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The prevalence of preconception care, its relation with recipients' individuality, fertility, and the causes of lack of checkup in women who gave birth in Isfahan hospitals in 2016

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Abstract:

BACKGROUND: Preconception care is a set of interventions that aim to identify and repair the factors that can affect the outcome of pregnancy. The aim of this study was to determine the prevalence of receiving preconception care, its relation with recipients' individuality, fertility, and determining the reason for lack of checkup.

MATERIALS AND METHODS: This was a descriptive cross-sectional study that was conducted based on simple stratified random quota sampling on 702 women who gave birth in hospitals of Isfahan (Iran) from April to June in 2016. The tool of collecting data was researcher-made questionnaire. The data were analyzed by the SPSS software version 18 using the mean, standard deviation, relativity, and independent Chi-square tests.

RESULTS: The results showed that 47.7% of participants had received preconception care. There was a significant relationship between educational levels, income, wanted pregnancy, number of pregnancies, and previous individual delivery with preconception care ($P <$ 0/05). The main reason for the lack of preconception care was unplanned pregnancy.

CONCLUSIONS: Results of this study indicated that the quantity of preconception care is not desirable. Therefore, notifying and sensitizing women of childbearing age is essential to refer to service centers and receiving preconception care and planning to present it to all eligible women before pregnancy care. The main causes of the lack of preconception care can be adjusted through health programs.

Keywords:

Individuality, Iran, preconception care, women's health

Introduction

The preconception care is a set of interventions through prevention and treatment with the aim of identifying and mitigation the biomedical, behavioral, and social risks that threaten woman's health or pregnancy outcomes.[1] With preconception care, the outcome of pregnancy will be improved, and its purpose which is honing the quality of life of the fetus, infants, and children through primary prevention will be possible.[2] Preconception care services for all women of childbearing age are conducted through preventing teen pregnancy and unwanted pregnancies, promoting optimal birth spacing interval, optimizing the weight before pregnancy, modifying nutritional status, prescription of folic acid, and vaccination.[3] Other items that their review and modification are necessary for

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preconception care and are effective on the outcomes of pregnancy are as follows:

The use of alcohol, caffeine, and other narcotics, contact with environmental radiation and chemical solvents, high blood pressure, sexually transmitted diseases, high body mass index, and obesity.[4-8] Several studies have suggested the necessity and importance of preconception care including the results of a study that emphasizes the need for counseling before pregnancy in women with risk factors before pregnancy.[9] In addition, in another study, it has been suggested that planning to meet the challenge of providing preconception care was important and due to the high rate of unwanted pregnancy, this care should be included in primary care routine for women of reproductive age.[10] To have a complete planning and presentation of preconception care, the existence of a detailed statistic is essential in the case of not receiving this care. This amount is 35.8% in China 88.4% in Semnan (Iran), and 53.4% in the city of Kalat (Iran).[11-13] In the understudy city (Isfahan), there is only one study that has reported 67 cases of maternal death, in which 73/2% of them had not received this care between the years 2006 and 2011.[14] While receiving two prepregnancy appointments is necessary based on the country's Ministry of Health and Medical Education (Iran).

The stated Iranian researches were conducted with a small size sample and merely for women under the guise of public centers, and a comprehensive and exact statistic is not available for women in different socioeconomic classes. Therefore, an important objective of this study was to determine the prevalence of receiving this care. Moreover the prevalence, the causes for the lack of checkup to receive this care are important. These causes could not be found in comprehensive conducted surveys in a quantitative and accurate way. Determining these causes can provide strategies for increasing receiving them and can be an effort to eliminate the obstacles to present them. In addition to the above points, it appears that examining the relationship of different factors with receiving prenatal care is also necessary. This assessment can identify high-risk groups to some extent. In general, studies on the deficiency of the prevalence of receiving preconception care, factors related to it, and the reasons for the lack of checkup are witnessed. Since one of the main goals of preconception care is ensuring the provision of these services to all women of childbearing age,[1] the current study is conducted with the aim of determining the prevalence of prepregnancy care, the relationships of individual and reproductive factors with it, and the reasons for the lack of checkup.

Materials and Methods

This descriptive cross-sectional study was performed for 2 months from April to June 2016 on 702 women who give birth in hospitals of Isfahan (Iran). The method of sampling was stratified randomly. In this method, hospitals were classified by type as governmental, charitable, private, social, related organizations, and health care. Then, they were randomly selected from each floor of a hospital, and thirty clusters were selected within each hospital. The number of samples assigned to each floor was determined and rationed based on the monthly delivery capacity of that floor compared to the total monthly deliveries in Isfahan. Next, a number of people assigned from the selected hospitals that had inclusion criteria were chosen. The inclusion criteria consisted of the following matters: Iranian Citizenship, residents of Isfahan, and having a desire to attend in the study. The data collection tools for the questionnaire that were self-made contained two parts: the first part was 12 questions about individuality and receiving preconception care and the second part was 11 questions about the lack of checkup. Receiving preconception care means receiving at least the care once in this research. Sampling was conducted as weekly periodic programs. This means that at the beginning of the week, the program of the presence in the hospitals was determined randomly so that every day one hospital will be visited; given that six hospitals were selected from six floors, all hospitals will be visited during a week and sampling will be done. In each week in each hospital, the sampling was conducted through interview and completing the questionnaires after obtaining informed consent till the completion of thirty clustered postpartum women. After the completion of the sampling, data were analyzed using descriptive statistics such as mean, standard deviation, median, and the relativity of description and with test (Chi-square test and average comparison test between the two groups and a one-way analysis of variance) by the usage of SPSS (version 20 - IBM Company, Armonk, NY, USA).

Results

Due to the findings of the research, 47.7% of women have received preconception care. The results of Chi-square test have demonstrated that there is no significant relation between receiving preconception care and the location of hospital ($P > 0/05$). Receiving preconception care had a vital relation with income amount, education, wanted pregnancy, and the number of pregnancy and previous childbirth ($P < 0/05$), [Tables 1 and 2]. Other personal characteristics of women and their relation in receiving this care were provided in Tables 1 and 2. The major reason for the lack of checkup for preconception

care was unplanned pregnancy. Other points are reported in Table 3.

Discussion

This study was conducted with the aim of determining the prevalence of preconception care in Isfahan among women who gave birth and showed that less than half of all women have received care before pregnancy. Receiving this care had a vital relation with income amount, education, wanted pregnancy, and the number of pregnancy and previous childbirth. Isfahan in terms of social status is located in the center of Iran and in terms of hygienic is in a relatively good status compared to other cities; this study was performed on all six floors of hospital in this city in a way that samples are representative of the entire population of the region. According to the results, more than half of the population of women who gave birth had not received preconception care. This amount in various studies has been investigated so that, in a study in the city of Kalat (Iran), 118 married women under the guise of health centers, 53.4%[13] and in another study between 1892 women who gave birth and 320 pregnant women for the first trimester was 58%.[15] Our study is similar with both cases and represents approximately the same level of health in the regions. On the other hand, the lack of care in America was two-thirds of cases,[16] it was 88.4% in a study in Semnan (Iran) in 2002,[12] and it was 72.3% in the case of maternal death reported in Isfahan (Iran) in 2006–2011,[14] that amount obtained in this study is less than the aforementioned studies. In another study, in China, this rate has been reported to be 35.8%.[11] The prevalence observed in this study is more than the above case which is probably due to the differences in the research community. The results indicated that there is a wide gap between the received preconception care and the standard. Given the importance of preconception care,[17] health planners need to pay more attention to it. The following points are provided to advance these services: Training preconception care to health personnel, also the need to do it, sensitizing and raising awareness among families in doing it by health systems and mass media in different ways. According to this study, there was a significant relationship between higher education level and preconception care. The results of the study showed that women who received preconception care were more likely to have higher education.[11,18] In this context, our study is consistent with it. Justifying this conclusion, we can say that probably the increase in the level of female education led to a greater awareness of the importance of health services thus had more referrals. In our study, there was a positive relationship between income and preconception care. A study in this regard points out the matter that participants who received preconception care had a higher income.[18] To justify this issue, it can be cited that the level of family income has a positive impact on preconception care, so it is necessary for the families with low economic level to be offered free and semi-free services and government agencies and insurance companies are active. In our research, there was a significant relationship between wanted pregnancy and receiving preconception care.

Table 1: Correlation between individual characteristics and preconception care

Individual characteristics	Receive preconception care, *n* (%)		Total, *n* (%)	χ^2 (*P*)
	Yes 335 (47.7)	No 367 (52.3)		
Female job				
Housekeeper	281 (83.9)	324 (88.3)	702 (100)	0.07
Employed	48 (14.3)	33 (9)		
Other cases	6 (1.8)	10 (2.7)		
Male job				
Self-employed	229 (68.3)	267 (72.7)	702 (100)	0.367
Governmental	86 (25.7)	78 (21.2)		
Other cases	20 (6)	22 (6)		
Income ($)				
Less 285	160 (47.8)	220 (60)	702 (100)	0.003
285-571	156 (46.6)	129 (35.1)		
571-857	14 (4.1)	7 (4.6)		
More 857	5 (1.5)	1 (0.3)		
Education				
Illiterate	6 (1.8)	15 (4.1)	702 (100)	0.001
High school	33 (9.9)	63 (17.2)		
Diploma	128 (38.2)	151 (41.1)		
Graduate	168 (50.1)	138 (37.6)		
Location				
Village	24 (7.2)	18 (4.9)	702 (100)	0.265
City	311 (92.8)	349 (95.1)		
Wanted or unwanted pregnancy				
Wanted	333 (99.4)	208 (56.7)	702 (100)	000
Un wanted	2 (0.6)	159 (43.3)		

Table 2: Correlation between reproductive characteristics and preconception care

Individual characteristics	Mean (SD)			Independent sample *t*-test (*P*)
	Preconception care receive		Total, *n* (%)	
	Yes 335 (47.7)	No 367 (52.3)		
Number of previous pregnancies	00.69 (0.86)	11.13 (1.08)	702 (100)	0.000
Number of previous births	00.43 (0.59)	00.86 (0.82)	702 (100)	0.000
Number of abortion	00.26 (0.65)	00.25 (0.6)	702 (100)	0.848
Space between pregnancies (month)	64.21 (45.10	59.56 (44.28)	406 (100)	0.306

Table 3: Prevalence of causes of lack of preconception care in women

Causes of lack of preconception care	*n* (%)
Unplanned pregnancy	237 (64.6)
Unawareness of the need to visit preconception	148 (40.3)
Lack of knowledge in providing preconception care in health centers	58 (15.8)
Outdoor job in women	16 (4.4)
Long distance to preconception care centers	13 (3.5)
Care of other children	10 (2.7)
Crowded public facilities	10 (2.7)
Financial problems	9 (2.5)
Past negative experiences in relation to public or private health centers	3 (0.8)
Distrust to the knowledge and skills of provider in preconception centers	2 (0.5)

In fact, there was more preconception care in mothers with wanted pregnancy. The study results showed that 21.8% of women with wanted pregnancies and 8.3% of the mothers with unwanted pregnancies visited counseling before pregnancy[19] that in this respect in which the amount of preconception care during the wanted pregnancy was more than unwanted pregnancy, our study is consistent with the mentioned study. In the present study, there was a negative correlation between the number of pregnancies and previous delivery with receiving preconception care. In justifying this problem, it can be said that the reduction of susceptibility in multiparous women about preconception care is due to not having enough time, etc., Hence, it is necessary for the multiparous women to be more sensitive about this care. This study showed that there was no statistically significant relationship between where you live and receive care before pregnancy. The results of a study in this regard demonstrated that women who lived in rural areas have received more prepregnancy care.[11,13] Results of the present study differ from both above studies. The reason for this may be that the majority of participants in our study were urban; there was not any significant relationship between other individuality and the receiving preconception care.

Another part of the results of this study showed that the major reason for the lack of checkup for preconception care was unplanned pregnancy and then the lack of awareness to visit before pregnancy. The results of a study showed that the most important factor of the lack of folic acid use before pregnancy was due to the lack of planning pregnancy and the lack of awareness of the need for folic acid.[20] Another study has stated the causes of lack of prenatal care as follows: social and family affairs (family problems, not having enough time, avoiding visiting the center, unwanted pregnancy, not giving permission to his wife, distrust of doctors, and midwives), lack of awareness to the care, and economy.[21] The results of the present study are similar to these two studies. According to these points, notifying women of reproductive age in the period before and immediately after the marriage and contraception without any plan can increase preconception care. Other results are significant in this regard.

It should be noted that this study is the first specific prevalence survey and epidemiological pattern which is present in preconception care topic in research environment. This study could be the basis for future studies on this topic. In addition to this research being cross-sectional, other limitations of the present study were the lack of access to all women of different socioeconomic groups at the beginning of pregnancy to check the status of preconception care. Accordingly, labored women were selected as the study population. It is recommended to carry a similar longitudinal study on women who are planning to become pregnant.

Conclusions

According to results of the current study, the quantity of care before pregnancy is not desirable. Due to the importance of this matter as the main health priorities, informing and sensitizing women of reproductive age and their families to receive care before pregnancy is crucial in many ways. Attention to the causes of not receiving this care and modifying them can lead to an increase in receiving them in possible cases.

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Conflicts of interest

There are no conflicts of interest.

References

1. GaryCuningham F, Leveno KJ, Bloom SL, Spong CY, Dashe JS, HoffmanBL, *et al*. Text Book of Williams Obstetrics. 24th ed. American: McGraw Hill; 2014. p. 156.
2. Wildschut HI, van Vliet-Lachotzki EH, Boon BM, Lie Fong S, Landkroon AP, Steegers EA. Preconception care: An essential part of the care for mother and child. Ned Tijdschr Geneeskd 2006;150:1326-30.

3. Dean SV, Mason E, Howson CP, Lassi ZS, Imam AM, Bhutta ZA. Born too soon: Care before and between pregnancy to prevent preterm births: From evidence to action. Reprod Health 2013;10 Suppl 1:S3.
4. Lassi ZS, Imam AM, Dean SV, Bhutta ZA. Preconception care: Caffeine, smoking, alcohol, drugs and other environmental chemical/radiation exposure. Reprod Health 2014;11 Suppl 3:S6.
5. Hedderson MM, Darbinian JA, Sridhar SB, Quesenberry CP. Prepregnancy cardiometabolic and inflammatory risk factors and subsequent risk of hypertensive disorders of pregnancy. Am J Obstet Gynecol 2012;207:68.e1-9.
6. World Health Organization. Meeting to Develop a Global Consensus on Preconception Care to Reduce Maternal and Childhood Mortality and Morbidity. Headquarters, Geneva: World Health Organization; 2012. p. 54. Available from: http://www.apps.who.int/iris/bitstream/10665/78067/1/9789241505000_eng.pdf. [Last accessed on 2016 Jul 12].
7. Morino S, Ishihara M, Nishiguchi S, Fukutani N, Adachi D, Tashiro Y, *et al*. The association between pregnancy-related discomforts and pre-pregnancy body mass index in Japanese women. J Womens Health Care 2015;4:1.
8. Dean SV, Lassi ZS, Imam AM, Bhutta ZA. Preconception care: Nutritional risks and interventions. Reprod Health 2014;11 Suppl 3:S3.
9. Kachoria R, Oza-Frank R. Receipt of preconception care among women with prepregnancy and gestational diabetes. Diabet Med 2014;31:1690-5.
10. Coffey K, Shorten A. The challenge of preconception counseling: Using reproductive life planning in primary care. J Am Assoc Nurse Pract 2014;26:255-62.
11. Liu Y, Liu J, Ye R, Li Z. Association of preconceptional health care utilization and early initiation of prenatal care. J Perinatol 2006;26:409-13.
12. Ansari Niaki M, Izadi Sabet F. The Quality of prenatal care in health therapeutic centers according to existing care standards. J Semnan Univ Med Sci 2003;5:81-86.
13. Bayrami R, Thaghipour A, Ebrahimipoor H, Moradi S. Investigating women's lifestyle during the preconception period in Kalat County, Iran. JMRH 2014;2:128-35.
14. Zarean E, Bina R. Investigate the causes of maternal morbidity during 2006-2011 in Isfahan. J Health Syst Res 2014; Health Education Supplement:2056-63.
15. Mastroiacovo P, Nilsen RM, Leoncini E, Gastaldi P, Allegri V, Boiani A, *et al.* Prevalence of maternal preconception risk factors: An Italian multicenter survey. Ital J Pediatr 2014;40:91.
16. Witt K, Huntington MK. Preconception counseling. S D Med 2016;69:103-7.
17. Elsinga J, de Jong-Potjer LC, van der Pal-de Bruin KM, le Cessie S, Assendelft WJ, Buitendijk SE. The effect of preconception counselling on lifestyle and other behaviour before and during pregnancy. Womens Health Issues 2008;18 6 Suppl:S117-25.
18. Ding Y, Li XT, Xie F, Yang YL. Survey on the implementation of preconception care in Shanghai, China. Paediatr Perinat Epidemiol 2015;29:492-500.
19. Pourheydari M, Khosravi A, Shamaeian Razavi N, Hamidzada A. A comparison of prenatal maternal care between wanted and unwanted pregnancies. Knowl Health 2011;5:7-13.
20. Bixenstine PJ, Cheng TL, Cheng D, Connor KA, Mistry KB. Association between preconception counseling and folic acid supplementation before pregnancy and reasons for non-use. Matern Child Health J 2015;19:1974-84.
21. Hakary D, Mohammadzade R, Velayaty A, Bolourian M. The barriers of prenatal care and its relationship with pregnancy outcome among women visited to Tabriz hospitals in 2009. Med Sci J Islam Azad Univ Tehran Med Branch 2011;21:206-13.