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# The relationship between attitude toward labor pain and length of the first, second, and third stages in primigravida women

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## Abstract:

**INTRODUCTION:** Factors affecting labor pain include physiological, psychological, and social factors, among which psychological factors refer to attitudes and beliefs about labor pain. Hence, the present study was conducted to determine the relationship between attitude toward labor pain and length of the first, second, and third stages in primigravida women.

**MATERIALS AND METHODS:** This cross-sectional study was performed on 230 pregnant women who were referred to hospitals affiliated to Isfahan University of Medical Sciences in a two-stage sampling in 2018. In the beginning, the participants completed the questionnaire of demographic/fertility characteristics and attitude to labor pain (25Q), and at the next stage, the researcher completed the form of labor information including length of the labor stages. Data were analyzed by SPSS software version 22 and Pearson correlation coefficient, Student's *t*-test, one-way ANOVA, and general linear regression.

**RESULTS:** The mean (standard deviation) of the attitude to labor pain was 53.96 (1.9), and the length of the first stage was 10.01 (0.3) (h), the second stage was 1.6 (0.4) (h), and the third stage was 15.9 (1.7) (min). One hundred and eighty-three (79.6%) had negative attitude and 47 (20.4%) had positive attitude toward labor pain. There was a significant positive correlation between attitude toward labor pain and length of the first ( $P = 0.001$ ,  $r = 0.37$ ) and second stages of labor ( $P = 0.001$ ,  $r = 0.24$ ). There was no significant between length of third stage of labor and attitude toward labor pain ( $P = 714$ ).

**CONCLUSION:** The results showed that the majority of primiparous women had a higher (negative) attitude toward labor pain, which was associated with longer the first and second stages of labor.

## Keywords:

Attitude, first stage of labor, labor pain, parturition, second stage of labor, third stage of labor

## Introduction

Although childbirth is a physiological process, it may be associated with severe pain, uncertainty, and frustration. The parturient feels she is alone and vulnerable during childbirth.<sup>[1]</sup> One of the factors affecting the delivery is the women's attitude and belief toward labor pain, which is itself influenced by several

factors such as previous experiences of pain, ability to adapt to pain, delivery environment, and psychosocial factors.<sup>[2]</sup> Women's beliefs about the care they need during various stages of delivery can affect the way these cares are carried out and subsequently affect admission of women and the delivery process. However, there is little information about this way of thinking, opinion, and experience.<sup>[3]</sup> Although all women experience labor pain, the type of perception, interpretation,

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and response to labor pain is different.<sup>[4]</sup> A woman's perception of labor pain is affected by many factors including cultural, social, mental, environmental, and psychological influences.<sup>[5]</sup> Sociocultural factors such as awareness level, cultural awareness to deal with pain, the ability to access health facilities and services, and the socioeconomic structure of the patient in response to pain can lead to different perceptions and reactions to pain.<sup>[6]</sup> For example, although most African American women believe that labor pain is painful and even challenging, they describe it as spiritual pleasure.<sup>[7]</sup> To examine the attitude to childbirth among young women, attention should be paid to the medical culture of childbirth.<sup>[8]</sup> Schwartz showed that the positive attitude toward normal delivery includes being closer to God, getting a reward from God, and accepting the baby as a divine gift.<sup>[9]</sup> Understanding Iranian women of childbirth is also derived from their culture and values and is rooted in their living environment.<sup>[10]</sup> Belief, imagination, and excitement of the person during child labor will play a fundamental role in satisfaction and effectiveness of childbirth experience and they result in forming memories of pain.<sup>[11]</sup> The perception of labor pain can influence the tendency and preference of the type of delivery of pregnant mothers. As a result, as the negative perceptions of normal delivery increase, the tendency toward normal delivery significantly reduces.<sup>[12]</sup> The feeling of not being seen or heard during childbirth contributed to a negative attitude toward labor pain in women.<sup>[12]</sup> Negative labor experience results in fear of the next delivery,<sup>[13]</sup> whereas positive labor experiences result in mother's positive attitude toward normal delivery.<sup>[14]</sup>

Sharifirad *et al.* reported that approximately 70% of women reported negative attitudes toward normal delivery.<sup>[15]</sup> The study of Yadollahi (2018) in Shiraz shows that there are different positive and negative attitudes toward labor pain. The study shows that negative attitudes result in forming bad memories of childbirth, and those who have a positive attitude toward labor develop a sense of self-confidence and spirituality. The reasons for the negative attitude toward labor pain are sometimes due to the experiences of others and sometimes due to the personal experience of childbirth.<sup>[11]</sup>

A woman's perception of labor pain is affected by many factors including cultural, social, mental, environmental, and psychological influences.<sup>[16]</sup> Today, wrong cultural beliefs and values such as being more popular and having a better social image about cesarean have replaced the correct beliefs about normal delivery.<sup>[17]</sup> The attitude of women toward childbirth may affect maternity care and birth outcomes.<sup>[18]</sup>

The results of a study by Green *et al.* showed that there is a relationship between the outcomes of labor and women's attitudes toward pregnancy. The factors affecting labor and the length of its stages can be classified into three categories, including physiological, psychological, and social factors. These include attitudes and beliefs about giving birth and labor pain in different cultures and societies.<sup>[19]</sup> The progress of delivery depends on the bone tissue, pelvis shape, uterus contractions, condition and size of the fetus, and psychological factors.<sup>[20]</sup> Due to the fact that prolongation of labor stages has complications for mother, fetus, and newborn, active involvement in childbirth to prevent complicated delivery and accelerate childbirth has been proposed for a long time.<sup>[21]</sup> Excessive prolongation of labor can be lead to infection, hypoxia, physical-neural damages, newborn's death, postpartum hemorrhage, anxiety, insomnia, and mother's fatigue.<sup>[22]</sup>

Duration of delivery is one of the factors affecting the outcome of pregnancy and maternal and fetal injuries. Therefore, with excessive prolongation of labor, the possibility of infection, physical-neurological damage, and fetal and infant death has increased, and the mother is also at risk of postpartum hemorrhage and infection and anxiety, insomnia, and fatigue.<sup>[23]</sup>

Considering the above-mentioned issues and identifying the related psychological factors on the stages of labor, as well as the importance of the subject and lack of adequate information about the relationship between attitude toward labor pain and the duration of delivery stages, we decided to implement this study.

## Materials and Methods

This cross-sectional descriptive correlational study was conducted on 230 pregnant women referring to Isfahan University of Medical Sciences affiliated hospitals in 2018. The two-stage sampling method (convenience-quota) was performed. In this study, hospitals were selected randomly and purposefully so that the selection of centers was nonrandom and based on the number of referrals. After identifying the centers, the sampling of the studied units was determined using quota sampling based on the labor statistics of the four hospitals. To do the research, the researcher traveled to Shahid Beheshti Hospital 1 day a week, 1 day a week to Al Zahra Hospital, 1 day a week to Amin Hospital, and 1 day a week to IsabneMaryam Hospital. Convenience sampling method was utilized to select mothers who were eligible to enter the study as the study samples. The inclusion criteria included pregnant women aged 15–35 years, Persian ethnicity, no history of physical and mental illness (referring to the patient's file and asking her), gestational age >37 weeks, being literate enough to complete the questionnaire,

lack of infertility, and mother's desire to participate in the study. The exclusion criteria included participants' withdrawal during the study and delivery stages of cesarean section for any reason. The tool used at the beginning of the study was a two-part questionnaire. The first part focused on the personal information fertility (7 questions). These questions included woman's age, education level, occupation, her spouse's age, education level of the spouse, the spouse's job, economic situation, and gestational age. The second part included the attitude of labor pain (25 items) that was completed by the individuals at the hospital emergency room in a completely quiet room. In the next stage, after women were admitted to the maternity hospital, the researcher also participated and continued the participation until the end of the third stage of labor (2 h after delivery) and completed the questionnaire related to the first, second, and third stages of delivery. The questionnaire on attitude toward labor pain (25 questions) was used. This questionnaire was rated on a 5-point Likert scale, ranging from 4 = strongly agree to 0 = strongly disagree. The range of the score was from 0 to 100. The higher score indicated a negative attitude toward labor and lower score indicated a positive attitude toward labor pain. Then researcher completed the questionnaire related to the first, second, and third stages of labor. The questionnaire on attitude toward labor pain was used in the qualitative study of Mohammad Ali Beigi *et al.* Since qualitative study was used to complete the questionnaire, therefore, the content and face validity of the questionnaire were determined using content validity rate and content validity index. The content validity was confirmed by 10 faculty members of Isfahan University of Medical Sciences and its reliability was also tested through conducting a test-retest on 20 women similar to the study population. The results using test-retest showed that the questionnaire was highly reliable (Cronbach's alpha = 0.98).

## Results

The results showed that the mean (standard deviation [SD]) age of mothers was 26.16 (5.83) years, the age of the spouse was 30.66 (5.75) years, and the gestational age was 39.18 (1.13) weeks. The results showed that the majority of mothers referring to the hospital had university education (40.4%), were housewives (63.9%), and had pain (48.3%). Moreover, the majority of wives had high school diploma (46.5%), were employed (83.5%), and had average household economic status (43%). In addition, the majority of infants were boys (60.4%). About 51.3% of the women participated in the childbirth class. The mean (SD) of attitude toward labor pain was 53.96 (1.9), and the duration of the first stage was 10.10 (0.3) h, the second stage was 1.6 (0.4) h, and the third stage of labor was 15.9 (1.7) min [Table 1].

**Table 1: Frequency distribution, mean, standard deviation, minimum and maximum attitude toward labor pain, and duration of the first, second, and third stages of labor**

Variables	n (%)	Mean (SD)	Minimum	Maximum
Attitude toward labor pain				
Positive	183 (79.6)	53.96 (1.9)	10	95
Negative	47 (20.4)			
First stage of labor (h)				
0-8/4	8 (3.5)	10.01 (0.3)	66	1080
>4/8	222 (96.5)			
Second stage of labor (min)				
0-50	6 (2.6)	1.6 (0.4)	40	150
>50	224 (97.4)			
Third stage of labor (min)				
0-5	3 (1.3)	15.9 (1.7)	4	35
>5	227 (98.7)			

SD=Standard deviation

Moreover, Pearson correlation coefficient showed that there was a significant positive correlation between attitude toward labor pain with duration of the first stage ( $r = 0.37$ ,  $P = 0.001$ ) and second stage of labor ( $r = 0.24$ ,  $P = 0.001$ ), but with the duration of the third stage of labor ( $P < 0.714$ ), no significant correlation was found. Therefore, the higher the score of attitudes toward labor pain (more negative), the duration of the first and second stages of labor was higher and longer [Table 2].

## Discussion

The results of this study on the primiparous women referring to the maternity hospitals in Isfahan showed that the majority of women had a negative attitude toward labor pain, and the length of the first and second stages of labor was longer in these women. As mentioned, women in this study with a very high percentage of about 80% had a negative attitude. This suggests, despite the fact that labor pain and its biological nature in the system of birth is an inevitable fact, this pain in humans is influenced by the social, cultural, and even spiritual conditions of individuals, and it makes it possible to experience and perceive it differently. This study was aimed to investigate the relationship between the attitude toward labor pain and the duration of delivery stages in primiparous pregnant women.

The duality of the feeling toward pain was one of the statements that participants expressed in this study. In fact, for women, labor pain was a mixture of positive and negative emotions. Some women, by recalling the details of the childbirth, expressed their satisfying feelings such as feeling comfortable, calm, and happy after childbirth

**Table 2: Correlation coefficient between attitude toward labor pain with duration of the first, second, and third stages of labor**

Attitude toward labor pain	Positive, n (%)	Negative, n (%)	Significance level and Pearson correlation coefficient
First stage of labor (h)			
0-8/4	0	8 (3.5)	$r=0.37, P=0.001$
>4/8	47 (20.4)	175 (76.1)	
Second stage of labor (min)			
0-50	2 (9)	45 (19.6)	$r=0.24, P=0.001$
>50	4 (1.7)	179 (77.8)	
Third stage of labor (min)			
0-5	6 (2.6)	21 (1.9)	$P=0.714$
>5	2 (17.8)	162 (70.4)	

and even considered it a sweet experience to understand the birth of a person. It seems that pain experience is not always bitter and unpleasant, and positive emotions can be achieved if the intelligent and conscious communication between the body and mind is based on the acceptance of pain.<sup>[24]</sup> Therefore, by practicing positive beliefs affecting this concern and getting the help of professionals, women can achieve strategies to help them deal with pain and fear of childbirth.<sup>[25]</sup>

It was found in various studies that women's attitudes toward labor are different so that the experience of Russian and Danish women from labor pain was that the childbirth and birth of a newborn is a spiritual experience, and therefore, the opportunity to live again is given to them. In contrast, some Australian women believed that giving birth is just a way that a person can attach to her newborn and nothing else. In their opinions, pregnancy and childbirth were a period of death and life that anything could have happened in this period.<sup>[26,27]</sup> In the present study, the mean score of the attitude toward labor pain was 53.96%, and the mean score of the attitude toward labor pain in a certain study was 52.7% (mean knowledge). The mean score of the attitude toward labor pain in the study of Sharifirad and Barabdi was also moderate, which is in line with this study.<sup>[28-30]</sup> In this study, it was found that a positive attitude leads to a shorter duration of labor, while Brighton's study has shown that short labor results in a positive attitude toward labor pain.<sup>[31]</sup> In the present study, it was found that there was a significant relationship between the attitude toward labor pain and the level of mother's education, whereas in Sharifi Rad *et al.*, it was found that there was no significant relationship between mother's education and mother's knowledge and attitude toward labor pain.<sup>[29]</sup>

In this study, pregnant mothers with different levels of literacy participated, and this was one of the strengths of the study. The results of this study can be a good opportunity for midwives to provide the necessary measures in the field of women's health and fertility by establishing scientific, cultural, spiritual training and

classes and scientific experiences and using women's experiences with positive perceptions to make childbirth more pleasant. In addition, providing midwives and gynecological reproductive health specialists with these results increases their awareness about providing the appropriate mental and spiritual conditions for the parturient, and as a result, they will have the feeling of satisfaction and happiness from childbirth. It will also enhance the physical and mental health of the mother and the baby and will also cause a sense of professional and moral satisfaction in the maternity caregivers.

## Conclusion

As the attitude toward labor pain increases, the duration of the first and second stages of labor decreases, but there is no correlation between the attitude toward labor pain and the duration of the third stage of labor. Many factors affect mother's attitude toward labor pain, and these factors can positively affect the attitude of the pregnant mother toward the pain of childbirth. This will reduce the length of the stages of labor. As a result, complications due to the prolonged labor can be prevented. Many factors can be corrected, and caregivers' interventions can help to promote positive experiences, prevent negative experiences, or change feelings afterward. Even the unchanging factors also respond to interventions.

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## Conflicts of interest

There are no conflicts of interest.

## References

1. Umeorac J, Ukkaegbe OU, Eze CI, Masekoameng JN, Kelly A. Spousal companionship in labor in an urban Facility in South East Nigeria. *Anatolian J Obstet Gynecol* 2011;2:1-5.
2. Rouhe H, Salmela-Aro K, Gissler M, Halmesmaki E, Saisto T. Mental health problems common in women with fear of childbirth. *BJOG* 2011;118:1104-11.
3. Fariba A, Alireza A, Shirin T, Ali DN, Leila SM, Roghaieh R. Maternal women's experience: A phenomenological study. *J Gonabad Univ Med Sci Health Serv* 2009;15:47-39.
4. Lowder Milk DL, Perry SE, Cashion K. *Maternity Nursing*. 8<sup>th</sup> ed. Maryland: Mosby; 2014.
5. Sousan H, Mahrokht D, Mahin KF, Morteza G. Comparison of severity of labor pain and factors affecting its perception in primiparous and multiparous women in private and public nursing homes. *Med J Tabriz Univ Med Sci* 1391;34:117-21.
6. Best S. The social construction of pain: An evaluation. *Disabil Soc* 2007;22:71-161.
7. Etowa JB. Becoming a mother: The meaning of childbirth for African-Canadian women. *Contemp Nurse* 2012;41:28-40.
8. Stoll K, Hall W, Janssen P, Carty E. Why are young Canadians afraid of birth? A survey study of childbirth fear and birth preferences among Canadian university students. *Midwifery* 2014;30:220-6.
9. Schwartz JA. *Childbirth as a Profound Experience: Exploring Narrative and Image of Experiences during Birth*. San Francisco, CA: California Institute of Integral Studies; 2014. p. 85.
10. Homa S, Al-Zamani Sayeh Sadat MS, Fereshteh J, Leila NS, Hamid H. A survey on the relationship between perceived support in first pregnancy and satisfaction with delivery in women referred to Shahid Akbar Abadi Medical Education Center in Tehran. *J Prev Care Nurs Midwifery* 1393;4:64-54.
11. Parvin Y, Ziba T, Abbas E, Maryam G. Iranian women's perception of labor pain. *J Armageddon J Yasuj Univ Med Sci* 1396;22:270-55.
12. Monavareh A, Esmat N, Maein K. Investigating attitude of labor pain and choosing the type of delivery in pregnant women referring to health centers in Kerman. *J Nurs Midwifery Kerman* 2011;10:36-41.
13. Elvander C, Cnattingius S, Kjerulff, K. Birth experience in women with low, intermediate or high levels of fear: findings from the first baby study. *Birth*, 2013; 40 (4): 289-296.
14. Marjan AS, Masoumeh BN, Tahereh T. Explain the role of women's labor experiences in choosing the type of delivery. *J Obstet Gynecol Fac Urmia* 2014;12:286-96.
15. Sharifirad G, Fathian Z, Tirani M, Mohleki B. The attitude of pregnant women toward vaginal delivery and cesarian section based on intention behavioural model. *J Reprod Infertil* 2012;13:237-40.
16. Lowe NK. The pain and discomfort of labor and birth. *J Obstet Gynecol Neonatal Nurs* 1996;25:82-92.
17. Latifnejad Roudsari R, Zakerihamid M, Merghati Khoei E, Kazemnejad A. Comparing the cultural beliefs related to mode of delivery among pregnant women and women with childbirth experiences as vaginal delivery or cesarean section (Tonekabon, 2014). *JMUMS* 2015;24:54-68.
18. Haines HM, Rubertsson C, Pallant JF, Hildingsson I. The influence of women's fear, attitudes and beliefs of childbirth on mode and experience of birth. *BMC Pregnancy and Childbirth* 2012;12 (55):1-14.
19. Green J, Coupland V, Kitzinger S; National Institute for Health and Clinical Excellence: Intrapartum Care of Healthy Women and their Babies during Childbirth. Expectations, experiences, and psychological outcomes of childbirth: A prospective study of 825 women. *Birth* 2011;17:15-24.
20. Frasset DM, Cooper MA. *Myles Textbook for Midwives*. 15<sup>th</sup> ed. Edinburgh: Churchill Livingstone; 2008. p. 434-5.
21. Shahali SH, Kashanian M. Effect of acupressure at the sanyinjiao point (SP6) on the process of active phase of labor pain in Nulliparas women. *J Babol Univ Med Sci* 2010;2:7-11.
22. Fahimeh SS, Samayeh K, Morteza G. Comparison of the mean duration of delivery stages in primiparous women. *Iran J Obstet Gynecol Infertil* 1394;18:18-25.
23. Roberts L, Gulliver B, Fisher J, Cloyes RG. The coping with labor algorithm: An alternate pain assessment tool for the laboring woman. *J Midwifery Women Health* 2010;2:107-17.
24. Vedadhir AH, Sadati M, Taghavi S. Childbearing as a socio-cultural problem: Construct realistic reflection of cesarean section in Tabriz. *Anthropol Res Iran* 2012;2:111-35.
25. Ternstrom E, Hildingsson I, Haines H, Rubertsson C. Pregnant women's thoughts when assessing fear of birth on the fear of birth scale. *Women Birth* 2016;29:44-9.
26. Johnson TR, Callister LC, Freeborn DS, Beckstrand RL, Huender K. Dutch women's perceptions of childbirth in the Netherlands. *MCN Am J Matern Child Nurs* 2007;32:170-7.
27. Callister LC, Holt ST, Kuhre MW. Giving birth: The voices of Australian women. *J Perinat Neonatal Nurs* 2010;24:128-36.
28. Moeini B, Besharati F, Hazavehei SM, Moghimbeigi A. Women's attitudes toward elective delivery mode based on the theory of planned behavior. *MOEINI, B., et al. Journal of Guilan university of medical sciences* 2011; 20 (79):68-76.
29. Sharifi Rad GR, Fathian Z, Tirani M, Mahaki B. Study on behavioral intention model (BIM) to the attitude of pregnant women toward normal delivery and cesarean section in province of Esfahan – Khomeiny Shahr-2006. *J Ilam Univ Med Sci* 2007;15:19-23.
30. Yarandy F, Rezaie Z, Eftekhar Z, Saadat H, Ansari Jafari M. Knowledge and attitude of pregnant women to methods of birth in patients referred to health centers in Tehran in 1999. *J Med Fac Guilan Univ* 2003;1:15-21.
31. Bryanton J, Gagnon AJ, Johnston C, Hatem M. Predictors of women's perceptions of the childbirth experience. *J Obstet Gynecol Neonatal Nurs* 2008;37:24-34.