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Original Article

Unmet need for postpartum family planning in Alexandria, Egypt

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ABSTRACT

Background: Postpartum women are a priority group to target on trying to solve the problem of closely spaced pregnancies as well as population explosion.**Aim:** To estimate the level of unmet need for postpartum family planning one year after birth as well as identify factors associated with having unmet need in Alexandria, Egypt.**Methods:** A cross sectional survey was adopted. A sample of 1500 women one year post-partum was selected. A predesigned interviewing questionnaire was used to collect data. Data include their socio-demographic characteristics and current use of family planning method. Those with unmet need for postpartum family planning (PPFP) were asked about the reasons for non-use, their intention to use in the future and their knowledge about contraceptives.**Setting:** Public settings delivering routine immunization for infants in Alexandria.**Results:** Out of 1500 postpartum women, 1370 (91.33%) have a real demand for family planning. Out of those with a real demand for family planning (n = 1370), 1106 (80.72%) were using a modern contraceptive method and only 41 (3%) were using a traditional method for birth control while the remaining 223 (16.28%) were having unmet need for postpartum family planning. Amenorrhea, breast feeding, fear of side effects, discontinuation due to health concerns and pressure from the surroundings were the most common cited reasons for non-use.**Conclusion:** Integration of family planning education during antenatal, natal and postnatal care services in Egypt should be actively initiated. Women with unmet need for PPFP in general and those with intention to use a contraceptive in particular should be targeted for recruitment efforts and services in any program tackle the problem of family planning and rising fertility in Egypt.© 2017 Alexandria University Faculty of Medicine. Production and hosting by Elsevier B.V. This is an open access article under the CC BY-NC-ND license (<http://creativecommons.org/licenses/by-nc-nd/4.0/>).

1. Introduction

Access to safe voluntary family planning is a human right. Family planning is central to gender equality and women's empowerment and it is a key factor in reducing poverty.¹

Sexually active females in the reproductive age could be classified according to their need for contraception into four main categories namely, with no need because of being un-fecund; with no need because of a desire to become pregnant soon, with no need because of current contraceptive practice (met need) and with

unmet need. The level of unmet need is one of the standard indicators for measuring effectiveness of family planning program in any country.² Such indicator provides information on the size of an extremely important population sub-group for FP programs. They represent women at the risk of pregnancy with an apparent need for FP services based on their expressed desire to limit or space future births, but who do not use contraception. Such women have an unmet need (unmet demand) for FP and are the logical primary target for program efforts.³

Unintended and mistimed pregnancy are the usual consequences of having unmet need for FP.⁴ Globally an estimated 80 million unintended pregnancies, both mistimed and unwanted, occur each year. Unintended pregnancy and births have grave consequences to the mother and family and are global social and health burdens. It is much more likely to end in potentially unsafe abortion.⁵ The EDHS 2008 reported that many Egyptian women are having more births than they consider ideal. Overall, 14% of preg-

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nancies in the five years prior to the survey were reported unwanted. Among those, 5% of births were identified as mistimed.⁶

Postpartum family planning (PPFP) is initiation of family planning services within the first 12 months following childbirth. Closely spaced pregnancies through the first 12 months following childbirth are known to be associated with the highest risk of adverse health outcomes for both mother and child. Postpartum women are more likely to have unmet need for family planning as compared to all married women.⁷ Unmet need for PPFP during the first year after birth accounted for 65% of the total unmet need for spacing among women in 27 low and middle income countries according to a study conducted by Ross and Winfrey 2001.⁸

Many families overlook contraception following childbirth. This might be due to a poor perception of pregnancy risks, difficulty in accessing services, and sociocultural issues. Other possible factors include geographical and financial inaccessibility, provider bias, poor method choice, lower status of women, medico-legal restrictions and fear of side effects.⁹

Population growth in Egypt continues to be high. Recent increase in total fertility predicts more future increase. This increase could be attributed to many factors include having unmet need for contraception. Urgent steps are required to make contraception more widely available, accessible and affordable. EDHS always reports data onto unmet need for family planning among total number of married women in the reproductive age but it gives no data about such estimate for post-partum women.¹⁰

The present study was conducted in order to estimate the level of unmet need for PPFP in Alexandria and identify its factors associated with having unmet need.

2. Materials and methods

A cross sectional survey was adopted. The target population was post-partum women attending public immunization settings delivering routine immunization for infants in Alexandria at the day of vaccination against Measles, Mumps and Rubella (MMR) according to EPI schedule in Egypt. The minimum sample size was calculated based on data from the last EDHS 2014 (14% level of unmet need in urban governorates) at 5% level of significance and design effect of 2 using Epi Info program version7, it was 370. It was increased to 1500 to increase accuracy of the results. The survey was conducted in 14 settings represent all districts in Alexandria, two from each district. Included settings were selected randomly from a list obtained officially from Directorate of Health Affairs in Alexandria. The targeted places were visited at the day of MMR vaccine once weekly. All women attended at the day of the visit were enrolled. The nature and purpose of the research were clarified for all women. Participation was voluntary.

Data was collected from studied women using a structured interviewing questionnaire. Data included demographic characteristics, current use of a contraceptive, its type and purpose of use. For non-users of any contraceptives data about reasons for not using a modern contraceptive, perceived susceptibility to conceive, previous attempt to use a contraceptive after birth and their intention to use in the future were obtained. Moreover, a series of self-structured questions aimed at exploring women's knowledge about birth control was added. The field work was conducted during the period between January and May 2016.

Microsoft Excel 2010 and IBM Statistics SPSS version 20 were used in analyzing the data. Data was presented using number and percentage. Classification of women as having unmet need for family planning was based on the revised definition of unmet need that was developed and adopted in 2012.¹¹ Chi-square test at 5% level of significance was used to verify significant differences

between both women using contraceptives and those with unmet need for PPFP regarding their socio-demographic characteristics.

3. Results

3.1. Total demand for family planning at one year post-partum: (n = 1500)

Out of 1500 studied women one year after her last birth, 130 (8.67%) having no real demand for contraception (5.47% were separated or widows and 3.20% have a desire to get pregnant). This yields the real demand for contraception equal 1370 (91.33%). Fig. 1 illustrates that, out of those with a demand for family planning (n = 1370), 1106 (80.72%) were using a modern contraceptive method and only 41 (3%) were using a traditional method for birth control (Periodic abstinence and withdrawal) while the remaining 223(16.28%) were not using any of family planning methods although they had no desire for more children "limiters" or want to postpone pregnancy for at least two years ("spacers") (Fig. 1).

Out of studied postpartum women with unmet need for family planning (n = 223), 29% showed unmet need for limiting and 71% had unmet need for spacing (Fig. 2). Distribution of women with unmet need according to the health district was illustrated in Table 1 where the highest percentages was observed in Borg Elarab and El-Amreya (30% and 23.47% respectively) followed by El-Agamy and El-Montaza districts (around 20%).

3.2. Sociodemographic characteristics of studied women with a demand for PPFP

Table 2 illustrates that statistically insignificant difference was observed between both women with met need and those with unmet need regarding their age. On the other hand, a significantly higher percentage of women residing rural areas had unmet need (44.15%) as compared to urban inhabitants. ($P < 0.001$) Similarly, unmet need were significantly highly encountered among housewives ($p = 0.016$), and those with low levels of education as well as their husbands ($P < 0.001$).

3.3. Description of women with unmet need for PPFP

3.3.1. Natal and postnatal history

More than two thirds of women (71.3%) delivered their last child in a private place and an equal percentage undergone caesarean delivery. Three quarters of women (n = 75.8%) breast fed their infants. At the age of one year post-partum, nearly a half of studied women with unmet need (45.7%) reported no return of menstruation and 6.3% had irregular menses. Slightly more than a half of studied women (52%) didn't receive any information or counselling regarding family planning during their visits to health

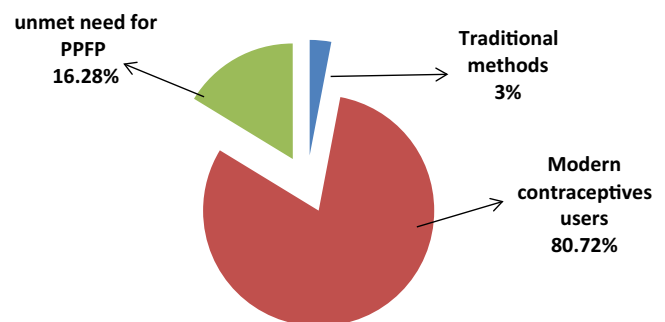


Fig. 1. Total demand for postpartum family planning.

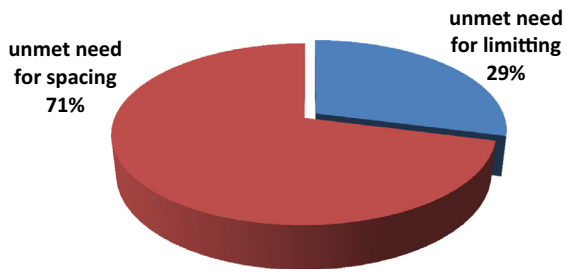


Fig. 2. Distribution of women with unmet need for PPF according to their desire to get more children.

Table 1

Distribution of studied women with unmet need for PPF in Alexandria according to their health districts.

District	Women with unmet need for PPF (n = 223) n (%)	Total number of enrolled women (n = 1370)
El-Montaza	46(20.91)	220
Sharque	18(9.10)	198
Wassat	38(17.19)	221
Gharb	21(11.05)	190
El-Gomrok	22(10.48)	210
El-Agamy	32(20.0)	160
El- Amreya	19(23.47)	81
Borg Elarab	27(30.0)	90

care facilities or private doctors neither during pregnancy nor in the postpartum period (Table 3).

3.3.2. Cited reasons for non-use of family planning

Post- partum amenorrhea was the most common cited reason for non-use while fear of side effects or the procedure of application was the second most common cause (26% and 18.4% respectively). Lactation without amenorrhea was reported by 16.6% of women as the main reason for non-use. Missed opportunity for using a contraceptive or for immediate replacement after discontinuation was observed in 19.2% of studied women with unmet

Table 3

Distribution of women with unmet need for PPF according to their natal and postnatal history.

Natal and post-natal history	Women with unmet need (n = 223) n (%)
Place of last delivery	
Public place	64 (28.7)
Private place	159(71.3)
Mode of delivery	
Normal vaginal delivery	64(28.7)
Caesarean section	159(71.3)
Menstrual history	
Amenorrhea	102(45.7)
Irregular	14 (6.3)
Regular	107 (48.0)
Infant feeding	
Breast feeding	169(75.8)
Formula feeding	45(24.2)
Information and counselling about FP in antenatal and post-partum visits	
Yes	107 (48)
No	116 (52)

need and reported as the main reason for non-use. Pressure from other family members was reported as the main cause by 15.7% of women with unmet need (Table 4).

3.3.3. Perceived susceptibility to conceive and intention for future use of contraceptives

Less than a half of women (47.1%) perceived that they are susceptible for pregnancy at any time however 36.3% stated that they are not susceptible at all. The remaining 16.7% were not sure. On the other hand, only 59.3% of women intended to use a method in the near future, 20.1% of them don't intend to use a modern contraceptive soon and 20.6% are not sure.

3.3.4. Knowledge about birth control

Nearly one third of females with unmet need recognized breast feeding as a safe method for birth control however only 43.4% are sure that it isn't. Regards the best timing for starting a contraceptive, 28.8% of females stated that it is after return of menstruation and 7.1% consider that it is after weaning. However 7.1% don't

Table 2

Distribution of studied women with demand for family planning according to their socio-demographic characteristics.

Socio-demographic characteristics	Women with Unmet need (n = 223) n (%)	Women with met need (n = 1147) n (%)	Total 1370 n(%)	Chi-square (P value)
Age (years)				1.163(0.281)
≤30	140(15.5)	763(84.5)	903	
>30	83(17.77)	384(82.23)	467	
Residence				46.53 (<0.001) [*] OR = 4.62 (2.87–7.43)
Rural	34(44.15)	43(65.85)	77	
Urban	189(14.62)	1104(85.38)	1293	
Working status				5.793 (0.016) [*] OR = 0.61 (0.40–0.91)
Working	30(11.36)	234(88.64)	264	
Housewives	193(17.45)	913(82.55)	1106	
Level of education				15.47 (0.001) [*]
Illiterate/read and write	39(27.08)	105(72.92)	144	
Basic education	26 (12.44)	153(85.74)	179	
Secondary education	63(13.46)	405(86.54)	468	
University education	95(16.41)	484(83.59)	579	
Husband's level of education				95.324 (<0.001) [*]
Illiterate/read and write	48(34.78)	90(65.22)	138	
Basic education	71(39.44)	109(60.56)	180	
Secondary education	43(10.19)	379(89.81)	422	
University education	101(16.03)	529(83.97)	630	

^{*} Significant at 5% level of significance.

Table 4
Cited reasons for non-use of modern contraceptives among women with unmet need for PPFPP (n = 223).

Cited reason for non-use of contraceptives	Women with unmet need n(%)
Lactation amenorrhea (last for one year)	58 (26)
Fear of side effects/applying procedure	41(18.4)
Lactation (no amenorrhea)	37(16.6)
Pressure from family members (husband and other family member)	35(15.7)
Missed opportunity for receiving a contraceptive or discontinuation without replacement due to health concerns	45(19.2)
Other causes ^a	7(3.1)

^a Lack of time, infrequent relation and religious causes.

know the best time. More than a half of them (52.5%) recognized that modern contraceptives have medical side effects (Table 5).

4. Discussion

4.1. Findings and interpretation

Post-partum family planning (PPFP) focuses on the prevention of unintended and closely spaced pregnancies through the first 12 months following childbirth. (Thirty percent of maternal deaths and 10% of child mortality could be prevented if couples space their pregnancies more than 2 years. (1) Last EDHS reported that one-fifth of non-first births were born within 24 months of a prior birth.¹⁰ The present study showed that 16.28% of women at 12 months post-partum who have no desire to get pregnant in the next two years following birth are not using a contraceptive. This figure is higher than that reported in many countries in Africa, Asia and Latin America according to recent DHS.¹² On the other hand it is higher than the estimated level of unmet need reported in the last EDHS 2014.¹⁰ This difference could be explained by the difference in their target population as the rate was calculated among women in the reproductive age group and not only post-partum women. Unmet need might be due to either increased in the demand for contraception or failure of family planning program. The latter is either due to factors in the quality of service or factors related to the clients themselves.

Table 5
Family planning related knowledge among females with unmet need for PPFPP.

	No.	%
Lactation is considered a safe method for birth control at one year post partum		
Yes	78	35.1
No	97	43.4
Not sure	48	21.5
The best contraceptive method to be used during the period of breast feeding ^a		
Progesterone only pills	90	40.5
Injectable contraceptives	25	11.3
Sub-dermal implants	9	4.1
Intrauterine devices	141	62.6
The best timing to start using a contraceptive after birth		
First 40 days after birth	97	43.5
After return of menstruation	64	28.8
At one year postpartum	30	13.5
After weaning	16	7.1
Don't know	16	7.1
Modern contraceptives have many side effects		
Yes	117	52.5
No	106	47.5

^a Categories are not mutually exclusive.

Prevention of unintended pregnancy should include not only those considered as having unmet need but also those using a less effective methods like traditional methods. In the current survey, 3% of the total demand was satisfied by traditional methods. Such methods are known to be more common among highly educated women. Neglecting of such proportion might lead to missed opportunities and unplanned pregnancy.¹³

EDHS 2014 showed that only 60% of nonusers have an intention to use a contraceptive sometimes in the future.¹⁰ This was in accordance with the results in the current research. On the other hand one fifth of nonusers are not intended to use even methods are available. That's why Callahan and Becker 2014 recommended identifying women with unmet need and also saying they intend to use a method. As those are women most likely to adopt a method in any intervention program.¹³

Lack of intention to use a method might be partly attributed to their perceived insusceptibility to get pregnant as this was reported by more than a third (36%) of enrolled women with unmet need.

Lower socioeconomic status as determined in the current work by lower level of education of both couples and rural residency was associated with a higher risk of unmet need for PPFPP. Moreover, being a housewife also significantly increased the risk. These findings were similar to previous studies discussing the problem of unmet need. Mekonnen and Worku 2011 in Ethiopia found that rural residency and lower level of education are significant determinants of unmet need for FP.¹⁴

In accordance, Hailemariam and Haddis (2011) in Ethiopia found that living in rural areas, having lower level of education and having no work other than household chores are important determinants for unmet needs.¹⁵

The timing of the return of fertility after childbirth is variable and unpredictable and women can get pregnant before the return of menstruation.¹⁶ However lactation amenorrhea (LAM) is considered a method of birth control only during the first sixth months after birth and under specific circumstances, it was cited as the main reason for non-use of a contraceptive by 26% of women with unmet need. This misconception was also reinforced in the current survey as 35% of women with unmet need reported that lactation during the first year postpartum protect her from getting pregnant. Similarly, in the last EDHS 2014, 71.7% of married Egyptian women consider prolonged breastfeeding as a family planning method it was reported in the EDHS 2014. Such common myths and lack of awareness among women in the post-partum period highlight the real need for community education about facts of birth control.

More than a half of enrolled women with unmet need stated that modern contraceptives have many side effects. Missed opportunities for family planning counselling and education from health care team to pregnant and post-partum females (52%) as well as listening to false information and bad experiences from other persons might be the underlying factor for fear of women from side effects of modern contraceptives as well as discontinuation shortly after usage. Pressure from the surroundings as opposition to use a contraceptive by her husband or relatives for personal, cultural or religious reasons was the main factor reported by 15.7% denoting lack of woman empowerment in Egyptian population in general and those in rural and semi-rural communities in particular.

4.2. Strengths and weaknesses of the study

The present work is a population based study tackle the problem of unmet need for family planning among a priority group for intervention not only for decreasing population growth but also for prevention of closely spaced pregnancy. Lack of enough data for users of contraceptives was a barrier towards identification of all possible determinants of having unmet need to PPFPP.

4.3. Conclusion

Nearly one sixth of women one year postpartum in Alexandria don't use any method of contraception. The majority delivered by caesarean section and in a private facility. Missed opportunity for ante-natal, natal and postnatal FP counselling reached up to 52%. Lower socioeconomic level was significantly associated with higher probability of having unmet need. Many misconceptions and rumours play a major role for this problem.

4.4. Relevance of the findings: implications for clinicians and policymakers

Women with unmet need for PFP in general and those with intention to use a contraceptive in particular should be targeted for recruitment efforts and services in any program tackle the problem of family planning in Egypt. Household survey in rural, semirural, outreach and slummy areas in Alexandria can get the greatest proportion of postpartum women with unmet need.

There are many opportunities for integrating family planning services with other services provided to women or their infants during post-partum period. Counselling and referral of post-partum females are very important approaches in such integration aiming at raising awareness of women and their family members about adverse health outcomes to the mother and child usually associated with closely spaced pregnancies. Compulsory infant immunization according to EPI schedule in Egypt gives a very good opportunity to apply such program as the targeted women could be reached easily. Community health education about birth control should return to the Egyptian mass media with high intensity.

Getting benefit from high rate of C.S delivery in Egypt in general and among those with unmet need in particular through applying intrauterine device during delivery.

4.5. Future researches

Qualitative researches with women, community leaders and health providers are required to clarify in depth the real barriers and challenges against achievement of zero percentage of unmet need for family planning and raise recommendations to be the basis for a community based intervention studies. Such intervention studies needs inter-sectoral collaboration between ministry of health, medical faculties, non-governmental organizations and advertisement.

Conflict of interests

The authors declare that there is no conflict of interests regarding the publication of this paper.

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