

Pain Perception at Birth depending on the Personality of the Parturient Women

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ABSTRACT

Background & Objective: Although giving birth is quite a natural process in a woman's life; it is very painful. Different people, however, experience this pain on different levels. In fact, one's perception of labor pain is determined by physiological, cultural, social, mental, and psychological factors. The present study aims to investigate the relationship between personality traits and one's perception of labor pain.

Materials & Methods: This study is a descriptive-analytical correlational study. Two questionnaires were used for Gathering information: one on personality traits and the other on labor pain. One hundred participants were chosen according to their demographic information from a pool of pregnant women at the Persian Gulf Hospital maternity ward in Bandar Abbas City. The data was analyzed using descriptive and analytical measures such as the Pearson Factor.

Results: Meaningful positive relationship between labor pain and Neuroticism ($P=0.000$, $r=0.448$), Openness ($P=0.000$, $r=0.517$) and Agreeableness ($P=0.003$, $r=0.296$). While Consciousness ($P=0.047$, $r=-0.199$) is found to have a meaningful negative relationship, extraversion shows no correlation with labor pain.

Conclusion: Good Childbirth Counseling and proper training, based explicitly on a mother's personality traits, could significantly help provide an enjoyable childbirth experience and reduce the unnecessary demand for C-section operations.

Keywords: Personality traits, Pain perception, Labor pain



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Introduction

Childbirth is a natural process and an exciting, important, and at the same time, painful event in a woman's life (1) and is a unique course that may have a profound effect on the biological, psychological, and social functioning of the mother and baby (2). The experiences women gain from their childbirth process are considered one of the important consequences of childbirth; these experiences will always remain with them throughout their lives (3). The psychological and physical effects of childbirth can lead to many short and long-term consequences in the mother and baby's life (4). A good delivery experience can affect the good relationship between mother and baby, and on the other hand, fear and anxiety during and before the delivery process is associated with a high risk of fetal distress and the need for more therapeutic interventions (5). Women who can successfully cope with the pain and stress of childbirth will be able to achieve peace of mind (6). Given that pain is part of the natural process

of childbirth, understanding the nature of pain and the factors affecting the perception of this pain and managing the factors affecting it is very important (7). Childbirth can be a very painful experience and, therefore, may be traumatic for some; although many of these women recover quickly, some of them can hardly cope with the trauma (8). Increased perception of pain, in the long run, causes fatigue and increased pain. High anxiety and stress make uterine contractions less effective and prolong labor (9). Due to the complexities of the nature of labor pain and lack of management of this pain, which has led to fear of labor and tendency to cesarean delivery and deviation from global standards of safe labor (10). In this study, a study is conducted to investigate the effect of personality traits. Be performed in the perception of labor pain. Therefore, the aim of current study was evaluated Pain perception at birth depending on the personality of the parturient women.

Methods

The current study is a descriptive-analytical correlational study. The statistical population of the current study includes pregnant women with singleton pregnancies who were referred to the maternity ward of Bandar Abbas Persian Gulf Hospital in August and September 2017 for vaginal delivery. Sampling is available among term pregnant women with singleton pregnancies who have been referred to the Persian Gulf Hospital maternity hospital in Bandar Abbas for normal delivery in August and September 2017.

Criteria for inclusion in the study of pregnancy and normal and uncomplicated childbirth are singleton pregnancies, the appearance of peaks, and primiparous or multiple births. Women were excluded from the study by refusing to participate in the study. The FFI-NEO five-factor personality questionnaire, the VAS pain questionnaire, and the researcher-made pack list containing questions about patients' demographic variables during the 72 hours after delivery were used. A total of 100 women were included in the study according to the inclusion criteria.

FFI-NEO Five Factors Personality Questionnaire: The validity of the FFI-NEO questionnaire was confirmed through factor analysis, and the factors were determined based on a plot Scree diagram. Its reliability was confirmed by Cronbach's alpha

coefficient, based on which its coefficients of 0.88 was calculated for the neuroticism factor, 0.78 for the experience openness factor, 0.80 for the conscientiousness factor, 0.80 for the agreement factor and 0.77 for the introversion factor (11, 12).

Ethical Statement

This study was approved by the ethics committee of Hormozgan University of Medical Sciences (Code: IR.HUMS.REC.1399.013) on 20.08.2018 and performed after the submission of a written signed informed consent form by each patient.

Statistical analysis: Data were analyzed using SPSS 23 software (SPSS Inc., Chicago, IL., USA), and descriptive statistics such as mean, standard deviation, frequency, and Pearson correlation coefficient were used, and multiple regression analysis was used to answer the research questions.

Results

The mean age of women was 27.15 ± 4.6 , and among them, 16% were illiterate, 36% had a diploma and 23% had a bachelor's degree or higher education, and 65% were urban dwellers and others were rural dwellers. 59% of newborns were girls, and 41% were boys. 85% of pregnancies were spontaneous, 23% of women with a history of infertility, and 9% used assisted reproductive techniques (Table 1).

Table 1. Demographic information of research participants

Variable	result	
Age	27.15±4.6	
baby gender	Boy	41%
	Girl	59%
History of infertility	23%	
wanted pregnancy	85%	
Disease in pregnancy	Sickle cell	3%
	hypothyroid	5%
	hyperthyroid	2%
	Hyperemesis gravidarum	6%
spouse presence	86%	
Divorce	0%	
Death of a Spouse	2%	
assisted reproduction	9%	

The mean score of perceived pain during childbirth was 8.99, and the mean of each of the personality components of the study showed that the highest score of personality traits related to extroversion factor with an average of 28.68 and the lowest score related to the factor of agreement with the mean it was 23/26.

According to the results, there seems to be a significant negative relationship between age and perceived pain score ($P=0.008$, $r=-0.262$), meaning that with increasing age, the amount of perceived pain during childbirth has decreased (Table 2). On the other hand, there was a significant positive relationship between the perceived pain score and Neuroticism

($P=0.000$, $r=0.448$), Openness to experience ($P=0.000$, $r=0.517$), and Agreeableness ($P=0.003$, $r=0.296$). Increasing the score of each of the mentioned personality components increases the perception of labor pain. A negative relationship was found between the amount of perceived pain and the personality

component of conscientiousness ($P=0.047$, $r=-0.119$), so with increasing the score of the conscientious personality component, the perception of labor pain decreased, While no significant relationship was found between perceived pain and extraversion personality component ([Table2](#)).

Table 2. Correlation coefficients of age and personality factors with labor pain perception score

Variable	P-value	Pearson correlation	Mean \pm SD
Age	0.008	-0.262	28.4 \pm 15.64
Neuroticism	0.000	0.448	26.4 \pm 71.60
Extraversion	0.419	0.082	28.5 \pm 68.35
Agreeableness	0.003	0.296	23.4 \pm 26.98
Conscientiousness	0.047	-0.199	26.3 \pm 32.98
Openness to experience	0.000	0.517	25.4 \pm 72.44

There was a significant negative relationship between the presence of disease in pregnancy and the pain perception rate, so the average pain perception in women with the disease in pregnancy was higher than in other women ([Table3](#)). No significant relationship was found between perception of labor pain and

neonatal sex, history of infertility, willing or unwilling pregnancy, and death of a spouse ([Table3](#)). No significant relationship was found between the perception of labor pain perception score and the education level of postpartum women ([Table3](#)).

Table 3. Test-t coefficients of research variables with the perception of labor pain

Variable	P-value	T	
Child gender	0.264	Boy	-1.124
		Girl	-0.104
pregnancy	0.616	Wanted	-0.502
		Unwanted	-0.529
Disease in pregnancy	0.040	Yes	-2.747
		No	-2.080
History of infertility	0.548	Yes	0.614
		No	0.550
death of the husband	0.544	Yes	-1.011
		No	-0.609

Discussion

The aim of the current study was to evaluate Pain perception at birth depending on the personality of the parturient women. The mean score of perceived pain during childbirth is 8.99, and the mean of each of the personality components of the research subjects showed that the highest score of personality traits related to extroversion factor with an average of 28.68 and the lowest score related to the factor of agreement with the mean. It was 23.26. According to the results, there seems to be a significant negative relationship between age and perceived pain score ($P=0.008$, $r=-0.262$), meaning that with increasing age, the amount

of perceived pain during childbirth has decreased. On the other hand, there is a significant positive relationship between the perceived pain score and the components of Neuroticism. A Negative was found between the amounts of perceived pain and the personality component of conscientiousness, so the perception of labor pain decreased with increasing the score of the conscientious personality component. The results of this study are similar to the results of the studies of Ramirez-Maestre *et al.*, (11) and Fridh *et al.*, (12); While they do not agree with the results of the study of Yadollahi *et al.*, 2017 (1). With age, a person's

acceptance of the inevitable situation increases, so the perception of the inevitability of labor pain prepares the mother to go through this psychologically painful stage. The results of this study show that there is no significant relationship between the sex of the baby and the amount of perceived pain, while the results of Yadollahi *et al.*, (1) show that there is a significant positive relationship between the birth of a baby boy and the perception of labor pain. The findings of this study could not find a significant relationship between education and perception of labor pain, which is consistent with the results of research by Yadollahi *et al.*, (1). The results showed a significant relationship between the amount of pain and the presence of disease in pregnancy, so mothers who experienced illness during pregnancy reported more pain than others. In other studies, this issue has not been addressed (13, 14). It may be explained that although in none of the cases did the mother's illness lead to additional hospitalization and medical interventions, the idea that the illness might threaten the mother and baby during childbirth causes fear in the mother. The same fear can increase the sensitivity to labor pain (15, 16). No significant relationship was found between pain perception and history of infertility among individuals with a previous history of infertility. Other studies have not addressed this issue (17). The results of this study did not show a significant relationship between pain perception and willingness or unwillingness of pregnancy. Other studies have not addressed this issue. The main purpose of this study was to investigate the relationship between personality dimensions and perception of labor pain. Based on the findings of this study, there was a significant relationship between most personality types and the perception of labor pain. There is a significant positive relationship between Neuroticism, Agreeableness, and Openness to experience with pain perception so that with increasing the individual's score in each of the above personality traits, the pain score also increases. On the other hand, the study's results report a negative relationship between conscientiousness and pain perception, with an increasing conscientiousness score, the perception of labor pain decreases. The positive relationship between Neuroticism and pain score can be explained by the fact that the neurotic factor is explained by characteristics such as anxiety, worry, sensitivity, irritability, instability, and intolerance of problems. It is clear that people with such characteristics are hypersensitive and irritable in the face of all kinds of pain, and labor pain as one of the most painful stages of a woman's life is no exception to this rule. This result is consistent with the results of studies by Yadollahi *et al.*, (1), Ghooshchian *et al.*, (15), Curzik *et al.*, (16), and Tragesse *et al.*, (17). Studies showed a significant positive relationship between Openness to experience and pain, which is consistent with the results of studies by Yadollahi *et al.*, (1), Ghooshchian *et al.*, (15), Curzik *et al.*, (16), and Tragesse *et al.*, (17). In people whose Openness to experience is the predominant personality type, there are traits such as artistic nature,

creativity, and imagination, all of which are associated with delicacy and sensitivity, so open people in experience are also more sensitive to pain, and report pain with a higher score. One of the traits associated with agreeable people is empathy, and sensitivity to pain. What makes a person prone to empathy and empathy with others is the ability to put oneself in a similar situation to others and to understand their pain. Therefore, a person with such characteristics is generally sensitive to pain, and this can be the reason for the significant relationship between pain perception and Agreeableness. The results of present study showed that the factor of conscientiousness has a significant negative relationship with the perception of labor pain, so that with increasing the score of conscientiousness, the pain score decreases. This result is consistent with the results of studies by Raselli *et al.*, (13), Curzik *et al.*, (16), and Yadollahi *et al.*, (1). Finally, no significant relationship was found between Extraversion and perception of labor pain. Which is consistent with the results of studies by Yadollahi *et al.*, (1). However, Brown and Johnston's., (14) study showed that among personality traits, extraversion facilitates labor pain, and these people report lower pain scores. The present study had some limitations, such as the fact that according to the statistics presented in the study, about 16% of the participants in the study were illiterate and this made it difficult to collect information.

Conclusion

According to the results of this study, some personality traits are positive predictors of labor pain perception; therefore, people with these characteristics are expected to be more prepared to perceive labor pain. On the other hand, some other personality traits are negative predictors of labor pain perception. The information obtained from this study and other similar studies can be used in the field of prenatal education by midwives and urban and rural health centers that are responsible for caring for and monitoring mothers during pregnancy, taking into account the personality traits of women. In this way, they reduce the fear and anxiety of childbirth, which can psychologically affect the perception of labor pain and have side effects for the mother and fetus during childbirth.

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Conflict of Interest

The authors declared no conflicts of interest.

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