

# Unmet needs and knowledge of postpartum contraception in Italian women

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## Summary

**Purpose of investigation:** Clinic visits during pregnancy and puerperium provide a unique opportunity to counsel women on contraception practices. With the aim of evaluating postpartum contraceptive attitudes among urban women attending an antenatal care center and delivering in the same facility, a structured questionnaire was administered to assess desired and received information on contraception in the postpartum period. **Results:** A total of 436 consecutive interviews were collected during the study period. Pregnancy was unplanned in 39% of the women interviewed. Overall, 269 women (61.7%) had decided to use a method of family planning during postpartum. Among the 112 women who stated they did not want to use a method during postpartum, almost 50% stated that they "did not think they needed it", due to a perceived lack of real risk. Of the 436 women interviewed, only 5.5 % women acknowledged that they had received information on contraceptive use. **Conclusion:** The present study indicates a need for ante- and postpartum counseling of women even in urban areas of Italy..

**Key words:** Postpartum contraception; Contraception attitudes; Hormonal contraception; Intrauterine contraception; Contraceptive needs; Contraception unmet needs.

## Introduction

Pregnancy and childbirth are fundamental events in the life of most women and in the majority of them these events change priorities, attitudes, and lifestyle. This is particularly true when dealing with future contraception. During pregnancy and in the postpartum period, women have been found to be more receptive to discussions with their care providers regarding the provision of methods capable of delaying or preventing altogether the occurrence of another pregnancy [1]. Thus, clinic visits during pregnancy and puerperium provide a unique opportunity to counsel women; this is indispensable since, in many cases, even if the woman has utilized a contraceptive method before a planned pregnancy, this previous method may no longer be desirable or ideal after childbirth [1, 2]. Unfortunately, despite the great opportunity to provide advice during antenatal care visits on postpartum contraception, caregivers often miss this opportunity. Even immediately after delivery the issue of future contraception is often neglected. For instance, a survey conducted some 15 years ago in Edinburgh showed that only 50% of new mothers received a contraceptive supply when leaving the hospital. The same study reported that only a scanty four percent of women were given an opportunity to discuss postpartum contraception and this was usually a brief, limited encounter before leaving the hospital [3].

Even when postpartum programs are in place, their appropriateness has been questioned and, indeed, more attention needs to be given to this issue because postpartum contraception is vital to ensure adequate birth spacing, a major component of every effort to improve

maternal and infant health. It has been estimated that globally implementing a two-year birth interval would avoid some 100,000 maternal deaths every year and also significantly reduce abortion rates [4].

Over ten years ago, in a large multinational survey of 27 countries, Ross and Winfrey [5] estimated that many postpartum women had unmet family planning needs, including a significant lack of information regarding postpartum contraception and optimal available methods. Obviously, this lack of information varies with geographical areas, education and social class, but substantial improvements are mandatory everywhere. For instance, in the Russian Federation, Vikhlyaeva *et al.* [6] have shown that a major improvement in counseling services for post-delivery contraception is necessary both in the maternity hospitals and in local family planning centers.

While many studies have evaluated patient satisfaction with specific contraceptive methods, few have focused on contraceptive needs of peripartum women [1, 2, 7, 8]. In a recent study, Glazer *et al.* [9] investigated 175 postpartum women attending an American University hospital out-patient clinic, asking whether contraceptive advice was offered either at ante- or postpartum. They found that three-quarters of the respondent (77%) had discussed future contraception before delivery and 87% did so during postpartum. Interestingly, 23% of the subjects would have elected immediate post-placental intrauterine device (IUD) placement if available, although at follow-up contacts four to six months after delivery, only five percent reported using an IUD, 29% were using no contraception, and 32% utilized a method which was not highly effective. This indicates that even in a tertiary urban hospital in the USA, there can be an unmet need for contraception, at least during postpartum.

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Several investigations have been conducted on the delicate issue of counseling adolescents pre- and postpartum, as well as on reasons for contraceptive non-use among young women who have had a delivery; these investigations are important for a proper understanding of adolescent attitudes and for reducing teenage pregnancy [10-13]. In 2007, Lemay *et al.* investigated non-use of contraception prior to first pregnancy among adolescent mothers and listed as reasons: denial, not planning to have sex, not considering the consequences of unprotected sex, and wanting to become pregnant. They concluded that in the USA, adolescents favored routine discussions of the topic, parental involvement, exchange of information between young mothers and teenagers at risk, and media campaigns [14].

Recently, Lopez *et al.* [15] have conducted a Cochrane review of existing data on "education for contraceptive use by women after childbirth." They found eight trials meeting their initial criteria for inclusion. On further analysis, there were only two studies evaluating short-term interventions with sufficient data and statistical power and both showed a positive effect on contraceptive use. They also analyzed four programs with multiple contacts: two showed more contraceptive use, fewer pregnancies or births among adolescents when there were enhanced services, and a structured home-visiting program. A group in Taiwan has now defined a "theory-based interactive postpartum sexual health education program" aimed at enhancing effective contraceptive behaviors in postpartum women with a follow-up over three months. They randomized 250 women into three groups. The first group received the full intervention program that utilized strategies matching participants' learning preparedness, as determined by a "transtheoretical" model including health education. The second group received only a pamphlet and the third group (used as controls) received routine education. The study proved that this new approach was capable of enhancing postpartum contraceptive self-efficacy and effective contraceptive behavior in participating women.

In Italy in 1978, after the passing of legislation permitting voluntary pregnancy termination [16], the Ministry of Health has been mandated by Parliament to draw-up annual reports providing full information on legal abortions (e.g. number of abortions, abortions' rates, and number of repeated abortions) and the most recent report, once again indicates that women who already had one pregnancy are at higher risk of a new pregnancy, thereby showing lack of postpartum counseling.

With the aim of evaluating postpartum contraceptive attitudes among urban women attending an antenatal care center and delivering in the same facility, a study was designed to assess desired and received information on contraception in the postpartum period.

## Materials and Methods

All consenting pregnant or puerperal women admitted to the Department of Obstetrics, Gynecology and Urology at the Policlinico Umberto I° Hospital, of the "Sapienza", University of

Rome were interviewed during the period from January 2009 to December 2009.

The Ethics Committee of the Hospital approved the study and individual informed consent was obtained after study characteristics and the questionnaire were verbally explained to prospective participants. General characteristics were recorded even for those who did not accept to participate to the study.

Considering an alpha level of 0.05 and a statistical power of 0.80, the minimum sample size required was 213. The sample size was then adjusted to compensate for a non-response rate of 20%. Thus a minimum final sample size of 256 was established. Statistical analysis was performed using SPSS (version 15), categorical variables were compared with chi-square test and Fisher exact test, as appropriate, while continuous variables were compared using t test. A *p* value of < 0.05 was considered significant.

A self-administered structured questionnaire with closed questions was utilized for the interviews. The questionnaire was organized in seven sections: general demographic characteristics; obstetric history and breastfeeding attitudes; previous contraceptive usage; intention to use a contraceptive method after delivery; knowledge of contraception in general and of specific postpartum contraceptive modalities; information received on postpartum contraception; factors that influenced their intentions, as well as their intended contraceptive choices. Additional information was obtained on whether their pregnancy was planned or not, whether the woman attended a hospital or a private clinic for antenatal care, and if she attended a preparatory course before delivery. The questionnaire was first administered in a pilot study and then validated.

The mean time for filling the questionnaire was estimated to be approximately 15 minutes.

## Results

During the study period, 1,760 women gave birth at the Department Obstetrics, Gynecology and Urology. A total of 436 consecutive interviews were collected during the study period, 284 respondents were pregnant, while 152 were puerperal women. Of these, 36.9% has been followed during pregnancy by the outpatient obstetrics service of the Department, 30% by a private physician, 20% by public clinic, and the last 13.1% by the obstetric clinic of a different hospital.

The mean age of respondents was  $31.7 \pm 6.08$  years (SD) with a range of 18-41 years.

Non-respondents were similar to respondents for general demographic characteristics and obstetrical history.

Overall, pregnancy was planned in 61% of the women interviewed, while in 39% it was unplanned (266 and 170, respectively).

As indicated in Figure 1, among women below 25 years of age, the vast majority of pregnancies (84.8%) were unplanned; this proportion decreased with age and reached a minimum (24.8%) among women aged 30-34 years, increasing again thereafter.

Table 1 shows that overall, 269 women (61.7%) had decided to use a method of family planning during the postpartum, with 112 (25.7%) opting or having opted for no contraception and 55 (12.6%) undecided. Of the three variables and many categories listed in Table 1, the only

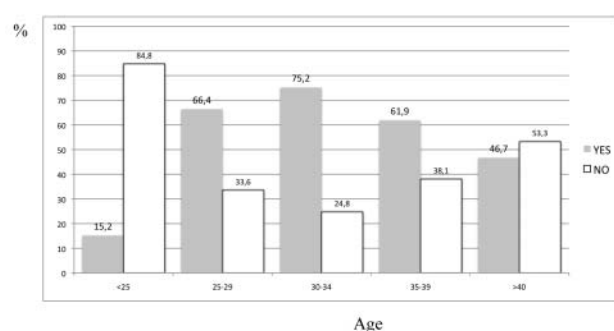


Figure 1. — Proportion of postpartum women who had planned pregnancy (by age).

Table 1. — Association between variables (age, education religion) and intention to use contraception (n. 436).

Variables	Intention to use a contraceptive						Total		p value	
	Yes		No		Do not					
	%	n	%	n	%	n	%*	n		
Age										
< 25	47.8	22	32.6	15	19.6	9	10.55	46	0.05	
25-29	83.2	94	15.0	17	1.8	2	25.91	113		
30-34	41.1	53	30.2	39	28.7	37	29.58	129		
35-39	72.0	85	22.0	26	6.0	7	27.06	118		
> 40	50.0	15	50.0	15	0.0	0	6.88	30		
Religion										
No	100	35	0.0	0	0.0	0	8.02	5	0.04	
Catholic	61.6	215	26.6	86	13.7	48	80.04	349		
Orthodox	24.2	8	60.6	20	15.1	5	7.56	33		
Protestant	0.0	0	100	4	0.0	0	0.91	4		
Evangelic	0.0	0	100	2	0.0	0	0.45	2		
Muslim	100	9	0.0	0	0.0	0	2.06	9		
Buddhists	0.0	0	0.0	0	100	2	0.45	2		
Hinduist	100	2	0.0	0	0.0	0	0.45	2	0.0001	
Education										
No/Primary	0.0	0	100	4	0.0	0		4		
Secondary	60.0	60	40.0	40	0.0	0		100		
Diploma	66.8	153	62.4	143	14.4	33		229		
University	54.4	56	24.3	25	21.3	22		103		
Previous contraceptive use										
Yes	77.3	215	18.0	50	4.7	13		278		
No	43.2	54	40.8	51	16.0	20		125		
No answer	0.0	0	33.3	11	66.6	22		33		
Total	61.7	269	25.7	112	12.6	55		436		

\* Percentage of 436 women.

ones that showed a significant association with the intention to use a contraceptive in postpartum were: previous contraceptive use ( $p = 0.0001$ ), having received a higher education (diploma;  $p = 0.04$ ), and paradoxically being of Catholic religion ( $p = 0.05$ ). However, it must be pointed out that only some 12% of all participating women were non-Catholic, with 7.5% being Orthodox Christians.

The overwhelming majority of subjects wanting to use a method of contraception during the postpartum (220 or 81.8%) gave the need to achieve a proper "birth spacing" as the reason. Only 13 (4.8%) stated that they had completed their project for a family, with 36 (13.4%) being unable to provide any specific reason (Table 2).

An analysis of postpartum contraceptive choices made

Table 2. — Reasons for wanting to use contraception during the postpartum period (n. = 269).

Reason	n	%
Birth Spacing	220	81.8
Completed family	13	4.8
Other	36	13.4

Table 3. — Contraceptive choices for the postpartum period.

	%	n
Total "yes"		269
Hormonal	81.78	220
Intrauterine device	7.80	21
Barrier methods	4.83	13
Sterilization	0.74	2
Did not know which method	4.83	13
Total "no"		112
No, does not think to need it	48.21	54
No, willing to have a new pregnancy	31.25	35
No, previous negative experience	15.17	17
No, no reason given	5.35	6
Total "do not know"		55

Table 4. — Knowledge that contraception can be used during breastfeeding.

	%	n
Yes, hormonal	17.54	10
Yes, intrauterine device	49.12	28
Yes, barrier methods	42.10	24
Yes, natural	5.62	3
Total "yes"	13.07	57
Total "no"	84.86	370
Did not answer	2.06	9

by women who wanted to use a method during postpartum, indicated that the vast majority (82%) preferred the use of combined hormonal contraceptives. Intrauterine contraception was selected by some eight percent of the subjects, while 4.8% stated that they would use a barrier method.

Among the 112 women who did not want to use a method during postpartum, almost 50% (54 or 48.2%) stated that they "did not think they needed it", due to a perceived lack of real risk (Table 3).

With regard to medical permissibility of using a contraceptive method while breastfeeding, 87% of the women stated that they were not aware of the existence of methods that could be safely used during this period (Table 4).

Among women who did not believe that a contraceptive method could be used during postpartum, as stated above, almost half felt that – at any rate – they were not at risk.

Of the 436 women interviewed, four did not provide information on contraceptive methods to be used during the postpartum period. In addition, only 24 women (5.5% of the 432 that gave an answer) acknowledged that they had received information on contraceptive use; most of

Table 5. — *Contraceptive counselling during pregnancy.*

	%	N
Yes	5.50	24
No	93.57	408
Did not answer	0.98	4

Table 6. — *Relationship between intention to use contraception and parity.*

Parity	%	Yes N	%	No N	Total	<i>p</i> value
0	64.3	166	35.7	92	258	<i>p</i> = 0.0048
1	78.7	100	21.3	27	127	
> 1	66.6	34	33.3	17	51	

them (21) from their obstetrician, with three who found useful information in the media (Table 5). All these subjects were among the 220 women who wanted to use hormonal contraception.

No statistically significant difference was observed between pregnant and puerperal subjects in 'intention to use contraception', with a preference for hormonal methods ( $p = 0.02$ ).

Parity was significantly related to intention to use a contraceptive: women with a prior pregnancy being more likely to wanting to use contraception in postpartum ( $p = 0.0048$ ) (Table 6)

## Discussion

In the Industrial world, many believe that a pregnancy is the result of careful planning; yet, data from the Global Health Council indicate that, of the 205 million pregnancies occurring annually worldwide, between 60 and 80 million are unplanned. In addition, more than half of the millions of unwanted pregnancies are terminated by elective abortion, a high proportion of which, are performed in developing countries under unsafe conditions [17].

The present study found that, overall, pregnancy was unplanned in almost 39% of the women interviewed; this percentage rose to almost 85 among those below 25 years of age. Almost two-thirds of them opted for a method of family planning during the postpartum period, giving as the main reason the need to properly "space" pregnancies. In their vast majority, these women preferred oral contraception. Almost half the women who did not want to use contraception during the postpartum believed that the risk of another pregnancy was negligible, although they were not even aware of the Lactational Amenorrhea Method (LAM). This was evidenced by the fact that among the 13% of women who knew that a method could be used during breastfeeding, not a single one mentioned LAM. Finally, only 15.8% of 152 women interviewed during postpartum had received information regarding contraceptive use during the ante- or postpartum periods, mostly from their obstetrician. This finding is particularly prob-

lematic when considering that the overwhelming majority of women interviewed (86.2%) stated that they would have appreciated receiving such information. Thus, the present study indicates a need for ante- and postpartum counseling of women even in urban areas of Italy.

It is also important to reflect on the high proportion (almost 50%) of women interviewed who did not believe that they needed contraception after birth of their baby, due to a lack of perception of risk of another pregnancy.

Many and diverse reasons have been given to explain the high rate of unintended pregnancies even in Western countries; they include: lack of patient education, ineffective or inconsistent use of contraceptive methods, unplanned sexual activity, and contraceptive failure. In this connection, a paper just published attempted to assess in a sample of 248 women, their knowledge of health risks connected with pregnancy, and how such an evaluation compared to their estimates of the risks of oral contraceptives. This investigation found that over 75% of respondents rated oral contraceptives as more hazardous than pregnancy and, intriguingly, women with greater levels of education were more likely to believe that oral contraceptives were riskier than pregnancy [18]. The study did not address the question of whether these misconceptions would lead to non-use of contraception in the postpartum period, but the inference seems obvious.

One of the aforementioned reasons seems especially relevant for the postpartum period: lack of proper education and information. Back in 2003, a comparative study was performed in the USA on contraceptive information received after delivery. Whereas all women in the intervention group received an information booklet during their postpartum stay at the hospital, one-third of those in the control group reported having received some kind of written information. The study concluded that the simple distribution of written material about contraceptive options during postpartum increases the ability of a woman to make an informed decision regarding future pregnancies [19].

The already mentioned recent, careful review of the literature on this subject concluded that educating women during the postpartum period led to increased contraceptive use and fewer unplanned pregnancies. Interestingly, the review found that both short-term and multiple-contact interventions were effective; however, data on short-term intervention did not always show improvement. Longer-term actions seemed to hold promise and were not necessarily more costly, although – by definition – they were more complex and not ubiquitously applicable [15].

Several national studies have addressed the issue of providing postpartum contraception: in Finland a study found out that the most common contraceptive method recommended by physicians and nurses to breastfeeding women was the condom, followed by progestin-only pills and intrauterine contraception. Only a few health operators recommended LAM, and only some 10% inserted an IUD postpartum [20]. In Nigeria, a study found that more than 50% of the women surveyed intended to use contraception



after delivery. Their preference went to condoms (38.3%) followed by intrauterine devices (11.5%). Advanced age and high parity significantly predicted intention to use postpartum contraception. Also counseling by doctors and nurses increased the intention to use postpartum contraceptives, stressing – once again – the importance of family planning counseling and education [21].

In Turkey, after postpartum counseling, one-third of the women involved in a study decided to use intrauterine contraception, followed by condoms (16%), injectable progestins (11%), oral contraceptives (5%), and coitus interruptus (5%). However, one-fourth of the women still decided against the use of contraception during puerperium. Authors concluded that, in spite of postpartum counseling, a high majority of the women appeared to use traditional and less effective methods [22].

In conclusion, available evidence indicates that initiation of effective contraceptive methods is often delayed after childbirth. In order to promote better postpartum contraception practice, it is necessary to educate physicians, nurses and women. This can be better achieved through widespread distribution of updated evidence-based guidelines for health operators and of educational material for pregnant and postpartum women.

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