 2).

According to Table 3, the main reasons for rejecting contraception were pregnant (14.1%), wanting more children (5.8%), and being in the postpartum period (2.4%). For those classified in the unmet need group, the main reasons for not using the family planning were secondary infertility, irregular sexual relationship with spouse, breastfeeding, objection of spouse, and disruption of body system by contraceptive method.

The results of logistic regression showed that women with primary education were 0.37 times more likely to have met need compared to illiterate women(OR=0.37, P=0.001, 95% CI [0.20-0.65]). Also, women with university education were 0.68 times more likely to have met need compared to illiterate ones (OR=0.68, P=0.04, 95% CI [0.47-0.98]). Furthermore women who had good knowledge about methods of family planning were 1.16 times more likely to have met need compared to the poor knowledge (OR=1.16, P=0.001, 95% CI [1.086-1.245]). Unmet need for limiting was 80 (3.42%) and for spacing was 288 (9.59%). Therefore the prevalence of unmet need in Khuzestan Province was 13%.

4. Discussion

This study designed to evaluate the prevalence of unmet need and its related factors for family planning in Khuzestan Province, Iran. The prevalence of unmet need in this study was 13% which in a rural area it comprised 3.42% and in the urban area 9.59%. The total rate of reproductive limit was 3.42% and spacing in childbearing was 9.59%. With adding the number of women who used traditional contraceptive methods to this number, the rate of unmet need reached to 23.66%. The unmet need that observed in this study was more than that calculated in 2005 according to IMES (5.2%) (Ahmadi & Iranmahboob 2005) but less than that was calculated in 2013 (17%) (Motlagh et al. 2013). In a study conducted by Umbeli et al. in Sudan, the total frequency of unmet need was 30.7% (Umbeli et al. 2005), which is not in line with the present study. This discrepancy may be due to the sample of their study. They recruited both married and unmarried women with the sexual activity while in the present study we only recruited married women.

According to the results of this study, the majority of women were in the age range of 20-29 years and only a small percentage of women had their first pregnancy before the age of 20. The number of pregnancies and children in the unmet need group was significantly more than that in the met need group. Also, the percentage of induced abortion in the unmet need group was almost twice that of the met need group. In a study by Klijzing (2000),

Table 3. Distribution of women according to the reasons for not using contraceptive methods.

Reasons for not using contraceptive methods	Women who did not use contraceptives n=1105 N(%)
Pregnancy	425 (14.1)
Wanted	306 (72)
Unwanted*	119 (28)
Suspected to pregnancy	29 (0.9)
Hysterectomy or ovarectomy	33 (1.1)
Menopause	33 (1.1)
No sexual relationship with spouse	8 (0.2)
Having irregular sex with* spouse	52 (1.7)
Primary infertility	65 (2.1)
Secondary infertility*	54 (1.8)
Postpartum period	73 (2.4)
Wanting more children	174 (5.8)
Objection to family planning program*	3 (0.1)
Objection of spouse with the family planning*	43 (1.43)
Objection of siblings with the family planning*	13 (0.4)
Breastfeeding*	52 (1.7)
Religious matters*	0
Lack of information about family planning *	2 (0.06)
Disruption of body system by contraceptive method*	17 (0.56)
Fear of side effects*	14 (0.46)
Illness*	7 (0.2)
Difficulties with using contraceptive methods*	7 (0.2)
Did not provide any reason	3 (0.1)

*Women classified as unmet need

Client-Centered Nursing Care

results showed that with increasing the rate of unmet need, the frequency of induced abortion would also increase. Because the induced abortion in Iran is illegal, and women hide their induced abortion, the rate of induced abortion is probably much higher than the present figure. The average income of unmet need was lower than that of the met need. The well-off women have more access to modern family planning methods than those women with less monthly income. This result is similar to what Ibnouf et al. found in 2007. The main reasons for induced abortion were unwanted pregnancy and the person who did the abortion procedure, in most cases, was an untrained midwife. Unwanted pregnancy had a strong relationship with the maternal morbidity and mortality (Ibnouf et al. 2007). In a study in Iran, results showed that about 27.3% of women had a history of induced abortion which most of them happened illegally and in an unhealthy situation (Shokravi & Chapman 2004). These results are in line with our study.

The results of the present study showed that the main reason for refusing contraception among unmet need group was an unwanted pregnancy. This result is confirmed by findings of Ahmadi et al. in Iran, who found that the main reason for not using contraception is pregnancy, which a lot of them were unwanted (Ahmadi & Iranmahboob 2005).

In the present study, men and women who had higher education were less likely to have unmet need. In a study by Hari et al. in Nepal, the results showed that with improving the women's education, their level of unmet need

also increased up to primary and secondary school and decreases thereafter (Hari et al. 2006, p. 1-18). The discrepancy between present study and study in Nepal may be due to the fact that in our study, women with university education were more likely to have less unmet need and there was not any relationship between primary and secondary education and unmet need. In the present study, women with good knowledge about family planning had a less unmet need. The results of our study are in agreement with Hailemariam and Haddis' study in 2011. They found that sociodemographic variables such as participants' education and knowledge of family planning were important factors affecting unmet need. A study in Gwalior district on 520 married women showed that unmet need for family planning was 21.70%, which was higher in the rural area and among women with the age range of 15-19 years. Also unmet need was higher among women with lower information. The result of this study is similar to what we found, except for the rate of unmet need in our study, which was lower than that found in Gwalior district. The reason for this difference lies in the fact that in our study only a small percentage of women were under 20 years, while in the Kumar et al.'s study, the larger proportion of unmet need were between 15 and 19 years old (Kumar et al. 2011).

One of the strengths of this study was its epidemiological aspect that covered 3000 eligible women from urban and rural areas of Khuzestan Province. Secondly, all eligible women were contacted by phone and if anyone could not attend the clinic, one of the researchers went to her house and collected the information. Considering the recent policy of population increase in Iran, attention to the unmet need for family planning can help women to decide about a number of children they desire and timing of their childbearing. Furthermore decreasing unmet need can significantly decrease the number of illegal abortions.

The unmet need for family planning in the Khuzestan Province is quite high compared to some statistics from other cities as well as the whole country. The policy makers can use this data for making decisions about family planning. Improving awareness about family planning can help women to decide on safer and more reliable contraceptive methods.

Acknowledgements

This article is a part of a master thesis of Malihe Botyar. We hereby would like to thank all staff of the health centers that assisted us during data collection. Our thanks are also extended to the Vice Chancellor of Research Affairs in the Jundishapur University of Medical Sciences, Ahvaz, Iran for the financial support.

Conflict of interest

The authors declare that they have no conflict of interest.

References

Ahmadi, A & Iranmahboob, J 2005, *Unmet need for family planning in Iran*, Poster presented at XXV IUSSP International Population Conference Tour, France.

Alkema, L, Kantorova, V, Menozzi, C & Biddlecom, A 2013, 'National, regional, and global rates and trends in contraceptive prevalence and unmet need for family planning between 1990 and 2015: a systematic and comprehensive analysis', *Lancet,* vol. 381, no. 9878, pp. 1642-52. doi: 10.1016/S0140-6736(12)62204-1.

Hari, AR, Pathak, RS, Dottel, BR & Dev Pant, P 2006, *A comparative analysis of unmet need in Nepal: further analysis of the 2006 Nepal demographic and health survey*, Calverton, Maryland, Macro International Inc, USA.

Hailemariam, A & Haddis, F 2011, 'Factors affecting unmet need for family planning in southern nations, nationalities and peoples region, Ethiopia', *Ethiopian Journal of Health Sciences,* vol. 21, no. 2, pp. 77-89.

Ibnouf, AH, Van den Borne, HW & Maarse, JA 2007, 'Utilization of family planning service by married Sudanese women of reproductive age', *Eastern Mediterranean Health Journal,* vol. 13, no. 6, pp. 1372-81.

Khosravi, A, Taylor, R & Lopez, AD 2007, 'Mortality in the Islamic Republic of Iran, 1964-2004', *Bulletin of the World Health Organization*, vol. 85, no. 8, pp. 607-14.

Klijzing, E 2000, 'Are there Unmet Family Planning Needs in Europe?' *Family planning perspectives,* vol. 32, no. 2, pp. 74-81 & 88.

Kumar, SD, Pramod, G, Roli, G, Neeraj, G & Manoj, B 2011, 'A study to assess the unmet needs of family planning in Gwalior district and to study the factors that helps in determining it', *National Journal of Community Medicine,* vol. 2, no. 1, pp. 28-31.

Morelan, S, Smith, E & Sharma, S 2010, *World population prospects and unmet need for family planning*, Future Group, Washington, DC 20005, USA.

Motlagh, ME, Eslami, M, Yazdanpanah, M & Nakhaee, N 2013, 'Contraceptive use and unmet need for family planning in Iran', *International Journal of Gynecology & Obstetrics,* vol. 121, no. 2, pp. 157-61. doi: 10.1016/j.ijgo.2012.11.024.

Ross, JA & Winfrey, WL 2002, 'Unmet Need for Contraception in the Developing World and the Former Soviet Union: An Updated Estimate', *International Family Planning Perspectives,* vol. 28, no. 3, pp. 138-143.

Saha, UC, Saha, KB & Roy, TK 2007, 'Meeting unmet need for contraception: validity assessment and designing new strate-

gy in Indian context', Population Association of America 2007 Annual Meeting Program.

Sedgh, G, Bankole, A, Oye-Adeniran, BF, Adewole, I, Singh, S & Hussain, R, 2006, 'Unwanted pregnancy and associated factors among Nigerian women', *International Family Planning Perspectives,* vol. 32, no. 4, pp. 175-184.

Shokravi, A & Chapman, PH 2004, 'A study on the effectiveness factors of unwanted pregnancies in pregnant women of Tehran city', *Journal of Reproduction & Infertility,* vol. 5, no. 3, pp. 249-258.

Singh, S, Darroch, JE, Ashfor, LS & Vlassoff, M 2009, *Adding It Up: The Costs and Benefits of Investing in Family Planning and Maternal and Newborn Health*. UNFPA, The Guttmacher Institute, New York, USA.

Soltani, R & Parsai, S 2010, [*The maternal and child health* (Persian)], 4th edn, Sanjesh Company, Tehran, Iran.

Tatari, F, Emalei, K & Ranjbar, B 2002, 'The prevalence of induced abortion in mothers of Mental and physical retard in Phayazebakhsh rehabilitation center in Kermanshah, Iran, 2002,' *Congress proceeding of abortion published in Fertility and Infertility*, p. 34.

Umbeli, T, Mukhtar A & Abusalab, MA 2005, 'Study of unmet need for family planning in Dar Assalam , Sudan 2001', *Eastern Mediterranean Health Journal,* vol. 11, no. 4, pp. 594-600

United Nations, Department of Economic and Social Affairs, Population Division 2011, *World Contraceptive Use 2010*, (POP/DB/CP/Rev2010).