KNOWLEDGE AND ATTITUDE OF IRANIAN PARTURIENT WOMEN TOWARDS PAINLESS LABOR:
A QUALITATIVE SURVEY

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ABSTRACT… Background: Few studies have addressed Iranian women's knowledge and attitude about painless labor. **Objectives**: To assess the knowledge and attitude of Iranian women about painless labor and also about the use of pain relief methods among women attending maternity cares clinic. **Study Design:** Qualitative survey. **Setting:** Obstetric Clinic of the Hafez training and medical center in South of Iran. **Period:** Aug 2014 Sep 2014. **Materials and Methods:** 232 pregnant women participated in face-to-face interviews after selection through convenience random sampling. A self-administered questionnaire was used to collect baseline characteristics and information on their knowledge and attitude towards painless labor. **Results:** We found that 28.9% of the women expressed that they did not have any information about painless labor, while 56.5%, 12.1%, 1.3%, and 1.3% had little, moderate, much, and perfect knowledge about painless labor, respectively. Also, 15% disagreed to choose one of the painless labor methods for current delivery after achieving the information on the methods of painless labor, 23.3% were indifferent, and 61.6% agreed to choose one of the painless labor methods. We found no association between the level of knowledge and age (P=0.694) and also gravidity (P=0.436). However, the education level of women was directly associated with the level of their knowledge (P=0.028). Also, employed women and housewives had the highest and lowest level of knowledge, respectively (P=0.002). **Conclusion:** The level of knowledge and perception about painless labor is low among Iranian women, suggesting the need to implement a comprehensive program to inform pregnant women about the benefits and limitations of painless labor.

Keywords: Pregnancy, Labor Pain, Anesthesia, Knowledge, Attitude

INTRODUCTION

Understanding the concept of painless labor is an ancient topic in medicine and varies in terms of onset, intensity, and duration.[1,2] The observed variations in the features of labor pain depends on different biological, social, and ethnic characteristics, and so the pattern of this pain may vary as circadian or continuous.[3] Physiologically, labor pain originates from periodic tightening of the uterine muscles in response to the release of oxytocin.[4] Early detection of the main causes of labor pain is primarily the responsibility of pregnant women.[5] Women's knowledge about labor pain is not only the main determining factor for the correct diagnosis of pain etiology, but it can also help physicians choose the best treatment method for pain relief.[6,8]

Currently, various pharmacological and non-pharmacological treatments protocols are used to relieve labor pain such as opioids, epidural analgesia, hypnosis, or acupuncture. 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.[9,10] Various studies especially in developing nations have shown a little understanding of labor pain, painless labor, and different methods for relieving labor pain.[10] Moreover, the satisfaction level of pain relieving methods may be affected by their knowledge of pain characteristics and the methods of its relief.[11,13] In the literature, a few published studies have addressed Iranian women's awareness of painless labor.[14]

OBJECTIVES

In the present study, we aimed to assess the knowledge and attitude of Iranian women about painless labor and also the methods of relieving labor pain among women attending maternity cares clinic.

PATIENTS AND METHODS

In this qualitative survey, 232 pregnant women who referred to Hafez Obstetrics Clinic in Shiraz, southern Iran, for prenatal care participated in face-to-face interviews after selection through convenience random sampling. A self-administered questionnaire was used to collect demographic characteristics (including age, educational level, occupation state, gravidity, and mode of delivery in those with previous experience of delivery), and also information on their knowledge and attitude about painless labor and the methods of relieving labor pain (table-I). In this questionnaire, each question had different options, independent concept, and different scaling pattern. The questions focused on five concepts including impression of the nature and severity of labor pain, preference of selecting a delivery method, awareness about different aspects of painless labor, willingness to learn about methods of labor pain relief, and tendency to choose painless labor in the current labor. The reliability of the questionnaire was determined by the researchers achieving an acceptable reliability with a Cronbach alpha of 0.83. Also, content validity was determined by a nominal group of five experts using professional judgment obtaining a validity level of 0.85.

Ethical Considerations

The study protocol was approved by the Ethics Committee of Shiraz University of Medical Sciences. After getting a signed written informed consent from participants, all information were remained confidential.

If you have previous delivery, which delivery method you selected?
If you had a normal delivery, how did you imagine the labor pain?
Which method do you prefer in your current delivery?
Why do you prefer cesarean section?
Why do you prefer normal delivery?
If you choose cesarean section, which way would you prefer to anesthesia?
Do you fear the labor pain?
Is it possible to deliver without pain?
Are you aware of painless labor?
What is your source of knowledge of the painless labor?
Which method of painless labor you know?
Did you want to achieve the information on the methods of painless labor?
Are you ready to use one of the methods of painless labor in current delivery?
If you would like, which way do you prefer?
Do you want to pay the extra cost of painless labor method?
Why would not choose painless labor?
Do you know other women who have used painless labor?
Did they agree with the painless method?

Table-I The questions of the used questionnaire in our study

Data Analysis

The responses to the questions were structured in a statistical file and then analyzed using the SPSS software, version 20.0, for windows (SPSS Inc., Chicago, IL). For statistical analysis, the results were presented as mean ± standard deviation (SD) for quantitative variables and were summarized by frequency (percentage) for categorical variables. Continuous variables were compared using t test or ANOVA and/or Non-parametric Mann-Whitney or Kruskal-Wallis H test whenever the data did not appear to have normal distribution or when the assumption of equal variances was violated across the study groups. Categorical variables were, on the other hand, compared using chi-square test. $P < 0.05$ was considered statistically significant.

RESULTS

Two hundred thirty two pregnant women participated in this qualitative survey. Table II&III shows the demographic characteristics of the study population.

Age, yr	26.98±5.00
Education level	
Illiterate	3.0%
Primary level	26.8%
Secondary level	44.8%
College degree	25.4%
Occupation status	
Housewife	91.4%
Employed	4.3%
Self-employed	4.3%
Gravidity	
Primigravida	44.0%
Multigravida	56.0%
Parity	
Unipara	47.4%
Primipara	36.2%
Multipara	16.4%
Mode of delivery	
Normal vaginal	45.4%
Cesarean section	50.4%
Both	4.2%

Table-II. Demogheraphic characteristics of interviewed women

Women's preference for choosing method of delivery in their current delivery was shown in table-IV. In those women who preferred cesarean delivery, 46.8% preferred general anesthesia, 12.8% regional anesthesia, and 40.4% preferred the physician opinion on the mode of anesthesia. In figure-I showed the severity of labor pain reported by interviewed pregnant women who had pervious experience of the normal vaginal delivery.

The knowledge of the interviewed pregnant women about painless labor was depicted in figure-II. The source of knowledge was expressed to be friends and relatives (39.7%), own previous experience (9.5%), national media (3.0%), internet (3.4%), gynecologist (8.6%), anesthesiologist (4.7%), and classes during pregnancy (7.3%).

	No	Little	Moderate	Much	Perfect	P-value
Education level						0.028
Illiterate	2 (3.0)	4 (3.1)	1 (3.6)	0 (0.0)	0 (0.0)	
Primary	19 (28.4)	37 (28.5)	6 (21.4)	0 (0.0)	0 (0.0)	
Diploma	33 (49.3)	55 (42.3)	16 (57.1)	0 (0.0)	0 (0.0)	
College degree	13 (19.4)	34 (26.2)	5 (17.9)	3 (100)	3 (100)	
Occupation						0.002
Housewife	63 (94.0)	121 (92.4)	25 (89.3)	1 (33.3)	2 (66.7)	
Self-employed	3 (4.5)	5 (3.8)	2 (7.1)	0 (0.0)	0 (0.0)	
Employed	1 (1.5)	5 (3.8)	1 (3.6)	2 (66.7)	1 (33.3)	
Gravidity						0.436
1	28 (42.4)	62 (47.3)	11 (39.3)	0 (0.0)	1 (33.3)	
2	20 (30.3)	45 (34.4)	11 (39.3)	3 (100)	2 (66.7)	
3	14 (21.2)	13 (9.9)	5 (17.9)	0 (0.0)	0 (0.0)	
4	1 (1.5)	5 (3.8)	1 (3.6)	0 (0.0)	0 (0.0)	
5	2 (3.0)	6 (4.6)	0 (0.0)	0 (0.0)	0 (0.0)	
8	1 (1.5)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	

Table-III. Association between the level of knowledge toward painless labor and baseline data

Preferred technique of delivery	Frequency	Percent	The cause of the preference	Frequency	Percent
Normal vaginal delivery	124	53.4%	To be conscious at the time of birth	42	33.8%
			Fear of complications with anesthesia	64	51.6%
			The higher cost of caesarean	18	14.5 %
Cesarean section	108	46.6%			
			Fear of normal delivery	55	50.9%
			Improper previous experience of normal delivery	8	7.4%
			Proper experience of previous cesarean section	45	41.6%

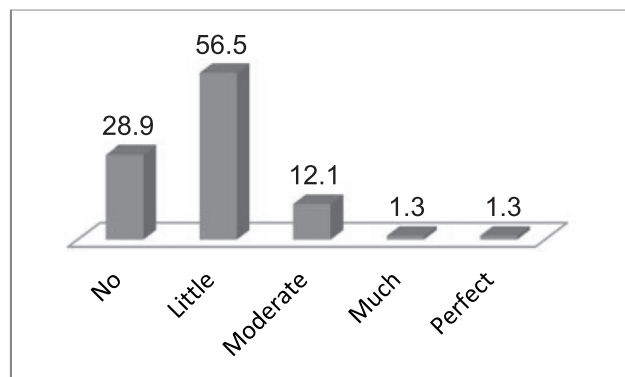**Table-IV. Women's preference for choosing method of delivery in their current delivery**

Figure-I. Severity of labor pain reported by interviewed pregnant women
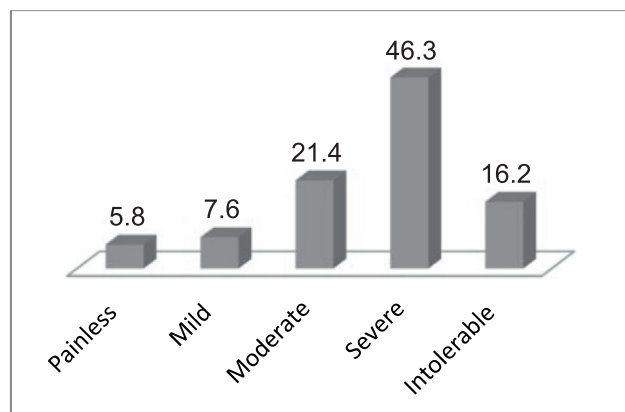

Figure-II. Knowledge about painless labor in interviewed pregnant women

Moreover, preference to learn about painless labor and the methods that women choose after receiving information on the methods of painless labor were shown in table-V. Table-VI showed the response to the question "Which method do you prefer if desired?" Also, the main reason for not selecting painless labor is shown in table-VII.

Preference to learn about painless labor	Frequency	Percent
Not willing to learn about painless labor	6	2.6%
Opposed to receiving information about painless labor	9	3.9%
Had no comments	44	19.0%
Agreed with learning about painless labor	173	74.6%
After receiving the information on the methods of painless labor		
Disagreed to choose one of the methods for painless labor	35	15%
Indifferent to choose one of the methods for painless labor	54	23.3%
Agreed to choose one of the methods for painless labor	143	61.6%

Table-V. Preference to learn about painless labor and the methods that women choose after getting information.

The method that women preferred	Frequency	Percent
Preferred to choose intra muscular injection	9	3.9%
Preferred to choose regional anesthesia	95	40.9%
Preferred to choose intravenous injection	8	3,4%
Preferred to choose gas anesthesia method	45	19.4%
Do not choose any technique	75	32,3%
Total	232	100%

Table-VI. The method that women preferred if they desired painless labor.

The main reasons	Frequency	percent
Believe that birth is natural and requires no intervention.	36	15.5%
Believed that the mother should have to experience the pain of childbirth	35	15.1%
Concerned about neonatal complications	45	19.4%
Concerned about assisted delivery	16	6.9%
Had feared cesarean section	12	5.2%
Did not express any particular reason	55	23.7

Table-VII. The main reason for not selecting painless labor

Finally, 31.9% knew other women who had selected painless labor, 6.4% of which disagreed with painless labor, 11.6% were indifferent, and 12.9% agreed with painless labor. Financially, 44% disagreed to pay extra cost for painless labor, 22.0% had no comment on this item and 34.1% agreed to pay extra cost for painless labor

By considering the level of knowledge about painless labor, we found no association between the level of knowledge and women's age (P=0.694). However, the educational level of women was directly associated with the level of their knowledge towards painless labor; so that complete information on this type of labor was only revealed in those with college degree (P=0.028).

Also, level of knowledge towards painless labor was significantly associated with the type of occupation. In this regard, the highest and the lowest level of knowledge was found in employed women and housewives, respectively (P=0.002). There was however no relationship between gravidity and level of knowledge towards painless labor (P=0.436, table III).

DISCUSSION
The present study attempted to assess the knowledge and perception of pregnant women towards painless labor and its applications and limitations. As previously pointed, different pharmacological and non-pharmacological methods are now employed to induce pain relief aided by different roots in pregnancy including different anesthetic agents, hypnosis, massaging, acupuncture, and herbal materials; however it is interestingly important that the level of response to these methods seems to be women's beliefs on the effectiveness and efficacy of these methods. In this context, determining the knowledge and attitude of pregnant and non-pregnant women towards painless labor is essential. In Iran and previously, normal delivery was the most common mode of delivery, while in the previous two decades, it has been dramatically replaced by cesarean delivery. The tendency for local (versus general) anesthesia has also considerably increased. Thus, we hypothesized that the interest in painless labor may increase among Iranian pregnant women. Therefore, our study focused on the following important points. First, most of the assessed women had a college degree, thus their responses to the questions seems to be authentic. Second, the normal and cesarean delivery had been equally selected in our women. Also, the most important criteria for selecting the mode of delivery included little information about efficacy and outcome of each of delivery mode. Importantly, about one-third of the women had no information about painless labor and in fact, only 2.6% of women had an acceptable knowledge of painless labor. More interestingly, most women received their awareness of painless labor from their friends or relatives and therefore healthcare providers had a minor role in informing women about this subject. Despite little information on painless labor and its related aspects, more than half of the pregnant women interested in selecting painless labor in their current delivery. About one-third of them were willing to bear the extra cost of this mode of delivery. In general, in spite of the low level of knowledge toward painless labor and its advantages and disadvantages, tendency to choose this mode is high among Iranian women; however healthcare professionals have a little role in enhancing women knowledge and attitude to painless labor. Thus, with respect to the increased desire to choose painless labor, proper continuous sessions should be scheduled in related clinics

and hospitals to inform women about various aspects of painless labor by healthcare providers. On the other hand, source of information should be shifted from unaware friends and relatives to aware healthcare professionals.

Reviewing the literature showed varied results on knowledge and attitude towards painless labor and labor pain relief. Ogboli-Nwasor and colleagues[15] in Nigeria showed that 94.8% of women expressed necessity for pain relief in pregnancy and only 3.2% believed that pain relief is unnecessary. Mung'ayi et al[16] showed that 56% of Nairobi women had a good knowledge about labor pain relief methods. Similar to our survey, friends were the major source of information. Oladokun et al.[17] among Nigerian women found that 80.5% had good knowledge of labor pain while only 19.5% of them were aware of epidural pain relief. In another study by Minhas et al.[18], 76% of the females were aware of epidural analgesia as a labor pain relieving method; however, only 19% availed this type of anesthesia. About 40% had heard about labor pain relief from their obstetricians and 64% from friends or relatives.

CONCLUSION
In conclusion, it seems that the level of knowledge and perception about painless labor is globally low suggesting the need to implement a comprehensive program to inform pregnant women about benefits and limitations of painless labor. Despite increase of mothers' knowledge, it is essential to form anesthesia and gynecology teams with a special program for setting-up and managing preterm labor in delivery centers. Another important point is that a high percentage of women would not perform painless labor because of its high financial burden, but due to following health development project in Iran, painless labor is now carried out free and thus a much higher percentage of women have a tendency to do it.

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> " **"One sees great things from the valley; only small things from the peak."**

Gilbert K. Chesterton
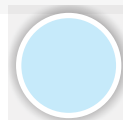
AUTHORSHIP AND CONTRIBUTION DECLARATION

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2	Golnar Sabetian	Designing survey, supervise study conduction of study, Writing draft of article	
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