



Journal of Nursing

Revista de Enfermagem

UFPE On Line

ISSN: 1981-8963

ORIGINAL ARTICLE

PRECONCEPTION CARE: ADOLESCENTS' KNOWLEDGE AND PRACTICE CUIDADO PRÉ-CONCEPCIONAL: CONHECIMENTO E PRÁTICA DE ADOLESCENTES ATENCIÓN PRECONCEPTIVA: CONOCIMIENTO Y PRÁCTICA DE ADOLESCENTES

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ABSTRACT

Objective: assess the knowledge and practice regarding preconception care among adolescents. **Method:** descriptive study conducted in a public maternity hospital in São Paulo city, with pregnant women, parturient women, and puerperal women. The adolescents answered to questions on preconception care and an instrument to measure pregnancy planning was applied. Data were processed through the software SPSS 18.0 and using thematic categorical analysis. The study has been approved by the Research Ethics Committee, CAAE 0094.0.196.196-11. **Results:** among the 126 adolescents, 18.3% had planned pregnancy, 19.0% had not planned it, and 62.7% were ambivalent. The measures cited as preconception preparation covered three dimensions: emotional, social, and physical. Although most of them think it is significant, 84.9% of the adolescents had not adopted any measure in preparation for pregnancy and 22.0% did not even know any measure to mention in this regard. **Conclusion:** the results show that little is known and done concerning preconception care during adolescence. **Descriptors:** Pregnancy in Adolescence; Preconception Care; Knowledge; Healthy Behaviors.

RESUMO

Objetivo: avaliar o conhecimento e a prática acerca do cuidado pré-concepcional entre adolescentes. **Método:** estudo descritivo realizado em uma maternidade pública na cidade de São Paulo, com gestantes, parturientes e puérperas. As adolescentes responderam questões sobre o cuidado pré-concepcional e foi aplicado um instrumento para mensuração do planejamento da gravidez. Os dados foram processados no programa SPSS 18.0 e pela análise categorial temática. O estudo foi aprovado pelo Comitê de Ética em Pesquisa, CAAE n. 0094.0.196.196-11. **Resultados:** entre as 126 adolescentes, 18,3% planejaram a gravidez, 19,0% não planejaram e 62,7% se mostraram ambivalentes. As medidas citadas como preparo pré-concepcional abrangeram três dimensões: emocional, social e física. Apesar da maioria considerar importante, 84,9% das adolescentes não adotaram qualquer medida como preparo para a gravidez e 22,0% sequer sabiam citar alguma medida nesse sentido. **Conclusão:** os resultados revelam que pouco se sabe e se faz em relação ao cuidado pré-concepcional na adolescência. **Descritores:** Gravidez na Adolescência; Cuidado Pré-concepcional; Conhecimento; Comportamentos Saudáveis.

RESUMEN

Objetivo: evaluar el conocimiento y la práctica relativa a la atención preconceptiva entre adolescentes. **Método:** estudio descriptivo realizado en una maternidad pública en la ciudad de São Paulo, con mujeres embarazadas, parturientas y puérperas. Las adolescentes respondieron a las preguntas acerca de la atención preconceptiva y un instrumento para medir la planificación del embarazo se aplicó. Los datos fueron procesados mediante el programa SPSS 18.0 y con el uso de análisis temático categórico. El estudio ha sido aprobado por el Comité de Ética en Investigación, CAAE 0094.0.196.196-11. **Resultados:** entre las 126 adolescentes, 18,3% habían planeado el embarazo, 19,0% no lo habían planeado y 62,7% eran ambivalentes. Las medidas citadas como preparación previa a la concepción abarcan tres dimensiones: emocional, social y física. Aunque la mayoría de ellas piensan que es importante, 84,9% de las adolescentes no han adoptado ninguna medida en preparación para el embarazo y 22,0% ni siquiera sabían citar cualquier medida en este sentido. **Conclusión:** los resultados muestran que poco se sabe y se hace con relación a la atención preconceptiva en la adolescencia. **Descriptores:** Embarazo en la Adolescencia; Atención Preconceptiva; Conocimiento; Conductas Saludables.

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INTRODUCTION

The 2006 Brazilian Demographic and Health Survey (DHS) found that just over half of the births in the five previous years were planned.¹ Specifically with regard to pregnancy during adolescence, the 2006 DHS showed that only 1/3 of the adolescents reported a planned pregnancy. When pregnancies occur without planning, we assume there was neither preconception care nor the implementation of other action that could prevent health risks to the woman or the fetus.

The Ministry of Health (MoH) emphasizes that preconception care consists of health care aimed at identifying and modifying reproductive risk factors before conception occurs. It also proposes actions within the food and nutrition context, in order to prevent the use of legal and illegal drugs, thus promoting a safe environment, preventing and controlling infectious diseases, and providing genetic counseling.^{2,3}

Regarding food and nutrition, folic acid supplementation within the period that precedes pregnancy is highlighted as an effective means of reducing the incidence of neural tube defects.⁴ Preconception preparation also includes a focus on adequate pre-pregnancy weight, since weight deviations may increase the risk of developing hypertensive disorders during pregnancy, as well as the possibility that infants may be born under the weight regarded as ideal.⁵

Another action included in preconception care is guidance on the risks arising from the use of legal drugs that can lead to fetal malformation. It is needed to know the profile of these drugs and determine the benefit-cost ratio of its use during pregnancy in order to keep them or replace them by drugs with less harmful effects to the fetus. In addition, the use of illicit drugs is also contraindicated during pregnancy, because it can cause fetal malformation, abortion, infectious diseases, maternal and fetal malnutrition, low birth weight, intrauterine growth restriction, preterm delivery, and neonatal drug withdrawal syndrome.^{6,7}

It is of paramount importance that, before any pregnancy, the couple undergoes health checks to verify the existence of infectious diseases, such as toxoplasmosis, rubella, hepatitis B, HIV, syphilis, and other STDs^{2,3,7}, chronic diseases, such as diabetes mellitus, hypertension, epilepsy, anemia, cervical cancer, and breast cancer. All of these pathologies increase the possibility of abortion, spontaneous or recommended

preterm birth, intrauterine growth restriction, fetal injury by maternal chronic drug use, fetal and maternal death.^{2,3,7,8} Experts also recommend genetic counseling, so that the risks of genetic diseases that can cause mutations are investigated in the fetus, such as, for instance, the gene for cystic fibrosis, sickle cell disease, thalassemia, hemophilia, and achondroplasia.⁷

Thus, preconception preparation is a significant action aimed at decreasing maternal and child morbidity and mortality rates. Despite its importance in promoting maternal health, contributing to a healthy pregnancy, little is known about how Brazilian women, especially adolescents, have been preparing for a pregnancy and what they know about preconception preparation.

OBJECTIVE

- Assess knowledge and practices regarding preconception care among adolescents who have experienced a pregnancy.

METHOD

This is a cross sectional study, conducted with a non-probabilistic sample of pregnant, parturient, and puerperal adolescents, aged from 13 to 19 years, provided with assistance at prenatal care facility, the normal delivery facility, and the rooming care facility of a public maternity hospital in São Paulo city, Brazil. This is a philanthropic institution that provides care exclusively through the Brazilian National Health System (SUS) to low obstetric risk pregnant women at any age and all stages of pregnancy. This maternity hospital also has a social housing facility which houses pregnant women in need of embracement for social reasons and it offers computer workshops and activities related to music, gymnastics, sewing, cooking, craftwork, among others.

Adolescents attending the institution from January to July 2012 were invited to participate in the study. We interviewed the adolescents using an instrument with three open questions about preconception preparation: “Do you think it is important to prepare for pregnancy?”; “If yes, how do you do that?”; and “What would you do to prepare for a pregnancy if you were not pregnant but intended to?”. Besides, there were other questions for sociodemographic and reproductive characterization. We measured pregnancy planning with the London Measure of Unplanned Pregnancy (LMUP)⁹, Brazilian Portuguese version. This is an instrument consisting of 6 items that make up the construct “pregnancy planning”. Item 1 is related to the use of contraceptive methods

within the month when the pregnancy occurred; item 2 refers to the time that pregnancy occurred; item 3 addresses the intention of getting pregnant; item 4 focuses on the wish to get pregnant; item 5 refers to the previous discussion with the partner about having children; item 6 is related to the measures adopted as preparation for pregnancy. Classification concerning pregnancy planning is obtained by calculating the scores: 10 to 12 points - planned pregnancy; 4 to 9 points - ambivalent; and 0 to 3 points - unplanned pregnancy.

This study was authorized by the research field institution, after approval by the Research Ethics Committee of the School of Nursing of the University of São Paulo (EE/USP), under the CAAE 0094.0.196.196-11. The formal consent term was obtained from those aged 18 years or over. Regarding those adolescents under 18 years of age, the authors asked for authorization by the companions responsible for them. Concerning those pregnant adolescents living in the institution, the consent was signed by the social worker.

Data were analyzed through the software SPSS, version 18.0, and they are described herein by using proportions, mean values, and standard deviations. The answers to open questions about preconception care underwent the thematic categorical analysis as proposed by Bardin.¹⁰

RESULTS

The participants in this study were 126 adolescents, and there was no refusal. Out of the total, 30.2% were from the prenatal care facility, 33.3% from the rooming care facility, and 36.5% were from the normal delivery facility; 54.0% were aged over 18 years. Table 1 illustrates the sociodemographic and reproductive characteristics of adolescents, who were, on average, 17.3 years old. Most of them were living with their partners (65.1%), were born in São Paulo city (78.0%), and were not working (84.1%). Among those who were working, 85.0% had a formal job. It is worth noticing that nearly 1/5 had planned their pregnancy. The first pregnancy occurred immediately after the onset of sexual life.

Table 1. Adolescents' sociodemographic and reproductive characteristics. São Paulo, 2012.

Variable	Mean	Standard deviation
Age (years)	17.3	1.4
Partner's age (years)	23.1	5.3
Years of school education	8.5	1.8
Age of first menstruation (years)	12.2	1.4
Age of first sexual intercourse (years)	14.9	1.5
Age of first pregnancy (years)	15.6	1.3
Skin color		
White	41	32.5
Brown	64	50.8
Black	16	12.7
Yellow	4	3.2
Indian	1	0.8
Current job		
No	106	84.1
Yes	20	15.9
Lives with the partner		
No	44	34.9
Yes	82	65.1
Previous pregnancy		
No	108	85.7
Yes	18	14.3
Planning of the current pregnancy, according to the LMUP		
Yes	23	18.3
Ambivalent	79	62.7
No	24	19.0

It is worth highlighting that 84.9% have not taken any action in preparation for pregnancy. Among the measures adopted, non-use of

alcohol was the most frequently mentioned. The use of folic acid before conception was reported by only 1 adolescent (Figure 1).

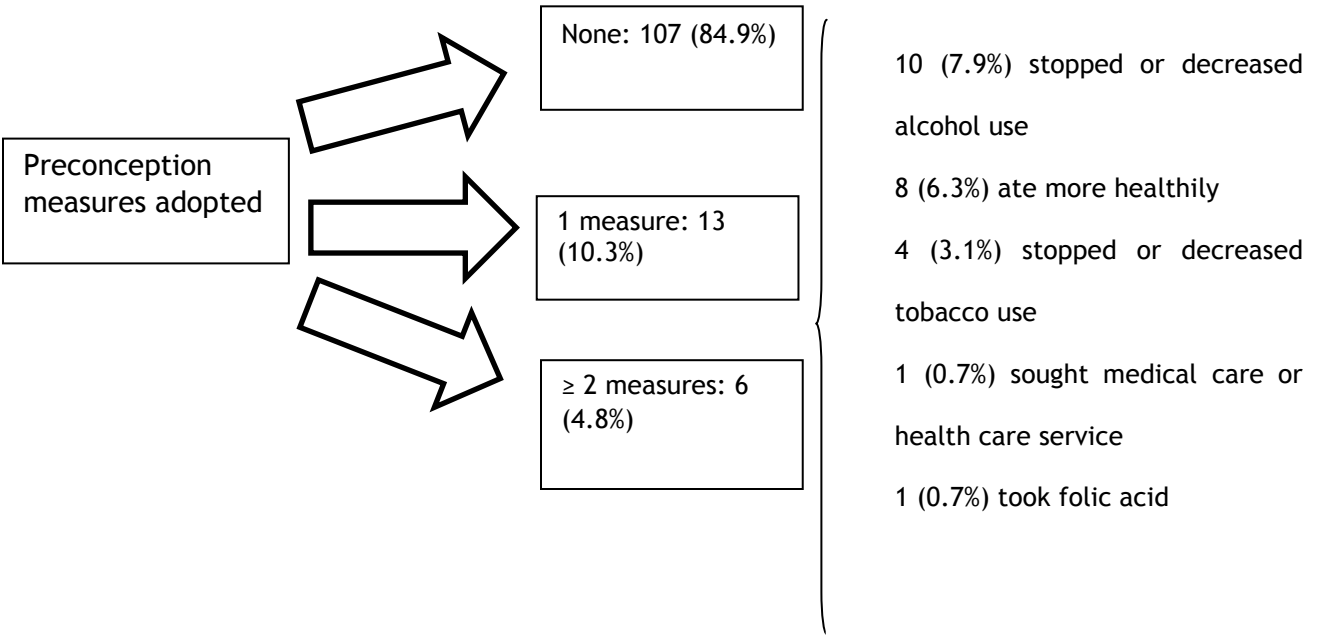


Figure 1. Preconception measures adopted by adolescents. São Paulo, 2012.

Regarding the open questions about preparation for pregnancy, it was found that most participants reported they believe it is very significant (97.6%), but overall, they did not know what to do it. Figure 2 displays the answers to open questions related to preconception preparation, which were grouped into three dimensions. According to 34.1% of the adolescents, preparation for a pregnancy encompasses an emotional viewpoint to cope with pregnancy; 29.3% thought that preparation is located within the social scope in order to acquire greater autonomy, either by remaining in school, getting a job, or establishing a formal relationship with the partner; in turn, according to 17.4%, the preconception preparation corresponds to changes in daily life habits, some of them very specific to adolescence, such as reducing the frequency of going out at night, avoiding to use alcohol, tobacco, and other drugs. Some adolescents said they would do nothing to prepare for a pregnancy (6.3%).

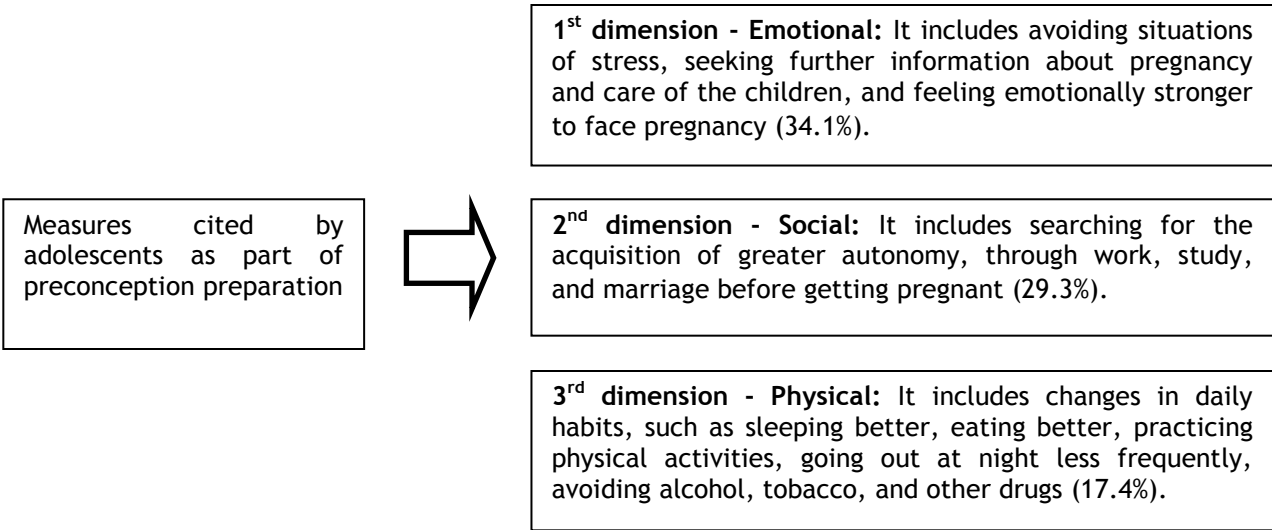


Figure 2. Dimensions preferred by adolescents as a part of preconception preparation. São Paulo 2012.

DISCUSSION

The adolescents' sociodemographic and reproductive profile was heterogenous, ranging from primiparous to multiparous individuals, single and married, workers and non-workers.

The vast majority of adolescents did not take any preconception measure, even considering 1/5 of them achieved scores that ranked their pregnancy as planned. This suggests that, even if they had planned their pregnancy, they would not have adopted any

measure as preparation for pregnancy. However, there was a small proportion of adolescents who have adopted some preconception measure, and not using alcohol was the most reported.

Abstention or decreased amount of alcohol consumption within the preconception period may be related to adolescents' awareness or common sense regarding alcohol teratogenicity. In fact, a study addressing knowledge about preconception measures among university students has shown that they knew that using cigarettes and alcohol affects

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fetal development. On the other hand, they did not show the same knowledge regarding the use of folic acid for prevention of neural tube defects.¹¹

A research conducted to assess women's knowledge and practices concerning the use of folic acid as a preconception measure has noticed that women aged under 24 years showed the lowest knowledge level and less likelihood to report daily consumption of folic acid when compared to women aged between 25 and 34 years¹². This result is very similar to ours as only 1 adolescent reported having used folic acid. Another study involving more than 20,000 European women showed that 70.0% had heard of folic acid and 40.0% said they knew their benefits. However, only 17.0% knew that folic acid can reduce the risk of neural tube defects.¹³ Similarly, a study found that 20% of adolescents in the U.S. pointed out that folic acid was dangerous during pregnancy.¹⁰ Unfortunately, there seems to be a limited understanding about folic acid use and a disparity between knowledge and use of this mineral.

In fact, a study conducted to assess the prevalence and spatial distribution of neural tube defects, before and after fortification of wheat flour with folic acid and corn in the state of São Paulo, Brazil, has noticed a decline in the prevalence of neural tube defects after fortification. However, in some groups of women - as those who are younger, less educated, attending less prenatal care consultations, no statistically significant reduction in the prevalence was observed.¹⁴ Similarly, a Brazilian research conducted to determine the prevalence of folic acid use and associated factors during pregnancy and within the preconception period has noticed that, although the prevalence of folic acid use during pregnancy was 31.8%, only 4.3% of women used it within the preconception period.⁴ Our results, as with those from other studies, confirms that there is a need to stimulate the use of folic acid as a preconception measure, both among adolescents and women at other age groups. Clearly, actions that promote greater success in reproductive planning should be prioritized, such as the adoption of folic acid before the conception.

Another worth highlighting finding was the low demand for health service as a preconception preparation measure. However, the MoH itself warns that we cannot expect significant percentages of women seeking and spontaneously adopting preconception care measures, thus health professionals must motivate them at the time of medical or

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nursing consultations or during health education activities.^{2,3} Therefore, this is a gap in reproduction care in this country.

Regarding their knowledge on the preconception preparation, there is a need to look beyond the preconception care measures traditionally recommended, but they do not know how to do that. The psychological dimension was the most frequently mentioned by adolescents as a priority when preparing for pregnancy. It is known that the occurrence of a pregnancy at this stage can change social expectations regarding the adolescents' educational and professional prospects, because the sequence studying-working-getting married-having children is reconfigured. It is expected that adolescents feel emotionally fragile when they have to deal with a pregnancy.

Among the dimensions mentioned as significant to preconception preparation, those involving the social domain stood out. In a study conducted to check the prevalence of five risk factors for adverse pregnancy outcomes, such as alcoholism, smoking, obesity, diabetes, and frequent mental distress, women who were unemployed or unable to work were more likely to have multiple risk factors than those who were employed, housewives, or students. Women who reported being provided with little emotional and social support were almost two and a half times more likely to show multiple risk factors than women who reported to receive emotional and social support on a frequent basis.¹⁵ This dimension must be included in counseling programs for preconception preparation, as concerns about money, employment, and child's needs are almost universal stressors among pregnant women.

The physical dimension was observed less frequently in the adolescents' speeches as for preconception preparation and, curiously, this is the dimension most emphasized by the guidelines of the MoH, and it is also the most frequently investigated. On the one hand, adolescents show some knowledge about the measures to be taken to prepare for a pregnancy; on the other hand, this knowledge was found to be limited when we take into account the measures recommended by programs and experts in the field, mainly with regard to the physical dimension.

CONCLUSION

Preconception preparation was poorly adopted by adolescents, even in the event of planned pregnancy. This shows that the fact a pregnancy has been planned does not

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necessarily imply in the adoption of preconception care within this group. Moreover, proper knowledge about which preconception measures might be required to improve maternal and child health was not was observed, too. The results reveal the importance of incorporating into the programs aimed at preconception care other dimensions inherent to the adolescence period.

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<http://online.liebertpub.com/doi/pdf/10.1089/jwh.2011.3259>.

Submission: 2014/07/31

Accepted: 2015/04/10

Publishing: 2015/05/01

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