

Knowledge, Perceptions and Desire to Pain Relief in Labor among Iranian Pregnant Women

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Abstract

Background: One way to promote vaginal delivery and reduce unnecessary caesarean section, is paying attention to labor pain relief techniques. The aim was to investigate factors affecting the desire of pregnant women for painless delivery.

Methods: This descriptive study was conducted on 325 pregnant women who referred to prenatal clinics in 2020 and met the inclusion criteria. Data were collected using researcher-made questionnaire on painless delivery. Data analysis was performed using SPSS v.21.

Results: Most of respondents (74%) were between 20-29 years old. 19.69% of participants were nulliparous and 62.76% had diploma. 72% were housewives. 56.61% of the participants had not enough information about pain relief in labor. Only 14 people of whom had information, (9.92%) desired to experience pain relief in labor. Many of the respondents 90.76% were worry about the effects of pain relief on their unborn. 44.68% of participants, who had information about pain relief in labor; got their information regarding the pain relief in labor internet sources.

Conclusions: Due to the low level of awareness of pregnant women to use painless delivery and labor pain relief techniques, it is recommended that the necessary measures be taken in order to increase women's knowledge of the benefits and limitations of painless delivery.

Plain language summary: Labor pain is the most painful experience in many women's lives. It causes a large number of unnecessary cesareans. There are different kinds of pain relief methods. However, it is used a little. This study investigated the information, attitude and tendency to pain relief in labor among pregnant women. It was declared that participants have a few information. They were unwilling to use pain relief methods duo to their probable side effects. So it is felt educational sessions about painless delivery during prenatal care.

Keywords: Attitude; Awareness; Painless delivery; Desire.

Abbreviations: C-sections: Cesarean section; TENS: Transcutaneous Electrical Nerve Stimulation.

Introduction

Labor pain is the most painful experience in many women's lives [1]. Although labor is a completely physiological process, it is considered one of the most important concerns of pregnant women today [2]. Labor pain is caused by a stimulation of neuroreceptors following uterine contraction and is felt in the lumbar, sacral, pelvic, and abdominal areas [3]. The mother's depression and mental changes increase after delivery due to labor pain, which negatively affects her relationship with her husband and child [4]. Many factors affect the understanding of labor pain including duration of labor, mother's pelvic anatomy, fetal size, use of oxytocin, attending childbirth preparation classes, fear and anxiety related to labor, previous experience of pain, and adaptive mechanisms. Cultural and educational backgrounds and learned behaviors affect the individual's understanding of and reaction to pain [1].

Using an effective method of painless delivery can lead to better pregnancy and labor outcomes [5]. Non-pharmacological pain relief methods include homeopathy, hydrotherapy, music therapy, TENS, using breathing techniques, massage, using hot and cold water therapy bags, and aromatherapy. Two other techniques of reducing labor pain are inhalation analgesia or regional analgesia. In the inhalation method, a gas mixture called Entonox, consisting of nitrous oxide and oxygen, is used. This method takes effect in 20 seconds. Regional or epidural analgesia is administered by blocking the conduction of impulses along the sensory nerves on the verge of entering the spinal cord. In epidural analgesia, the anesthetic is injected into the epidural space, and in spinal anesthesia, the anesthetic is injected into the subarachnoid space [1]. In both methods of inhaled and epidural analgesia, the presence of an anesthesiologist is required to perform and further the procedure.

Overall, women's understanding of the nature of labor pain plays an important role in proper pain management as well as achieving the best pregnancy outcome. Various studies especially in developing nations have shown a little understanding of labor pain, painless labor, and different methods for relieving labor pain. Moreover, the satisfaction level of pain relieving methods may be affected by their knowledge of pain characteristics and the methods of its relief [6]. Due to the significance of vaginal delivery, the need for encouraging pregnant women to opt for it, the fear of labor pain as one of the reasons for the inclination towards C-section, and few studies on women's awareness of the methods of eliminating labor pain in Iran, the present study was conducted with the aim of investigating factors affecting the desire of pregnant women for painless delivery.

Methods

This descriptive-analytical study conducted on 325 pregnant women who referred to prenatal care clinics. After receiving the ethics code (IR.KMU.REC.1397.548) study was carried out from November to January, 2021. Research setting consisted of health care centers in Kerman, a province in south of Iran. Eight centers were selected randomly out of 36 governmental health care centers. Convenience sampling method was used, and the women who met the inclusion criteria with informed written consent, were selected to participate in the study.

Inclusion criteria: Inclusion criteria were as follows: age between 15 and 45 years, single pregnancy. Exclusion criteria included addiction to cigarettes, drugs, and alcohol, literacy, history of psychotherapy or mental illness, obvious and recogniz-

able barriers to vaginal delivery, contraindications for painless delivery, and history of C-section (in multiparous women).

Sample size was determined as 325 people using the cross-sectional study formula and based on 5% alpha, and the accuracy of 0.04.

Data collection tools: Data collection tools were demographic and midwifery questionnaires and a researcher-made questionnaire to assess knowledge, perceptions and desire to pain relief in labor among pregnant women. The questionnaire had 21 questions. The validity of the questionnaire was evaluated by 10 midwifery and gynecology faculty members and confirmed after necessary omissions and editing. To assess the reliability of the questionnaire, Cronbach's alpha was determined to be 0.9 through completion of 30 questionnaires.

Statistical analysis: Statistical analysis was performed using SPSS software v.21. In the present study, descriptive statistical tests such as simple frequency distribution, central and dispersion were used.

Results

Table 1 shows the sociodemographic characteristics of the participants. Majority of respondents (n=242, 74%) were between 20-29 years old. 19.69% of participants were nulliparous while parity of 1-4 constituted two thirds (75%) of the participants. A good number of the respondents 62.76% (204/325) had diploma, 22.46% had university education. Majority of the study population (234/325)72% were housewives. People living in the city accounted for 83.69% of respondents.

The results of the assessment of pregnant women's awareness of pain relief in labor and its methods indicated that 56.61% (184/325) of the participants had not received enough information on the use and benefits of pain relief in labor. Among the people who had information (141/325), the least information was related to epidural analgesia (5.23%) (Table 2).

Table 1: Sociodemographic characteristics of pregnant women (n=325).

	Variable	Frequency (n)	Percentage (%)
Age(year)	15-19	4	1.23
	20-24	104	32
	25-29	138	42.46
	30-34	45	13.84
	>35	34	10.46
parity	None	64	19.69
	1	117	36
	2-4	128	39.38
	>5	16	4.92
Education	Under diploma	48	14.76
	Diploma	204	62.76
	University	73	22.46
Job	Housewife	234	72
	Employee	91	28
Location	Resident of the city	272	83.69
	Resident of the village	53	16.3

Table 2: Knowledge of pain relief methods in labor (n=325).

Methods	Frequency (n)	Percentage (%)
Intramuscular injection of drugs	25	7.69
Intravenous injection of drugs	57	17.53
Entonox gas inhalation	31	9.53
Epidural analgesia	17	5.23
Spinal analgesia	68	20.92
None	184	56.61

Table 3: Reason for unwillingness to pain relief in labor (n=127).

Variable	Frequency (n)	Percentage (%)
Worry about the complications of pain relief in labor	65	51.18
The impossibility of eliminating labor pain in their view	28	22.04
Need to experience labor pain as a rewarding experience for women	16	12.59
Belief in the physiological nature of the birth process without any intervention	11	8.66
Lack of control over labor	7	5.51

Table 4: Complications of pain relief in labor (n=65).

Complication	Frequency (n)	Percentage (%)
Headache	48	74.47
Increase risk of cesarean section	35	53.84
Effect on the unborn baby	59	90.76
Increased interventions in labor	18	27.69
Prolongation of labor	9	13.84

Table 5: Source of information about pain relief of labor (n=141).

Source of information	Frequency (n)	Percentage (%)
Doctors	13	9.21
Midwives	58	41.13
Internet sources	63	44.68
Friends and family	37	26.24
Antenatal classes	52	36.87

Table 3 shows that 141 of the participants (43.38%) were aware of the possibility and procedure of having painless delivery in the medical centers, however only 14 people (9.92%) desired to experience pain relief in labor while most of them (127/141) did not want to try it. The most (51.18%) reason of not willing to relief of pain during labor was fear of pain relief side effects. Lack of control over labor accounted for 7(5.51%) of participants.

Regarding their opinion about complication related to pain relief in labor (Table 4), many of the respondents 90.76% (59/65) were worry about the effects of pain relief on their unborn baby while 13.84% (9/65) were worry about the effect of pain relief on the duration of labor.

141 of the participants had information about pain relief in labor, 9.21% of them got their information regarding the pain relief in labor from doctors, 41.13% midwives in health

care centers, 44.68% Internet sources, and friends and family 26.24%. Antenatal classes held during prenatal care (group sessions) was the source of information for 36.87% our pregnant women (Table 5).

Discussion

Reducing labor pain has always been one of the main goals of medicine. Despite significant progress in labor analgesia, the acceptability and utility of labor pain relief in some settings has not received adequate coverage.

Maternal factors are involved in the increase in C-section in Iran, and the most important of these factors are fear of labor pain and anxiety about vaginal delivery [7]. The results of the present study indicated that pregnant women have very little knowledge about painless delivery and pain reducing methods. Studies showed that most of the pregnant women were not aware of painless delivery. A study showed that 5.1% of participants had little information, and 36.2% of the informed people had got their information from friends and acquaintances and 20% through television [8,9]. Moreover, the results of the study conducted by Oladokan in 2009, indicated that 80.5% of pregnant women had a lot of information about labor pain, while only 19.5% of them knew about painless delivery. The results of the previous studies are in line with those of the present study, and confirm the low level of awareness of painless delivery in pregnant women and their inclination to know about the subject. The study conducted by Chukwuzitelu in 2018 showed that 56% of the participants were aware of painless delivery, 34.8% of whom had obtained this information through nurses. In that study, 62.5% of the participants were interested in having painless delivery [7,10]. According to the results of the present study, the internet was the most common source of information about painless delivery. However, due to the inaccuracy of some of the information available on the internet, which can cause confusion in pregnant women about the methods, and the potential complications of painless delivery, there is a need for extensive training programs, in order to increase awareness in pregnant women regarding painless delivery, and the methods of reducing labor pain. To reach this purpose, health care workers, especially gynecologists and midwives, who have the most contact with the women during pregnancy, can be very helpful. Present study showed that desire to painless childbirth was low, and the reasons were fear of maternal and neonatal complications, lack of information about the process and belief in the usefulness of labor pain. These results are in line with Nabukenya study in 2015, who found that pregnant women had very little information about painless delivery, and the most important reason for not wanting to have a painless delivery was the desire to experience labor pain [11]. Toledo also found that the majority of pregnant women did not want analgesia during childbirth, citing a lack of knowledge about the procedure, fear of procedure, and a lack of trust in providers [12]. Orejuela in 2012 showed that 72% of women did not want to be anesthetized at the time of admission to the maternity ward. The most common reasons for reluctance were fear of back pain, lack of advice from maternity and child care centers, and the acceptance of a woman to bear the pain of childbirth [13].

Conclusion

Due to the fear of vaginal delivery because of its pain, and in order to promote vaginal delivery, and reduce unnecessary C-sections, more effective measures should be taken to increase pregnant women’s awareness and to improve their attitude to-

wards painless delivery methods. Furthermore, painless delivery should be available in more hospitals and medical centers.

Declarations

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Ethics approval and consent to participate: This manuscript was derived from a project code No. 97000786 and was approved by the Ethics Committee of Kerman University of Medical Sciences, Iran (IR.KMU.REC.1397.548). Written informed consent was obtained as a requirement to enter the study. At the request of the ethics committee, the study was conducted in accordance with the Declaration of Helsinki and Ethics Publication on Committee (COPE). Unique codes were used for each of the participants to ensure information confidentiality.

Consent for publication: Not applicable.

Competing interests: Authors mention that there is no conflict of interest in this study.

References

1. Silva M, Halpern SH. Epidural analgesia for labor: Current techniques. *Local and regional anesthesia*. 2010; 3: 143-53.
2. Khodabakhshi Koolae A, Heidari S, Khoshkonesh A, Heidari M. Relationship between Spiritual Intelligence and Resilience to Stress in Preference of Delivery Method in Pregnant Women. *The Iranian Journal of Obstetrics, Gynecology and Infertility*. 2013; 16(58): 8-15.
3. Bolbol-Haghighi N, Masoumi SZ, Kazemi F. Effect of Continued Support of Midwifery Students in Labour on the Childbirth and Labour Consequences: A Randomized Controlled Clinical Trial. *J Clin Diagn Res*. 2016; 10(9): 1.
4. Oladokun A, Eyelade O, Morhason-Bello I, Fadare O, Akinyemi J, Adedokun B. Awareness and desirability of labor epidural analgesia: a survey of Nigerian women. *International Journal of Obstetric Anesthesia*. 2009; 18(1): 38-42.
5. Federenko IS, Wadhwa PD. Women's Mental Health During Pregnancy Influences Fetal and Infant Developmental and Health Outcomes. *CNS Spectrums*. 2004; 9(3): 198-206.
6. Thorbiörnson A, da Silva Charvalho P, Gupta A, Stjernholm YV. Duration of labor, delivery mode and maternal and neonatal morbidity after remifentanyl patient-controlled analgesia compared with epidural analgesia. *Eur J Obstet Gynecol Reprod Biol X*. 2020; 6(100106).
7. Ali Alahmari SS, Almetrek M, Alzillae AY, Hassan WJ, Ali Alamry SM. Knowledge, attitude, and practice of childbearing women toward epidural anesthesia during normal vaginal delivery in Alsanayeah Primary Health Care in Khamis Mushait. *Journal of family medicine and primary care*. 2020; 9(1): 99-104.
8. Ali M, Sultan SF, Kumar A, Ghouri N. Knowledge, Attitude and Practices of Labor Analgesia amongst healthcare workers and patients: a single center cross sectional study. *Pakistan journal of medical sciences*. 2020; 36(1): 4-8.
9. Olayemi O, Aimakhu CO, Udoh ES. Attitudes of patients to obstetric analgesia at the University College Hospital, Ibadan, Nigeria. *Journal of Obstetrics and Gynaecology*. 2003; 23(1): 38-40.
10. Ekweani JC AS. The awareness and desirability of pain relief in labour among pregnant women in Zaria. *Port Harcourt Med J*. 2016; 10: 115-8.
11. Nabukenya MT, Kintu A, Wabule A, Muyingo MT, Kwizera A. Knowledge, attitudes and use of labour analgesia among women at a low-income country antenatal clinic. *BMC Anesthesiology*. 2015; 15(1): 98.
12. Toledo P, Sun J, Peralta F, Grobman W.A, Wong C.A, Hasnain-Wynia R.A qualitative analysis of parturients' perspectives on neuraxial labor analgesia. *International Journal of Obstetric Anesthesia*. 2013; 26: 119-123.
13. Orejuela FJ, Garcia T, Green C, Kilpatrick C, Guzman S, Blackwell S. Exploring factors influencing patient request for epidural analgesia on admission to labor and delivery in a predominantly Latino population. *J Immigr Minor Health*. 2012; 14(2): 287-91.