Pregnancy planning: prevalence and associated aspects*

PLANEJAMENTO DA GRAVIDEZ: PREVALÊNCIA E ASPECTOS ASSOCIADOS

PLANIFICACIÓN DEL EMBARAZO: PREVALENCIA Y ASPECTOS ASOCIADOS

Ana Luiza Vilela Borges[1], Fernanda Bigio Cavalhieri[2], Luiza Akiko Komura Hoga[3], Elizabeth Fujimori[4], Luís Ricardo Barbosa[5]

ABSTRACT

The aims were to know the prevalence of and associated aspects to the planned pregnancy. Using the Brazilian version of the *London Measure of Unplanned Pregnancy*, we classified the pregnancy of 126 women who had a positive urine pregnancy test in primary health centers in the city of Marília, São Paulo. The prevalence of planned pregnancy was 33.3% [25.2%-42.3%]. We found that age, partners age, living with a partner, having a previous pregnancy and a previous abortion or miscarriage were positively associated to the planning of the pregnancy. We conclude that planning a pregnancy is not frequent yet and is mainly determined by personal and relational contexts of a woman's life as well as by their reproductive history and not simply by contraception use or schooling, as it has been traditionally considered.

DESCRIPTORS

Contraception
Pregnancy
Sexual and reproductive health

RESUMO

Os objetivos foram estimar a prevalência de gravidez planejada e analisar os aspectos a ela associados. Gravidez planejada foi avaliada pelo *London Measure of Unplanned Pregnancy*, versão Brasil. Foram estudadas 126 mulheres que procuraram unidades básicas de saúde de Marília, São Paulo para confirmação da gravidez e que tiveram resultado positivo. A prevalência de gravidez planejada foi 33,3% [25,2%-42,3%]. Os aspectos positivamente associados ao planejamento da gravidez foram idade, idade do parceiro, coabitação com parceiro, ter engravidado anteriormente e ter vivenciado um abortamento anterior. O planejamento da gravidez ainda não é evento freqüente e está determinado, sobretudo, pelos contextos de vida pessoal e afetiva das mulheres, bem como por sua trajetória reprodutiva, e não simplesmente pelo uso de métodos contraceptivos ou nível de escolaridade, como tradicionalmente se tem pensado.

DESCRITORES

Anticoncepção
Gravidez
Saúde sexual e reprodutiva

RESUMEN

Se objetivó estimar la prevalencia de embarazo planificado y analizar los aspectos asociados a él. El embarazo planificado fue evaluado por *London Measure of Unplanned Pregnancy*, versión brasileña. Fueron estudiadas 126 mujeres que se presentaron en unidades básicas de salud de Marília, São Paulo, para confirmación de gravidez, con resultado positivo. La prevalencia de embarazo planificado fue 33,3% [25,2%-42,3%]. Los aspectos asociados positivamente al embarazo planificado fueron: edad, edad del compañero, cohabitación con el compañero, haber estado embarazada anteriormente y haber experimentado un aborto anterior. El planeamiento del embarazo aún no es un evento frecuente y está determinado, sobre todo, por el contexto personal y afectivo de las mujeres, así como por su trayectoria reproductiva; y no simplemente por el uso de métodos anticonceptivos o nivel de escolaridad, como tradicionalmente se ha pensado.

DESCRIPTORES

Anticoncepción
Embarazo
Salud sexual y reproductiva

* Study awarded a prize in the Poster Session, 2º Simpósio Internacional de Políticas e Práticas em Saúde Coletiva na Perspectiva da Enfermagem – SINPESC, University of São Paulo School of Nursing, São Paulo, 9-11 October 2011.

[1]RN. Ph.D. Professor of the Collective Health Nursing Department, School of Nursing, University of São Paulo. São Paulo, SP, Brazil. alvilela@usp.br [2]RN, Marília City Adminsitration. Marília, SP, Brazil. [3]RN. Associate Professor, Maternal-Child and Psychiatric Nursing Department, School of Nursing, University of São Paulo. São Paulo, SP, Brazil. [4]RN. Associate Professor, Collective Health Nursing Department, School of Nursing, University of São Paulo. São Paulo, SP, Brazil. [5]Mathematician, School of Nursing, University of São Paulo. São Paulo, SP, Brazil.

Português / Inglês
www.scielo.br/reeusp

Received: 10/30/2011
Approved: 11/29/2011

INTRODUCTION

More than a decade has passed since the sexual and reproductive rights have been defined at a global level, with full support from the Brazilian government, but several gaps still exist surround the consolidation of these rights in our society. Undoubtedly, the issues regarding reproductive planning appear as important challenges, mainly because there is a rather long course to pursue between what is recommended in the promotion of care and sexual and reproductive health and what is actually experienced by Brazilian women in a reproductive age.

Although experiencing an undesired or unplanned pregnancy is a situation present in the life of Brazilian women, even with the increased amount of information and improved accessibility to contraceptive methods, the single national source of information about pregnancy planning is the National Demographics and Health Survey (*Pesquisa Nacional de Demografia e Saúde* - PNDS), that uses the *Demographic Health Survey*[1] questionnaire, conducted in 79 developing countries. In its standard instrument, it performs an indirect assessment of the planning of the current pregnancy or one that occurred up to five years before the interview through one single question: *In the pregnancy (OF NAME), did you want a child at that time, did you want to wait longer or not have any more children?*[1].

The PNDS survey, performed in 2006, found that only 54% of the births that occurred in the five-year period before the study were actually wanted, even considering the high prevalence of the use of modern birth control methods in the country[1].

At a first view, it appears that intentionality, the desire or planning of a pregnancy are synonymous[2]. Actually, the desire and intention to become pregnant are elements that comprise the planning of a pregnancy[3-4], mainly because the desire is considered a feeling that does not necessarily conduct to an action, and, therefore, the intention is closely related to the personal context, such as the support from the partner and their position at work, which can trigger one or more initiatives to become pregnant[3]. Planning, on the other hand, concerns the behavioral domain, because it includes adopting measures centered on conception[3] and can only exist as long as there is the desire and/or the intention, regardless of the intensity[4-5].

Knowing and measuring the unplanned pregnancy is essential to assign a new direction to the actions aimed at sexual and reproductive in the primary health care setting. This is justified because it is known that women who face an unplanned pregnancy are more prone to consuming less folic acid than the recommended amount, both before and after the pregnancy, smoking during pregnancy, reporting postpartum depression, starting prenatal care after the first trimester, terminate the pregnancy, among other problems[3,5-6]. Therefore, the objective of this study was to estimate the prevalence of planned pregnancies and analyze its associated aspects.

Planning, on the other hand, concerns the behavioral domain, because it includes adopting measures centered on conception and can only exist as long as there is the desire and/or the intention ...

METHOD

This cross-sectional study was performed with 126 women subjects aged between 18 and 42 years, users of Family Health Strategy units in the city of Marília, São Paulo state. These women were selected between January and June 2010 when they sought the health service to confirm they were pregnant. After taking the immunological test, which verifies the human chorionic gonadotropin in the urine to diagnose the pregnancy, women with positive tests were invited to participate in the study. The exclusion criteria were their not knowing how to read or write, because the questionnaire was self-administered, and being younger than 18 years of age, due to the need to obtain the guardians' authorization for the adolescent to participate.

To classify the pregnancy planning, the Portuguese version of the *London Measure of Unplanned Pregnancy* (LMUP)[7-8] was used. The LMUP is a short and self-administered instrument, consisting of six items that comprise one single domain: the pregnancy planning. The items refer to the use of contraceptive methods in the month the pregnancy occurred; on the time when the pregnancy occurred; the intention to become pregnant; the desire to become pregnant; a previous talk with the partner about having children; and, finally, the measures taken to prepare for a pregnancy.

It is a valid measure and practicable for any type of pregnancy, regardless of its outcome, either birth or miscarriage/abortion. The score it obtained by adding the points, which range between 0 and 2 for each item (the respondents should not be allowed to see the item's scores), with a total maximum of 12 points. The criterion indicated by the authors of the instrument is that the higher the score, the greater the indication that it refers to a planned pregnancy. Therefore, they suggest the segmentation of the points into at least three groups (unplanned pregnancy); 4-9 points (ambivalent regarding the pregnancy planning); and 10-12 points (planned pregnancy).

This way, all women whose scores were equal to or greater than 10 points were classified as having planned their pregnancy. The women also filled in an instrument about their sociodemographic characteristics and reproductive history.

The data were processed with the Statistical Package for the Social Sciences (SPSS) 19.0, and described through total and relative frequency, mean, standard deviation, minimum and maximum. The categorical variables were compared using the chi-square test for the difference of proportions and the continuous quantitative variables were compared using the Mann-Whitney non-parametric test.

The study project was approved by the Research Ethics Committee at the University of São Paulo School of Nursing (process number 858/2009). Approval from the Municipal Health Department was obtained to apply the instrument among the women users of primary health care services.

RESULTS

The 126 women with a positive pregnancy test, who agreed to answer the questionnaire were, in average, 24.6 years old (sd = 6.2) and 10.5 years of education (sd = 2.4). Most of them lived with a partner (72.2%) and were unemployed (67.4%). For half of them, that was their first pregnancy (51.6%). All other sociodemographic and reproductive characteristics are listed in Table 1.

Table 1 - Sociodemographic and reproductive characteristics of women with a positive pregnancy test, who answered the LMUP - Marília, SP - 2010

Variable	Mean	(sd)
Age (years)	24,6	(6,2)
Years of study	10,5	(2,4)
Age of partner (years)	28,4	(7,1)
	n	**%**
Skin color		
White	48	38,1
Brown	59	46,8
Black	16	12,7
Yellow	12	1,6
Indigenous	1	0,8
Religion		
Catholic	57	45,2
Evangelic	50	39,7
Others	2	1,6
No religion	17	13,5
Working currently		
No	85	67,4
Yes	41	32,6
Living with partner		
No	30	23,8
Yes	96	72,2
Previous pregnancy		
No	65	51,6
Yes	61	48,4
Total	**126**	**100,0**

Table 2 shows that 65.1% of the women were not using any contraceptive method. For 47.6% of the women, the pregnancy occurred at a wrong or *not quite the right* time in their lives, and 34.9% did not intend to get pregnant. A considerable part of the sample revealed they did not want a child at that time (19.0%). It is observed that only a little more than half the women had talked with their partner and agreed about having children (50.8%).

Table 2 - Frequency of the answers per item on the LMUP - Marília, SP - 2010

Item	Answer	N	%
1. Use of contraception in the month you got pregnant	Always	12	9,5
	Not on every occasion or with some failures	32	25,4
	Was not using contraception method	82	65,1
2. Time when the pregnancy occurred	Wrong time	12	9,5
	Not quite the right time	48	38,1
	The right time	66	52,4
3. Intention to become pregnant	Did not intend to get pregnant	44	34,9
	The intentions kept changing	29	23,0
	Intended to get pregnant	53	42,1
4. The desire to have a child	Did not want a child	24	19,0
	Mixed feelings	36	28,6
	Wanted a child	66	52,4
5. Talk with partner about having children	Never	20	15,9
	There was talking, but no consensus	42	33,3
	Agreed to become pregnant	64	50,8
Total		**126**	**100,0**

The prevalence of planned pregnancy was 33.3% [25.2%-42.3%]. The aspects associated with pregnancy planning were having a steady partner, not being the first pregnancy and have experienced a miscarriage/abortion. The mean current age and partner's age were statistically different between the women who planned their pregnancy and those who did not. These data are described on Tables 3 and 4.

Table 3 - Number and proportion of women according to pregnancy planning - Marília, SP - 2010

Variables	Planned pregnancy		P
	No	Yes	
Skin color*			
White	31 (36,9%)	17 (40,5%)	0,781
Brown	40 (47,6%)	19 (45,2%)	
Black	10 (11,9%)	6 (14,3%)	
Employed			
No	56 (66,7%)	30 (71,4%)	0,588
Yes	28 (33,3%)	12 (28,6%)	
Religion			
Catholic	35 (41,7%)	22 (52,4%)	0,633
Evangelic	36 (42,9%)	14 (33,3%)	
None	13 (15,5%)	6 (14,3%)	
Steady partner			
No	28 (33,3%)	2 (4,8%)	<0,001
Yes	56 (66,7%)	40 (95,2%)	
First pregnancy			
No	38 (45,2%)	27 (64,3%)	0,044
Yes	46 (54,8%)	15 (35,7%)	
Previous miscarriage/ abortion**			
No	67 (87,0%)	24 (63,2%)	0,003
Yes	10 (13,0%)	14 (36,8%)	
Total	**84 (100,0%)**	**42 (100,0%)**	

* Thee exclusions: two yellow and one indigenous
** Considered only for women who reported a previous pregnancy

Table 4 - Mean, standard deviation and p-value of variables according to the pregnancy planning - Marília, SP - 2010

Variable	Planned Pregnancy	Mean	Standard-deviation	P
Age	No	23,8	5,9	0,008
	Yes	26,4	6,3	
Partner's age	No	27,3	6,7	0,004
	Yes	30,0	7,2	
Years of study	No	10,1	2,3	0,802
	Yes	10,0	2,4	
Age at menarche	No	12,5	1,5	0,916
	Yes	12,6	1,6	
Age at sexual initiation	No	16,1	2,4	0,129
	Yes	17,4	3,2	

DISCUSSION

The sociodemographic and reproductive profile of the women involved young women to women of 42 year of age with previous pregnancy, some were single and others lived with their partner. This diversity of types of affective relationships and reproductive history becomes relevant with the intention is to measure the pregnancy planning, because there is a positive relationship between age and number of children and the undesirability of the pregnancy[1].

It is noted that there is an inconsistent or lack of use of contraception in the month before the pregnancy was identified. Although a study[9] has shown, by comparing the 1996 and 2006 PNDS survey data, that using the pill, condom, and other so-called modern methods, such as tubal ligation and vasectomy, has increased substantially in Brazil, it should not be disregarded that contraception is founded on subjectivity and not on rationality[10]. In other words, the use of methods is not necessarily continuous and consistent, thus generating situations of contraceptive vulnerability. Furthermore, because not using contraception does not always mean that the women or couples are planning or wanting a pregnancy; therefore, it cannot be the only indicator of pregnancy planning[11].

Regarding the time when the pregnancy occurred, half the women reported that it was the right time and only one small part stated it was the wrong time. The women consider the life contexts in which they are with the purpose of tying to postpone the pregnancy to a time when the personal and/or professional circumstances are favorable for a child to arrive[12].

In this study, less than half of the women reported they intended to become pregnant. Another study[4] found that the women did not use the terms *planned* and *intentional* spontaneously. Most of all, the women had referred to their intention of becoming pregnant, but not necessarily had they planned the pregnancy, which confirms that intention is only an initial step of planning.

The proportion of undesirability found in this study was the same as the 19.0% observed in the PNDS survey (2008) related to the current pregnancy[1]. It is noted that, although the concepts of *unplanned* and *unwanted pregnancy* are used as synonyms, here they appeared with different magnitudes. The proportion of unplanned pregnancies was nearly eight percentage points smaller than the proportion of undesirability. In fact, the pregnancy planning is a complex concept that considers not only elements concerning the desire and intention, but also personal contexts and circumstances, besides the contraceptive behavior *per se*. Therefore, it appears that measuring only desirability would overestimate pregnancy planning.

One third of the women were classified as having planned the pregnancy. Undoubtedly, from the point of view of one's sexual and reproductive health, efforts should be made so that all pregnancies can be planned. However, studies have warned that the occurrence of *unplanned*, *unwanted*, or *unintentional* pregnancies has not reduced over time, even considering the increase in women's education and the changes in social, affective and work relationships, besides the improvement of contraceptive technologies and the increase in accessibility to contraceptive methods[13-14].

A study performed in the United States, with the purpose to analyze the data um of the National Survey of Family Growth and the study regarding the tendencies of increase in unplanned pregnancy rates, found that between 1995 and 2002 there was an increase in the proportion of births of an unplanned pregnancy. In women younger than 25 years of age, the unplanned pregnancy rate increased from 10.4% in 1995 to 18.6% in 2002, and the number of undesired births per 1,000 women of ages between 15-24 years increased from 25 to 48[15]. According to the *Pregnancy Risk Assessment Monitoring* (PRAMS) performed by the *Center for Disease Control and Prevention*, in 2006, the undesired pregnancy rate increased from 33.4% to 59.5% in 24 U.S. states[14].

The aspects that appear as statistically different between the group of women who planned the pregnancy and those who did not indicate that women who plan their pregnancy may be more experienced, from the reproductive point of view, and not only women with a high education level or those who are employed. It cannot be denied that the women's work situation interferes in the pregnancy planning, precisely because it is part of the personal circumstances of her life, although the present study did not find any statistically significant difference regarding the employment situation between women who did or did not plan their pregnancy.

FINAL CONSIDERATIONS

In this study, older women, who has a stable relationship with partner who was also older, and had already experienced a pregnancy or miscarriage/abortion were those who most planned their pregnancy. These women, somehow, were able to gather the necessary tools to experience a pregnancy exactly at the time they wanted, intentionally and with the support from their partner. Therefore, it appears that younger women, without a steady partner and in the beginning of their sexual life[16], and those who have never been pregnant are the most vulnerable to experience an unplanned pregnancy. To provide the necessary conditions for women to plan their pregnancy, besides the simple act of offering contraceptive methods is a challenges for health care professionals, particularly because the use of

contraceptive methods does not always correspond to the expressed intentions[11]. We agree that fecundity cannot, in fact, be totally controlled, and that the act of becoming pregnant cannot be seen as a rational activity based only of planning and foreseeing, as this may be true for some couples but not for all of them.

REFERENCES

1. Berquó ES, Lima, LP. Planejamento da fecundidade: gravidezes não desejadas: PNDS 1996 e 2006. In: Elza Berquó; Sandra Garcia; Tania Lago, oranizadores. Pesquisa Nacional de Demografia e Saúde da Mulher e da Criança - PNDS 2006: dimensões do processo reprodutivo e da saúde da criança. Brasília: Ministério da Saúde; 2009. p. 135-49.

2. Kavanaugh M, Schwarz EB. Prospective assessment of pregnancy intentions using a single-versus a multi-item measure. Perspect Sex Reprod Health. 2009;41(4):238-43.

3. Morin P, Payette H, Moos MK, St-Cyr-Tribble D, Niyonsenga T, De Wals P. Measuring the intensity of pregnancy planning effort. Paediatr Perinat Epidemiol. 2003;17(1):97-105.

4. Barret G, Wellings K. What is a planned pregnancy? Empirical data from a British Study. Soc Sci Med. 2002;55(4):545-57.

5. Klerman LV. The intendedness of pregnancy: a concept in transition. Matern Child Health J. 2000;4(3):155-62.

6. Santelli J, Rochat R, Hatfield-Timajchy K, Gilbert C, Curtis K, Cabral R, et al. The measurement and meaning of unintended pregnancy. Perspect Sex Reprod Health 2003;35(2):94-101.

7. Barrett G, Smith SC, Wellings K. Conceptualisation, development and evaluation of a measure of unplanned pregnancy. J Epidemiol Community Health. 2004;58(5):426-33.

8. Cavalhieri FB. Adaptação cultural e validação para a língua portuguesa de um instrumento para mensuração de gravidez não planejada (London Measure of Unplanned Pregnancy) [dissertação]. São Paulo: Escola de Enfermagem, Universidade de São Paulo; 2011.

9. Caetano AJ. Acesso à contracepção segura. In: Villela WV, Saar E, organizadoras. Compromissos do governo brasileiro com a plataforma da Conferência Internacional sobre População e Desenvolvimento: Rumos para Cairo +20. Brasília: Presidência da República, Secretaria Especial de Políticas para as Mulheres; 2010.

10. Brandão ER. Gravidez na adolescência: um balanço bibliográfico. In: Heilborn ML, Aquino EML, Knauth DR, Bozon, organizadores. O aprendizado da sexualidade: reprodução e trajetórias sociais de jovens brasileiros. Rio de Janeiro: FIOCRUZ; 2006. p. 61-95.

11. Rocca CH, Krishnan S, Barrett G, Wilson M. measuring pregnancy planning: an assessment of the London Measure Unplanned Pregnancy among urban, south Indian women. Demogr Res. 2010;23(11):293-34.

12. Pirotta KMC, Schor N. Intenções reprodutivas e práticas de regulação da fecundidade entre universitários. Rev Saúde Pública. 2004;38(4):495-502.

13. Organização Pan-Americana de Saúde (OPAS). Rede Interagencial de Informações para Saúde. Informe da situação e tendências: demografia e saúde. Brasília; 2009. (Série G. Estatística e Informação em Saúde).

14. Beck LF, Johnson CH, Morrow B, Lipscomb LE, Gaffield ME, Gilbert BC, et al. Pregnancy Risk Assessment Monitoring System: PRAMS 1999 Surveillance Report. Atlanta (GA): Centers for Disease Control and Prevention; 2003.

15. Kissin DM, Anderson JE, Kraft JM, Warner L, Jamieson DJ. Is there a trend of increased unwanted childbearing among young women in the United States? J Adolesc Health. 2008;43(4):364-71.

16. Borges ALV. Relações de gênero e iniciação sexual de mulheres adolescentes. Rev Esc Enferm USP. 2007;41(4):597-604.

Correspondence addressed to: Ana Luiza Vilela Borges
Av. Dr. Enéas de Carvalho Aguiar, 419 – Cerqueira César
CEP 05401-001 - São Paulo, SP, Brazil