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Research Article

**THE RELATIONSHIP BETWEEN PERSONALITY TYPE WITH AN  
ATTITUDE TOWARD CHILDBIRTH AND THE CHOICE OF  
DELIVERY METHOD IN PREGNANT WOMEN**Azam Sinaei<sup>1</sup>, Zahra Abbaspoor<sup>2\*</sup>, Seyyed Esmaeil Hashemi<sup>3</sup>, Nahid Javadifar<sup>2</sup>

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**Abstract:**

**Introduction:** Birth method selection is one of the most important choices of a woman's life. As a result, a study of the factors affecting this choice is essential. In recent years, the effect of different psychological factors on the attitude of childbirth has been considered. One of the most important of these factors is mother's personality traits. Based on the division of Friedman and Rosenman, people fall into two groups of personality types A and B, each with specific characteristics. So this research aimed to determine the relationship between personality type with attitude to childbirth and the choice of delivery method.

**Method:** This prospective cohort study was performed in 2016 on three hundred and twenty pregnant women referring to selected health care centers of Ahvaz that were selected through simple non-randomly sampling. The data collection tools were "demographic information", "Friedman & Rosenman personality trait" and "Attitude to the choice of delivery method". Data were analyzed using Chi-square, independent t-test and Pearson correlation coefficient statistical tests, and considering significance level  $p < 0.05$ .

**Results:** The average score of attitude to birth method selection in persons with type 'A' were 158.77 and with the type 'B' was 159.37. The most selected birth methods in type A [%88.0] and type B [%87.1] personality groups were normal delivered. There was no statistically significant relationship between personality type with attitude to childbirth [ $p=0.45$ ] and birth method selection [ $p=0.81$ ].

**Conclusion:** There was no significant relationship between personality type with attitude to childbirth and choice of delivery method. However, definitive conclusions in this field require more studies.

**Key words:** Birth method selection, personality type, attitude to childbirth

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**INTRODUCTION:**

Childbirth is a multidimensional process with physical, emotional, social, physiological, cultural and psychological dimensions and is considered as a critical experience in the woman's life [1]. In many developing countries, the complications of pregnancy and childbirth are the main cause of the death of women in childbearing ages [2]. The World Health Organization has identified primary measures to reduce maternal mortality, one of the themes is the protection against unnecessary medical technology, including cesarean section [3]. Childbirth is a natural phenomenon without the need of intervention, and a cesarean section is performed only in cases of compromising the life of the mother and the fetus [4]. According to the World Health Organization [WHO], in 2007-2008, the rate of cesarean section was 27 percent in 24 countries [5]. According to this organization's report in 2010, the rate of cesarean delivery in Iran in 2008 was 41.9% of all deliveries [6]. Meanwhile, the WHO's recommendation for the rate of cesarean section was up to 15% till 2010.

There are many reasons for increment of the amount of cesarean section, such as cesarean section at the request of mothers [7]. One of the most important reasons for cesarean selection is mother's fear of childbirth or tokophobia. Maternity may be accompanied by other forms of fear such as fear of pain or death [8]. The fear and attitude of women in childbirth can affect the care they receive during pregnancy [9]. Attitude means a positive and negative state toward a subject. The combination of cognitions, feelings, and readiness to act toward a certain thing is called the attitude of the person toward that [10].

The set of psychological factors, economic, social and cultural norms, sexual beliefs, ensuring the safety and health of the mother and the newborn, the trust in operator of childbirth and the preparedness and personal capacities, from the person's attitude to the type of delivery [11, 12]. According to Louise Silverton's theory, natural birth, pain and fear with it can play a major role in women's decision making for choosing a type of delivery [13]. One of the reasons for fear of childbirth is maternal and mental characteristics, intolerance to pain and concern about undesirable physical complications [14].

Some of the personality traits of the mother play a role in the occurrence and the exacerbation of childbirth fear. Friedman and Rosenman introduced two personality types 'A' and 'B'. Personality type means specific physical and mental characteristics that individualize people from each other. Persons with the same personality type have similar behaviors and thoughts. Persons with personality type 'A' are highly competitive, intolerant, aggressive, distressed and uncomfortable. Type 'B'

people have a character opposite to Type 'A'. They are less angry, more realistic and have a quiet nerves, accept their mistakes and never worry about time [15]. Many scholars believe that the existence of individual differences and different personality traits distinguishes people's response to situations and pressures [16]. One of these situations is the delivery for pregnant mothers. In reviewing the relationship between personality and childbirth fears by Raiding *et al.* [2007], it was found that there is a greater fear in solitary people with low flexibility [17]. There is also a correlation between personality types and labor pain, so that principle personality types and lack of flexibility even feel more painful than those with disturbances in thinking and verbal communication [18]. It has recently been noted that Type 'A' people tend to be more likely to become infertile, which in fact, such characteristics is visible among women who are afraid of childbirth [19]. Persons with personality type 'A' are often anxious. And it is believed that anxious women are more likely to be afraid of childbirth [20]. Mothers who are afraid of childbirth have a sense of urgency and compulsion, it is difficult for them to reach peace, they are more likely to be skeptical and experience high stress [21]. For this reason, it is believed that pregnant women with type 'A' are more likely to be afraid of giving birth. So far, no study has been done to examine the relationship between personality type with attitude to childbirth and the choice of delivery method in Iran, but in some studies, other psychological factors affecting the fear of delivery have been investigated. For example, in the study of Laursen *et al.*, it was found that depression exacerbates the fear of childbirth [22]. In another study a significant relationship was found between depression, low self-esteem, marital dissatisfaction and lack of social support with fear of delivery [15]. According to studies, women who have a high concern about childbirth, experience long-term delivery, and mother's fear and anxiety cause multiple problems, including irregular heartbeat patterns and increased chance of cesarean section [23, 24].

In view of the above and due to the lack of studies specially the prospective study on the relationship between personality type and attitude toward childbirth, and also due to the rapid economic growth in Iran, the medicalization of childbirth and the role of factors such as personal, cultural and social norms in increasing the prevalence of cesarean section more than the WHO approved [25], this prospective study was conducted to investigate the relationship between personality type with attitude to childbirth and the choice of delivery method in order to move toward programing and action to reduce effective negative

factors on attitude to natural delivery and finally reducing amount of unnecessary cesarean sections.

#### **MATERIALS AND METHOD:**

The present study was an epidemiologic-analytic, prospective cohort study, which is done with the goal of determining the relationship between personality type with attitude to childbirth and the choice of delivery method in 2016 within 4 months, on 305 pregnant women referring to health centers in Ahvaz city. A classified cluster randomization method was used to select the centers. Thus, first, the city of Ahvaz was divided into two geographical regions of the east and west, and then each of the health centers in each region was considered as a cluster, and two centers were randomly selected from each region using the lottery paper [centers 8 and 17 from the east, and centers 1 and 3 from the western region]. In order to carry out the research, after obtaining a license from research deputy of Ahvaz University of Medical Sciences, the researcher was stationed in selected health centers, and people were selected by her, using convenience non-random sampling method from pregnant women who were referred to selected health centers for prenatal care after reviewing the criteria for entering the research, not having the existing criteria, explaining the goals of research and obtaining written consent. The sample size was calculated as two groups of 160 [totally 320] people based on the ratio estimation formula, which based on the results of previous studies, confidence level considered as 95% and power as 85%.

The criteria for entering the study included: Having ages ranging from 16 to 45 years, the pregnant woman's consent to participate in the study, first pregnancy, and being on the 32nd week of pregnancy. The criteria for exiting the study included: Having a history of mental illness, psychological treatment, and having medical necessity for cesarean delivery.

Because of medical necessity for cesarean section, 15 people were excluded from study after delivery. So, final sample size for personality type 'A' group became 150, and the other group became 155.

In this study, "Friedman & Rosenman personality type" and "attitude toward birth method selection" questionnaires were used to collect data.

**Friedman & Rosenman Personality Type questionnaire:** This questionnaire, which is used to assess the personality type A and B, has 25 questions and the subject answers to each of the questions as yes or no, and its validity is reported in most studies in range from 0.7 to 0.8 [26]. Then the total sum of the points is calculated and interpret

according to the cutoff score 13. This means that persons with a score of 0 to 12 have a personality type B and people with a score of 13 to 25 have a personality type A. In Shakerinia *et al.* research in 2010, the Cronbach's alpha coefficient of the questionnaire was reported to be 89% [27].

**Attitude toward birth method selection questionnaire:** This questionnaire is a tool for determining the factors affecting the choice of delivery method and has 68 items whose scores are based on a Likert scale of 5 points. According to the question type, the scores were divided into three groups: "negative attitude to normal delivery" [score 68 to 113], "neutral attitude" [score 114 to 159], and "positive attitude to normal delivery" [score 160 to 204]. An increment in the score points represents an increment in the tendency to have a normal delivery [28]. This questionnaire was designed by Moghaddam *et al.*, with a Cronbach's alpha coefficient of 0.89 and a correlation coefficient of 0.92 that these numbers indicate internal consistency and high stability of the questionnaire [12].

The process of the study was that after the researcher's refers to the selected health centers, the subjects were explained about the purpose of the study, and after agreeing to cooperate in the study, the questionnaires were given to the subjects, and necessary explanations were given about responding the questions. They also assured the subjects that their information would be completely confidential, and their identity and characteristics would not be reported in the study. The study design was approved by the Ethics Committee of Ahvaz Jundishapur University of medical sciences, with ethics code: 448IR.AJUMS.REC.1395.

After collection, the questionnaires were scored and the data were analyzed using SPSS software [version 22], descriptive statistics, independent t-test, chi-square and Pearson correlation coefficient. A P value less than 0.05 was considered significant.

#### **RESULTS:**

The mean age of female participants in the study was 22.7 years and most of the research units [64.3%] were in the age range of 20-29 years, 62.6% had Arab ethnicity, 70.5% had middle and upper secondary education, 87.9% were housewives and 60.0% had an average economic level. 96.4% of the research units indicated that they had no history of infertility. 52.1% had a positive attitude toward normal delivery, and most of them [87.5%] selected normal delivery [Table 1].

**Table 1- Frequency distribution of individual characteristics of the participants**

Variable	Quantity	Number	Percentage
Age [Years]	16-19	81	26.5%
	20-29	196	64.3%
	≥30	28	9.2%
Education	Elementary	46	15.1%
	Intermediate – High school	215	70.5%
	College	44	14.4%
Occupation	Housewife	268	87.9%
	Employed	37	12.1%
Economic situation	Good	93	30.5%
	Average	183	60.0%
	Bad	29	9.5%

**Table 2: Relationship between personality types with attitude to childbirth, type of attitude to childbirth and type of delivery in women referred to health centers of Ahvaz**

		Personality type		P-value
		A [n=150] Average [Standard deviation]	B [n=155] Average [Standard deviation]	
Attitude's score		158.77 [21.28]	159.37 [22.09]	0.811
		Number [Percentage]	Number [Percentage]	
Type of attitude to childbirth	Positive	75 [50.0%]	84 [54.2%]	0.447
	Neutral	71 [47.3%]	64 [41.3%]	
	Negative	4 [2.7%]	7 [4.5%]	
Type of selected delivery	Natural	132 [88.0%]	135 [87.1%]	0.811
	Cesarean	18 [12.0%]	20 [12.9%]	

According to the results, there was no significant relationship between personality scores and attitude to the delivery of the participants in the study [ $p=0.29$ ]. The mean of total attitude to childbirth in individuals with personality type A was 158.77 and personality type B was 159.37. Based on the results of independent t-test, we can conclude that there was no statistically significant relationship between personality type and attitude to childbirth [ $p=0.45$ ]. According to the results, the frequency of positive attitude toward normal delivery in personality group A was 50.0% and in type B was 54.2%, frequency of negative attitude in personality group A, was 2.7% and in type B was 4.5%, and others had a neutral attitude to normal delivery. According to the results of the Chi-square test, there was no statistically significant difference between the two groups with personality type A and B in terms of attitude to childbirth [ $p=0.45$ ] [Table 2].

Also, the Chi-square test was used to determine the absolute and relative abundance of selected and performed childbirth in individuals with personality types A and B. According to the results, There was no significant difference between the two types of

delivery in individuals with different personality types [ $p=0.81$ ] [Table 2].

#### DISCUSSION:

The aim of this study was to investigate the relationship between personality type with attitude to childbirth and the choice of delivery method in primiparous pregnant women referring to health centers in Ahvaz. In selecting the type of delivery, 267 [87.5%] of women selected normal delivery and 38 [12.5%] selected cesarean section. More than half of the research units [52.1%] had a positive attitude toward normal delivery, 44.3% had a neutral attitude and 3.6% had a negative attitude toward normal delivery. In a study by Negahban et al. entitled "Can the fear of childbirth predict emergency cesarean delivery among primiparous pregnant women?" that was conducted in Rafsanjan in 2008, most of the samples [70.4%] had normal delivery and 29.6% had cesarean section [28], that is consistent with the present study. However, in a study by Biglari et al. in 2014, in order to investigate the knowledge and attitude of mothers in the first pregnancy regarding the choice of type of delivery in Ilam, the type of delivery performed on most research units [53%]

was cesarean and 47% were normal [29]. It seems that the Ministry of Health's demographic policies has had a positive impact on women's attitudes toward natural delivery.

The results of this study also showed that there was no significant relationship between personality type and total score of attitude to childbirth, but there was a significant relationship between the subscale "fear of childbirth" of attitude measurement tool and personality type [ $p=0.04$ ] that is consistent with the results of Nasiri *et al.*'s research on the relationship between childbirth fear and personality type in pregnant women in Fatemeh Hospital in Hamedan in 2012, that there was a statistically significant relationship between personality type and fear of childbirth [ $p=0.01$ ] [19]. In the study of Negahban *et al.*, there was a severe significant relationship between fear score and type of delivery [ $p<0.001$ ], so that the percentage of emergency cesarean section was higher among those who reported a higher degree of fear [28], that is consistent with the results of this study, with there is a significant correlation between the fear of childbirth and the choice of delivery method [ $p=0.00$ ]. Also Shaw *et al.* [2007] showed that type 'A' people were more vulnerable to psychological harms [30]. It seems that the reason for the significant relationship between personality type and subscale "fear of childbirth" is that this subscale is more influenced by the personality type than the others, and other subscales [beliefs and attitudes, sexual ideas, all-round assurance, cultural norms, performance and personal choices, and influential sources] are also affected by external factors such as cultural, social and economic differences, ethnicity, education and occupation [25].

In the present study, no significant relationship was found between personality type and choice of delivery method [ $p=0.81$ ]. In the study of Johnston *et al.* [2012], there was a meaningful correlation between two characteristics of stable emotional and an extroverted personality with select delivery type, but no significant relationship was found between other personality traits with the type of the selected delivery [31]. In England, personality dimensions [courage] had a predictive effect on the childbirth's outcome or type of delivery [32]. Also, Ryding *et al.* in a study investigated the associations between stable personality traits, fear of childbirth during late pregnancy, and experience of the delivery during gestation week 34–37, and at 1-week postpartum on 85 women who had sought help from a fear-of-childbirth team, and a group [ $n = 177$ ] from routine antenatal care, showed that women with intense fear of childbirth differ from other pregnant women also in personality [33]. The reason for the difference between the results of other studies with current research can be the

difference in the type of questionnaires used to determine the score and the personality types.

The results of the above studies indicate that one of the most common and main causes of cesarean section is the fear of normal delivery [34] and as previously mentioned, personality traits play a significant role in the severity and weakness of such a fear [15]. Therefore, attention to this issue is important because it is possible to identify the personality traits of pregnant women and timely and appropriate adoption of psychotherapy strategies for these women, reduce their fear and horror as much as possible and provide the basis for performing normal labor. According to the results of various studies, most prenatal women experience some degree of fear of childbirth. This fear can be one of the reasons for the occurrence of emergency cesarean section, which psychological support during pregnancy and the training of relaxation and planning methods to reduce pain in the stages of pre-natal and natural delivery can prevent this fear [14, 15].

One of the limitations of this research is the research's community that is limited to, health centers in Ahvaz, so generalization of its results to other groups should be done with caution. Another limitation of this research is the necessity to do it in the third trimester of pregnancy to assess the attitude to the choice of childbirth method, that during this period, pregnant women are slightly impatient due to the physiological conditions of pregnancy, and this can affect how they respond to questions. However, it was trying to minimize the error by giving a complete explanation and confidence to the research units.

### CONCLUSION:

The results of this study showed that personality type has no relation with attitude to childbirth and choice of childbirth method. However, attitude to childbirth has eight subscales, which subscales "fear of childbirth" and "trust in childbirth agent" had a significant relationship with personality type. This fear can have negative effects on the birth process as well as on the newborn. Therefore, by adopting psychological and behavioral strategies, such as coping with unhealthy thoughts and relaxation education, it is possible to reduce the fear of pregnant women' delivery and provide the basis for the choice of natural delivery by the mother. Also, for a definitive conclusion about the relationship between personality type with an attitude of childbirth and its other subscales, it needs more studies with other personality type measurement tools.

**Conflicts of interest:** None declared.

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