ORIGINAL ARTICLE

The Adaptation Rate of Preconception Care with the National Standard at Ahvaz Health Care Centers in 2014

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Abstract

Background: Preconception counseling is preventive medicine in obstetrics. Preconception care creates an opportunity for examining conditions before pregnancy improving pregnancy outcome. This study was conducted with the aim of determining the adaptation rate of preconception care with the national standards at health care centers, Ahvaz, 2014.

Methods: This descriptive study was conducted at health care centers in 2013 selected randomly. The samples of the study included 385 women at their fertility age who came to receive health services. Researcher observed simultaneous care and filled the related forms. The data were analyzed using the descriptive statistic SPSS version 19.

Results: Results showed that the presented preconception care as to the case history section was weak for 14.3% of the cases, medium for 42.3% and desirable for the remainders (43.4%). In addition, presented preconception care at test's section was weak for 38.4% of the cases, medium for 50.1% and desirable for 11.4%. Presented preconception care at exam's section was weak in 82.3%, medium in 16.9%, and desirable in 0.8%. Presented preconception care at immunization's section was weak in 42.3% of cases, medium in 43.1%, and desirable in 14.5%. As to resented preconception care at education's section, it was weak in 81.6% of the cases, medium in 13.8%, and desirable adaptation with the standard guidelines of country in 4.7%. . 84.9% of women were completely satisfied with centers, 11.9% relatively satisfied, and just 3.3% were dissatisfied.

Conclusion: Presented preconception care at health care centers is not in the same line with the national standard; thus, a more accurate control is needed.

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Introduction

Pre-pregnancy care is considered as the services assessing and reducing the pregnancy risks through providing medical care and mental support.[1] Maternal mortality ratio is one of the main causes of mortality rate in women because of pregnancy and delivery which cannot be simply overlooked. Unwanted, hazardous pregnancies, non-enjoyment of preconception cares and non-immune delivery are among the main causes which can be prevented.[2] Also, preconception care showed promising results related to reducing mother and infant mortality and reducing other high-risk factors for poor birth outcomes.[3] In this manner, the importance of the existence of services under the title of preconception care becomes apparent, an important factor in reduction

of neonate and maternal mortality ratio, increase in the physical and physiological health, and assurance about the normal progress pregnancy.[2]

Preconception care is a set of caring services concerned with evaluation of existing hazards in the way of pregnancy and conception; presenting instructions and taking diagnostic and therapeutic measures and pharmaceutical interventions are attempts in improvement of the women's health.[4]

Preconception care is defined by the Centers for Diseases Control and Prevention (CDC) as, "a set of interventions that aim to identify and modify biomedical, behavioral, and social risks to a woman's health or pregnancy outcome through prevention and management".[5] Unfortunately, millions of women in the world do not have access to pre-pregnancy, pregnancy health services and childbirth with suitable quality, especially poor, illiterate women or those in deprived areas.[6] Mother's level of education is among the effective factors in health care because it makes it possible for her to study instructional books and this will lead to a better understanding of the points and issues as regards "care".[7]

One of the best solutions for removing pregnancy problems and the birth of a healthy child is planning for pregnancy.[4] Different studies have shown the positive impact of preconception care on the neonate's Apgar Scale, premature delivery, the weight of the newborn,[8, 9] reducing the neonate and maternal hazards,[10] controlling blood sugar in women with diabetes,[11] and reducing the stillbirth.[12] In other studies, the effects of identifying hazardous factors before pregnancy such as consuming alcohol, narcotics and drugs,[13] and the probability of undergoing X-ray on pregnancy have been shown.[14]

One of the United Nations' Millennium Development Goals is to reduce the maternal mortality rate by 75% by 2015,[15] so to achieve this goal, the maternal mortality ratio (MMR) should decrease about 5.5 percent each year.[16] WHO also emphasizes the effect of high quality preconception care on reducing maternal mortality rate.[17] There are many diseases and serious and dangerous problems which can be identified and treated before pregnancy with minimum wages and their effects on pregnancy can be prevented.[18] Also, all the studies carried out in connection with such cares reveal the fact that counseling before pregnancy is of utmost importance causing a person to begin her pregnancy with much better and improved conditions and remove the dangers leading to pregnancy side effects in pre-pregnancy period. This will reduce future problems for her health and her new-born baby.[6] However, despite the necessity and importance of such cares and their effects on pregnancy on mother and her fetus, so far no study has fully addressed and attempted a full investigation of pre-pregnancy care.

Unfortunately, in many cases, despite the topographical and financial accessibility to such services, the quality of the services is not satisfactory.[19] As an example, according to Izedi and colleagues, in a study with the aim of specifying the effect of improving the quality of preconception and conception care, on reducing stillborn babies and neonatal death in the Farooj town, the most important cause of neonatal death and stillborn babies in 2008 was due to pre-term delivery in high risk pregnant women. Also, the rate of preconception care was reported to be very minimal in the past. This became very noticeable after the administration of preconception care leading to a 60 per cent reduction in stillborn babies and a 26 percent reduction in neonatal death.[20]

Today, the index of maternal death, due to delivery and pregnancy side effects, is one of the most important indices of development in society and one of the commitments of the countries has been to reduce it. For this reason, in 1990, the countries of the world have made an attempt to reduce maternal death up to 50 percent. The accessibility of women to health care in preconception, conception and post-delivery period will pave the way for reducing many cases of maternal and neonatal death. This is an indication that the system of presenting health care services should be boosted for the purpose of providing high quality care at any time or place the women need.[21] Based on the instructions of national standard, the cases needing to be heeded at the time of offering pre-pregnancy cares include case history, clinical examination, tests, sonography, immunization, intensive care, instruction, and recommendation.[9]

Quality care is the way of presenting care compared with founded standards,[22] by means of which, "standardizing" can be defined as a general concept, establishing the correct rules and regulations for making similar affairs uniform and unifying the specifications in any method and a practice guaranteeing the social, technical and economic resources.[23]

Unfortunately, the weakness of service quality is one of the most common causes of not being inclined to using health services in women[6] in such a way that Jahani Shuorab and colleagues, in a descriptive study carried out with the aim of investigating the process of care before pregnancy based on Donabedian model (evaluating the quality of health care) at health care centers in Mashhad, reported that considering the average level of the quality of preconception care, increasing the number of health care providers compared to the population at health care centers, general sensitization in the area of preconception care and more information science are more tangibly felt.[24]

With respect to the fact that obeying the standards will play a key role in increasing the efficiency of health care centers,[25] therefore, the present study was conducted with the aim of investigating the adaptation of presented preconception care in Ahvaz health care centers with the national standards. The functional aim of this study is that, by determining the adaptation rate of the offered pre-pregnancy care with national standards, the existing identified inadequacies and suggestions in eliminating the problems can be put at the disposal of related organizations.

Patients and Methods

This is a descriptive study conducted in 2014 at selected health care centers. Through a cluster method, five centers from the east (number 1, 2, 4, 9, 10) and five from the west of Ahvaz (number 3, 4, 5, 6, 8) were selected. The centers were randomly chosen. Then, in ratio of the population under the cover of any center, the number of the samples particular to a center were calculated and 385 persons were selected out of 10 designated centers in such a way that the more the number of people at a center, the more the number of samples from that center; as a result, more samples would be collected from a particular center. The sample size was determined based on the obtained results from the pilot (30 persons) and a 95% level of confidence, d=0.05 and P=0.5 amounting to 385 people.

The samples participated in the study based on accessible sampling method. The inclusion criterion included those women who had referred to health care centers and for whom preconception care form had been filled in. The exclusion criterion included those who had used permanent contraceptive methods, women who had referred to the center only for cases such as blood pressure control, and those who had a file at a selected health care center but, at the time of the study, referred to the center only for examining the results of the test.

The researcher (midwife), having obtained of the informed consent from the samples, filled in the demographic information form by conducting an interview and simultaneously observing the presented cares and their registration in the checklist with verified reliability and validity. To determine the validity of the questionnaire, ten faculty members at Ahvaz obstetrics and nursing faculty were asked to comment. After the necessary revisions, the final version was prepared. Also, to determine the reliability, the simultaneous evaluation method was used. So, the researcher and one of the colleagues (obstetrician) recorded the results obtained through observation of pre-pregnancy care for women who were qualified for entering this study; then, the reliability of the checklist was calculated using the correlation coefficient 85%.

The mentioned checklist was designed based on national standards and all the cases at the time of presenting preconception care in different areas including history, examination, laboratory tests and sonography, immunization, feedback/intensive care and instruction and recommendations were investigated. It is necessary to mention that sampling method was blind through coordination with those in charge of the clinic. The scoring method was used for investigating the rate of adaptation and each checklist was divided into different parts. By considering its total subgroups, we calculated the highest expected score according to national standards. Then, it was divided into three parts of adaptation: good, medium and weak. For example, if a part consisted of 12 questions and it were done in a correct way, then the score (1) would belong to it. If the intended action were carried out without considering standard principles, then the score (0.5) would be given. The score (0) was given if the intended actions were not done. In this manner, the highest expected score was 12 which was divided into three equal parts and the obtained score 0 to 4 was considered for a weak adaptation, 5 to 8 for a medium adaptation, and the scores 9 to 12 for a desirable adaptation. Then, for all the 385 persons, the degree of adaptation was calculated and their ratios were obtained. These calculations were conducted for all the cases which were under investigation.

The data were analyzed in SPSS statistical software, version 19, using descriptive statistics including mean, standard deviation, and ratio.

Results

In this study, 385 women in their reproductive age with an average age of27.13±5.152 were examined. Based on the obtained results, 344 of them (89.4%) were housewives and 137 (35.6%) had a high school diploma. The demographic information and the midwifery history of the research units are presented in Tables 1 and 2.

Among the personnel in charge of preconception care services, 90 of them (23.4%) had an associate degree in obstetrics and 134 (34.8%) had a bachelor's degree. The remaining had an associate or bachelor degree in health. The mean age of health care providers, their working record, type and the academic degree and their employment situation are presented in Table 3.

Based on the results of the study, most women (91.9%) did not intend to become pregnant up to the forthcoming year. The women, in the preconception counseling sessions in the due time in 100% of the cases, were not trained by the health care providers. Also, the results showed that only four women (1%) had referred to the center with the aim of receiving preconception care. The results of the study as to the

Table 1: Descriptive statistics of women's demographic information

Variable	Mean±SD	Median
Age (year)	27.13±5.152	27
Family income	872333/66±715541/564	650,000
Variable	**Number**	**Percent**
Education: illiterate	10	2.6
Primary school	33	8.6
Guidance school	88	22.9
High school	52	13.5
High school diploma	137	35.6
University degree	65	16.9
Occupation status: housewife	344	89.4
Employee	41	10.6

Table 2: The obstetrics features of the women under the study

Variable	Mean±SD	Median
Number of pregnancies	2.26±1.539	2
Number of abortions	0.29±0.598	0
Number of children	1.96±1.238	2
variable	**Number**	**Percent**
Existing prevention method: condom	92	23.9
Pill	167	43.4
IUD	61	15.8
Ampoule	23	6
Coitus interruption	42	10.9
Delivery type: natural	135	35.1
Cesarean	250	64.9
Place of delivery: hospital	384	99.7
Home	1	0.3

Table 3: The descriptive statistics of some health care providers working at the selected Ahvaz Health Care Centers

Variable	Mean±SD	Median
age of health careers	37.73±4.969	37
total years of service history	13.25±4.798	13
Variable	**Number**	**Percent**
Type and academic degree: Associate in obstetrics	90	23.4
Bachelor in obstetrics	134	34.8
Associate in health	60	15.6
Bachelor in health	101	26.2
Employment situation: contractual	21	5.5
Government employee	364	94.5

rate of people's satisfaction with the way health care workers treat patients and the care delivered revealed that 89.9% and 84.9% of the women were completely satisfied (Table 4).

The results of the study of the adaptation rate of preconception cares as to the case history based on national standard instruction showed that the adaptation rate was weak in 14.3%, medium in 42.3% and desirable in 43.4% of the cases (Figure 1). In 44.4% of the cases, necessary measures for cases in need of intensive care were taken based on the standard principles.

The results of study investigating the percentage of adaptation of the preconception care as to laboratory tests and sonography using the standard practice in the country showed that the adaptation rate was weak in 38.4%, medium in 50.1% and desirable only in 11.4% of the cases (Figure 2).

Also, in this section, necessary measures for cases in need of intensive care were taken based on the standard principles in 33.8% of the cases.

The results of another study on the percentage of adaptation of the preconception care in the examination section showed that the condition of care delivered is not good in this section because most parts of this section were not filled in completely. The adaptation rate was weak in 82.3%, medium in 16.9% and desirable only in 0.8% of the cases (Figure 3). Also, in 3.6% of the cases, the necessary measures were taken in the case of intensive care and referral to the center.

As to immunization with the national standard

Table 4: The participants' satisfaction rate as to the treatment and care delivered

Variable	A complete yes	A relative yes	no
The client's satisfaction with the way they are treated by the personnel	89.9%	8.6%	1.6%
The client's satisfaction with the care she/he has received	84.9%	11.9%	3.3%

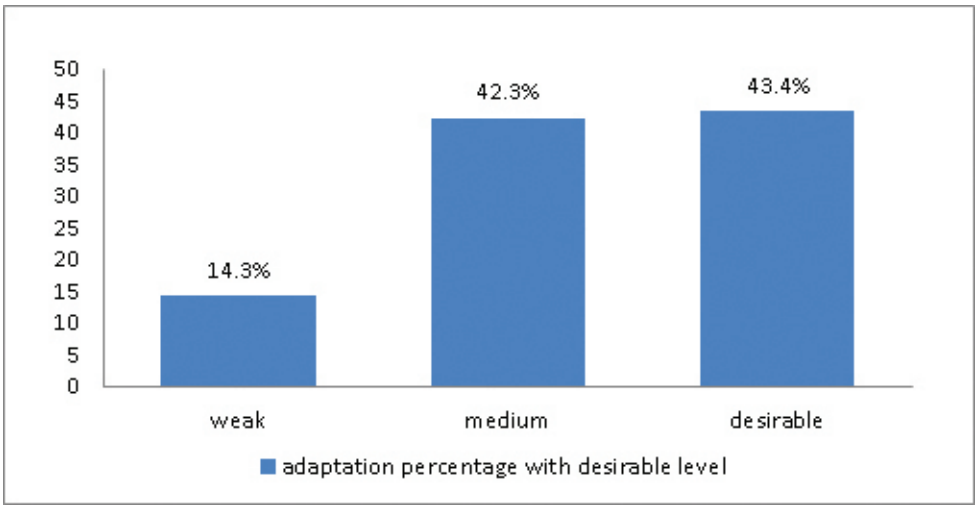

Figure 1: This figure shows the frequency distribution of adaptation level in the presented history of preconception care.

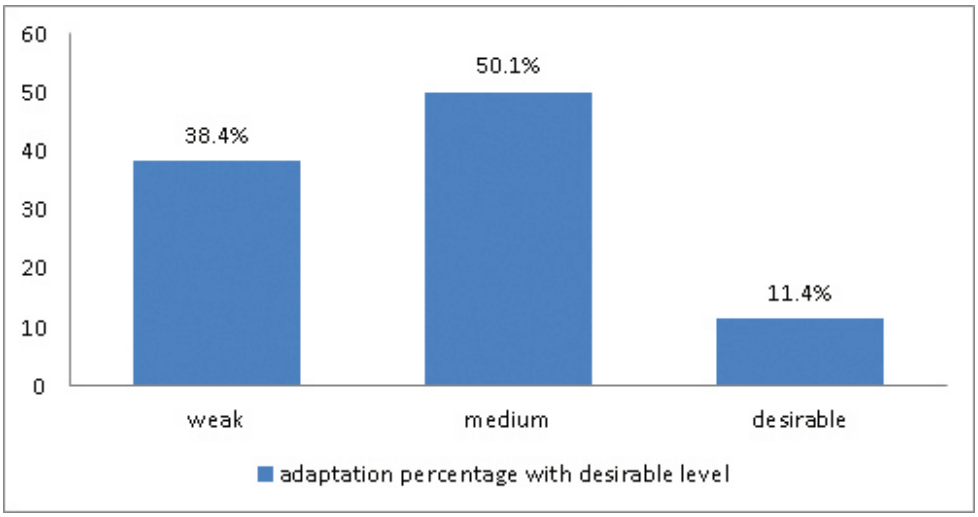

Figure 2: This figure shows the frequency distribution of adaptation level in the section related to preconception care laboratory tests and sonography delivered at selected Ahvaz health care centers.

instruction, it was shown that the adaptation rate was weak in 42.3%, medium in 43.1% and desirable in 14.5% of the cases (Figure 4). In 43.9% of the cases, the necessary referrals were carried out by observing the standard principles.

The results also showed that the necessary measures were taken in 21% of the cases with complete observance of the standard principles and 42.5% cases did not observe them. Also, in 36.4% of the cases, no measures were taken (Figure 5).

The results of the study investigating the adaptation rate of presented preconception cares in the section related to instruction and recommendation based on the national standards showed that the adaptation rate was weak in 81.6%, medium in 13.8% and desirable in 4.7% of the cases (Figure 6). Based on the results, the health care providers in this section enjoyed a weak performance. As an example, no instruction was provided in 100% of the cases for the participants concerning tooth and mouth health or information as to the valid time of preconception counseling

Discussion

One of the main aims of health care is promotion of

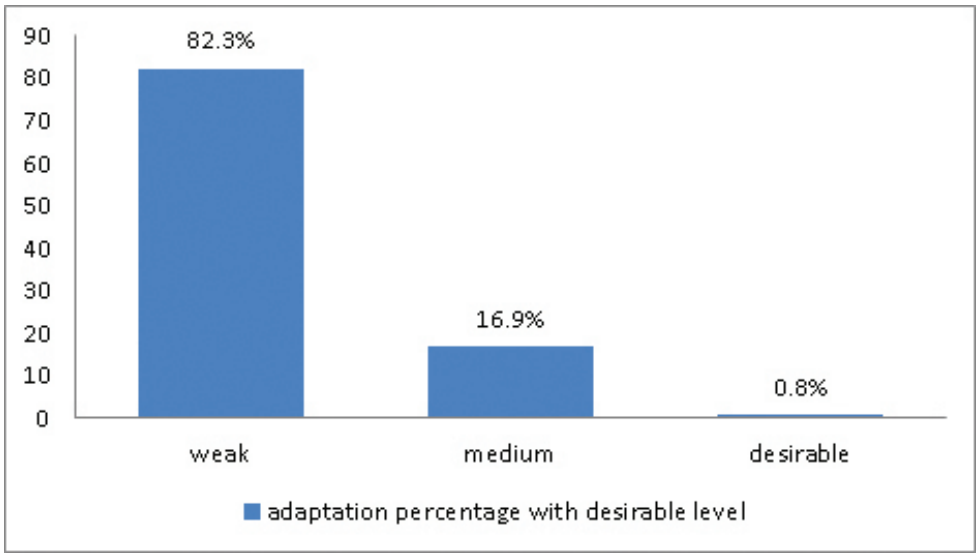

Figure 3: This figure shows the frequency distribution of adaptation level as to preconception care examination delivered at selected Ahvaz health care centers.

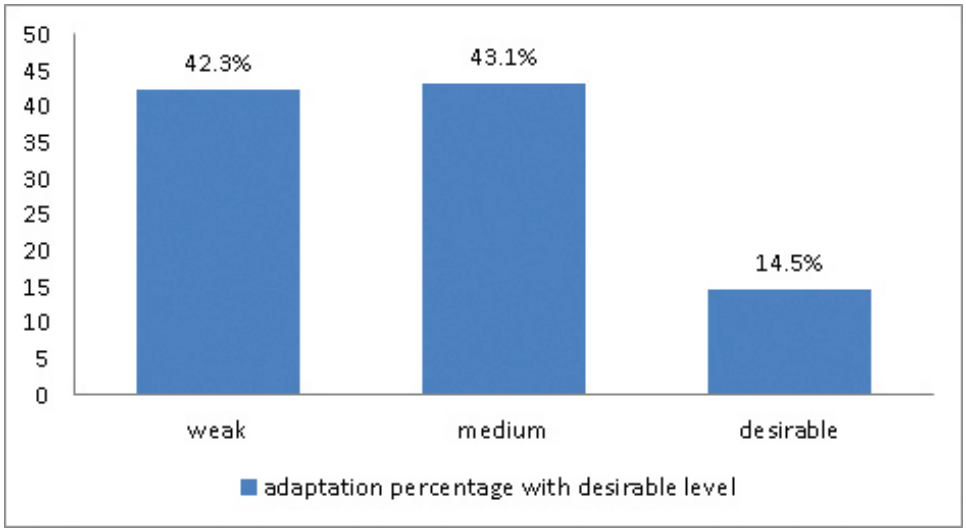

Figure 4: This figure shows the frequency distribution of adaptation level as to preconception care immunization delivered at selected Ahvaz health care centers.

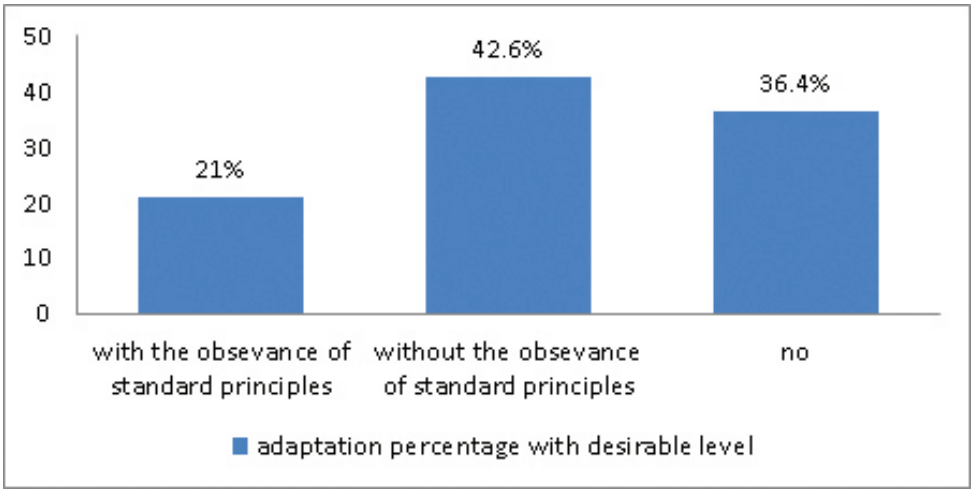

Figure 5: This figure shows the frequency distribution of adaptation level as to preconception care feedback/intensive care delivered at selected Ahvaz health care centers.

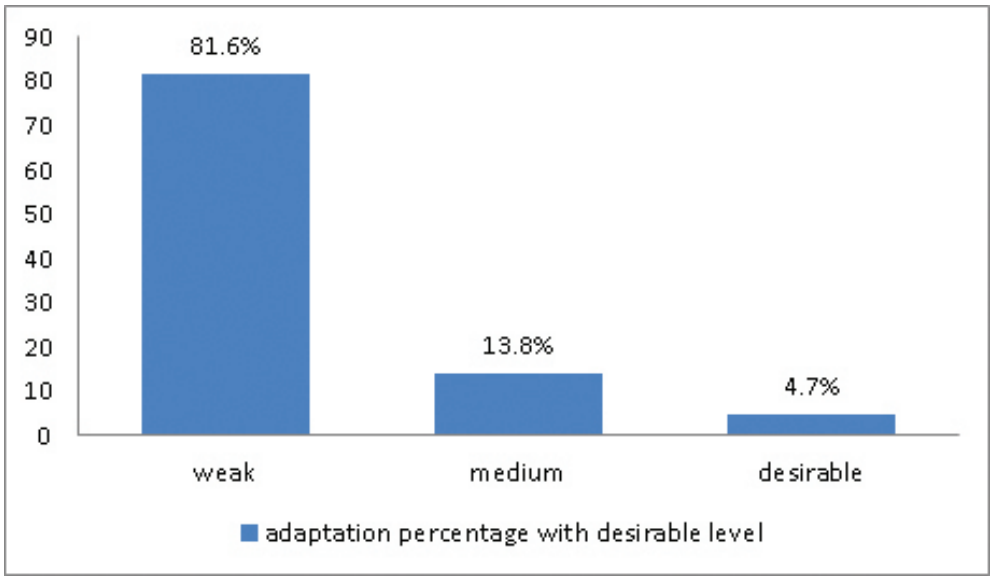

Figure 6: This figure shows the frequency distribution of adaptation level as to preconception care instruction and recommendation provided at selected Ahvaz health care centers.

family health, and counseling before pregnancy is, in fact, the investigation and control of all the influential factors on pregnancy results which can lead to the choice of an appropriate caring method for women and surviving different stages of pregnancy and delivery with no risk.[24] Based on the results of the present study, the adaptation rate of preconception care with the standard of country ranged from a weak to a medium level at Ahvaz health care centers. Jahani Shourab and colleagues, in a study on the process of preconception care based on Donabedian model[24] and Esfandyarinejad and colleagues, in a study investigating the adaptation rate of pregnancy care period with the standard of the country,[19] have referred to the poor quality of the cares provided. Nekooei and colleagues, emphasized the poor quality of cares in their study investigating the experiences of health care providers in preconception care in diabetic women. According to them, one of the main influential factors is the pitfall in instructing health care providers.[2] In contrast, a study by Oladapu and colleagues, reported pre-pregnancy cares as desirable. In the study by Oladapu, two-thirds of the necessary information was given to women; however, in this study, such instructions were not provided seriously. The reason might be the fact that the health care providers did their utmost in delivering pregnancy cares with maximum quality and conducted pre-pregnancy care more to increase the quantitative growth of cares. Another point is that pre-pregnancy care has not been given appropriate attention, even by the personnel at health care centers.[26] Preconception care creates an opportunity for monitoring conditions before pregnancy which, potentially, causes an improvement in the stages of pregnancy. However, such cares are not effective unless presented with desirable qualities and, by offering prevention services, high risk factors can be identified; also, by taking necessary measures, the women can be informed of the hazardous conditions. Comparing the quality and quantity of the delivered services in the fertility wards in our country with many developed countries shows that the structure and the type of such services differ significantly. The data from the care system of maternal death show that the quality of the services offered are inconsistent in different areas of the country.[6] Based on the results of the study, in all sections of the preconception care which included case history, instruction and recommendation, tests, sonography, examination, immunization and feedback, the adaptation level with the standard and quality is at a weak to medium level. Based on the present study, the general adaptation rate of pre-pregnancy cares at Ahvaz health care centers was at a weak level in 55.1% of the cases.

Similar to this study, Jahani Shourab and colleagues, studying the preconception care process based on Donabedain model, showed that at Mashhad health care centers such cares lie at a medium level in 100% of the cases.[24] One of the reasons for poor quality of the services is shortage of midwifery personnel. The results of the present study showed that, at selected Ahvaz health care centers, 34.8% of the services are provided by midwifery specialists. But, unlike this study, at Mashhad health care centers this rate is 92.3%. Also, another reason for poor preconception cares is the lack of necessary instructions concerning such services and lack of awareness about their effects and importance on the health of both mother and the neonate. Shahidi and colleagues, have shown the effect of health care providers' lack of awareness on the reduction of the quality of care.[4] Based on the results of the present study, the measures taken as to "instruction and recommendation" were at a desirable level only in 4.7% of the cases. One of the main reasons is the

health care providers' lack of information concerning mental health and sexual hygiene. Another reason is that, perhaps, the position and the importance of preconception care have not properly been realized by people. The present study showed that only 1% of the women under the study had personally referred to a center for receiving preconception care.

One of the main limitations of the study was a sort of insincerity in the delivery of preconception cares. After the presentation of the reference letter to a health care center and the personnel's awareness of the aim of the study, the personnel could provide the preconception care based on the national standard instruction while, on a routine basis, they did not do so. Therefore, through coordination with those in charge of the hospital and explaining the importance of the study, sampling was done in a blind method.

Conclusion

With respect to the obtained results out of this study, it was indicated that preconception care is, in most of the cases, not based on national standards; therefore, there is a need to further evaluation and supervision of the way preconception care and completion of the relevant forms at Ahvaz health care centers are provided.

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Conflict of interest: None declared

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