

# Cultural perceptions and preferences of Iranian women regarding cesarean delivery

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## ABSTRACT

**Background:** Data was reported in Iran in 2013 has shown that almost 42 percent of deliveries in public hospitals and 90 percent in private hospitals were carried out with cesarean section. This high rate of cesarean requires careful consideration. It seems that making decision for cesarean is done under the influence of cultural perceptions and beliefs. So, this study was conducted to explore pregnant women's preferences and perceptions regarding cesarean delivery.

**Materials and Methods:** A focused ethnographic study was used. 12 pregnant women and 10 delivered women, seven midwives, seven gynecologist and nine non-pregnant women referred to the health clinics of Tonekabon, who selected purposively, were included in the study. To collect data semi-structured in-depth interviews and participant observation were used. Study rigor was confirmed through prolonged engagement, member check, expert debriefing, and thick description of the data. Data were analysed using thematic analysis and MAXQDA software.

**Results:** Four themes emerged from the data including personal beliefs, fear of vaginal delivery, cultural norms and values and also social network. These concepts played main roles in how women develop meanings toward caesarean, which affected their perceptions and preferences in relation to caesarean delivery.

**Conclusion:** Most of pregnant women believed that fear of vaginal delivery is a major factor to choose caesarean delivery. Hence, midwives and physicians could help them through improving the quality of prenatal care and giving them positive perception towards vaginal delivery through presenting useful information about the nature of different modes of delivery, and their advantages and disadvantages, as well as the alternative ways to control labor pain.

**Key words:** Cesarean delivery, decision-making, focused ethnography, qualitative study

## INTRODUCTION

Childbirth and the passage to motherhood can be thought of as one of the most beautiful event in every woman's life. In fact it is a stressful event which, sometimes, due to medical reasons and in order to prevent risks that threats to mother and fetus, could not happen normally, so that cesarean section (C-section) is carried out as a necessary action in this condition.<sup>[1]</sup>

Although it can be said that in many cases, medical

necessities do not result in delivery by cesarean method, lack of awareness, false beliefs and behaviors determine the method of delivery, i.e. giving priority to cesarean delivery roots in psychological, social, and cultural factors.<sup>[2]</sup> In such a way, nowadays in many societies, cesarean has converted to a cultural issue and more than half of the women choose cesarean delivery voluntarily.<sup>[3]</sup>

Ever-increasing cesarean rate in many countries causes researchers' and public health professionals' concerns. So, in 1994, the World Health Organization recommended that the cesarean rate must be between 5- 15 percent.<sup>[4]</sup>

Cesarean rate has been different in various parts of the world and it is ever increasing. During 1970- 1980 and afterwards, cesarean rate increased worldwide<sup>[5]</sup> and it is increasing from 5% to 25% in recent years.<sup>[6]</sup>

The 'Integrated Monitoring Evaluation System Survey' (IMES) conducted on women aged 10-49 years also reported the rate of C-section to be as high as 40%.<sup>[7]</sup> In a study conducted by Shakeri *et al.*, in 2009 to assess the rate of C-section in Zanjan, they reported the rate of C-section is high (43%).<sup>[8]</sup>

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Many studies were conducted on the reasons of choosing cesarean and the researchers believed that various factors were involved in increasing cesarean rate. These factors included: Pregnant woman's request, tendency to reduce pregnancy number, increased number of nulliparous women, increased age of the first pregnancy, increased multiple or twin pregnancy, decreased applications of forceps and vacuum during delivery, increased use of induction during labor, dystocia and non- cephalic presentations, increased safe application of anesthesia, high risk pregnancy and previous cesarean delivery, provision of opportunity for tubectomy, concern about and fear of labor pain and physical impacts of NVD, tendency to delivery in specified and estimated time, decreased neonatal risks and pelvic floor risks, using electronically monitoring means, fear of complaining against physicians, demographic factors, educational level, low awareness of delivery process and following mode.<sup>[9-12]</sup>

Review of the studies on Iranian pregnant women's preferences regarding cesarean showed that they were mainly performed quantitatively and most of them were cross-sectional ones related to examining the reasons for choosing cesarean method, its rampancy, and other related factors. Since none of these studies in Iran has considered the perception of cesarean and its preference a cultural phenomenon, the necessity of the examination and deep study of the above subject becomes obvious.

Pregnant women are placed in a decision-making process about choosing vaginal or cesarean delivery method. Various factors play important roles in this selection. Generally, decision-making and selection are subjective processes that all human beings deal with throughout their life. Decision-making process occurs in light of individual's culture, perceptions, beliefs, insights, and personality, and these factors interact.<sup>[13]</sup> So, determining women's perceptions and preferences about cesarean is important.

Culture provides a frame for directing a person's behavior in a special situation in that individual's cultural grounds affect the expression of the concept and meaning of delivery.<sup>[14]</sup> Thus, culture plays an important role in person's attitude toward the kind of delivery, beliefs, and delivery behaviors.<sup>[15]</sup>

One of the qualitative research approaches is ethnography which is the most perfect method for finding answers for questions and goals of the recent study. Because ethnography is a kind of qualitative method in which researchers describe the common and acquired patterns of behaviors, beliefs, values, and language of a same cultural group.<sup>[16]</sup>

Ethnographers use culture as a lens for describing cultural members, phenomena, and problems and emphasize the importance of the study of human's behaviors in a culture ground to understand cultural rules, norms, and usual cultural habits.<sup>[17]</sup> On the other hand, ethnographer deals with the interpretation of culture or phenomena from participant's view to make others alien with that culture understand it.<sup>[18]</sup>

Nowadays, cesarean is the first option for delivery in most societies. Although this method of delivery has various outcomes and complications and usually midwives and physicians do not recommend it unless special circumstances happen, but tendency toward the selection of cesarean in the entire world is increasing. Since there is little information about women's perceptions, preferences, and norms on cesarean delivery, maternal health won't occur without clear understanding of women's tendency toward cesarean and their interpretations. On the other hand, Tonekabon has just one hospital where cesarean rate is 50%. Considering the high level of cesarean compared to what has been determined by the WHO (up to 15%), it is necessary that effective interventions occur with regard to the pregnant women's perceptions and preferences about cesarean delivery in the cultural ground of that region. According to researcher's work history in Tonekabon hospital and health centers and her familiarity with determining the cultural factors on cesarean selection in this area, this study contributes to determining the meaning of women's behaviors about cesarean delivery and its preference. So, this ethnographic study was conducted to explore pregnant women's preferences and perceptions about cesarean delivery.

## MATERIALS AND METHODS

Focused ethnographic method has been used in this study, through which pregnant women's perceptions and preferences about cesarean delivery were deeply studied. Ethnography deals with the description of cultural beliefs, norms, perceptions, and cultural responses to delivery and its effect on the selection of cesarean delivery, and provides a ground for the perception of the meanings of cesarean delivery.<sup>[19]</sup> Researchers use the term "focused ethnography" for ethnography in small-scale (micro) ethnography. Focused ethnographies study a special problem in a single field with a few participants. Unlike Max ethnography which studies the examination of culture in a wider ground and during a longer period of time, focused and classic ethnographies include clear observations of participants in a real situation, and asking questions to understand what is happening and using other available information sources for comprehensive perception of people, locations, and events.<sup>[20]</sup>

Participants of this study consisted of 22 pregnant women in their third trimester and also delivered women, seven midwives, seven gynecologists, and nine non-pregnant women. They were interviewed in health care centers, hospital and obstetrics and gynecologic clinics in Tonekabon. Participants were those who tended to participate in this study. Eligible participants in this study were included. Participating standards in this study included pregnant women who referred to health care centers to receive prenatal care in their third trimester, women who preferred cesarean delivery and had no obstetrics problems that impose cesarean surgery, and delivered women with cesarean who referred to Tonekabon health care centers to receive prenatal care. Pregnant and delivered women were selected from native ones who referred to Tonekabon health centers or gynecologists' offices for prenatal care and also for postpartum health care services.

The researcher interviewed some midwives and gynecologists individually to explore their perceptions and preferences about cesarean. These persons were selected from those who had authority in the field and had at least five years of experience of treatment, training or research in the field of childbirth. Also, non-pregnant women were individually interviewed.

Participants were selected using purposive sampling method and maximum variation strategy. In this sampling method, those participants were selected who could present special and accurate information about the topic under study. In the strategy with maximum variation, the researcher selected participants with different insights, viewpoints, and characteristics. To this aim, the researcher selected the participants from different groups with various characteristics including pregnant women with different pregnancy and delivery numbers, women who delivered through cesarean method, midwives and gynecologists, and non-pregnant women.

To collect data, at first, the researcher introducing herself and expressing the aim of the project assured the participants to maintain confidentiality and observe moralities during interview and made them sure from being free to withdraw from the study at any time. Then the researcher conducted observations and semi-structured interviews in a private environment and in one of the health centres' rooms and gynecologist's offices using broad questions, with average time of one hour for interview and an hour and a half for observation

Observations were performed as an "observer as participant" and recorded as field notes. This study used three types of observations including descriptive, focused, and selective.

During the observations, nine components of culture including people, actions, instruments, events, functions, time, goals, physical characteristics of the site, and feelings were taken into account.

Three different methods of interview with clear goals, ethnographic explanations, and questions were used in this study. An interview guide was used to do semi-structured interview. The interview was started by communicating and gaining participants' trust. Then, the participants were asked to express their perceptions and preferences in relation to cesarean. Then, questions were asked based on participants' answers and interview guideline. Also probing questions were used along with the interview in cases where they were needed. At the end of the interview, the participants were asked to express if they had any viewpoints. Finally, after thanking the participants, they were told about probable interviews in the future. The interviews were recorded and listened carefully with the interviewees' allowance, and then they were transcribed as quickly as possible in order to their accuracy to be examined and checked by the interviewees.

In qualitative studies, data saturation is a reason for adequacy of the sampling so that after interviewing 45 participants, no new ideas emerged for choosing cesarean delivery, and therefore the process of sampling terminated.

In this study, the analysis of the data started simultaneously with data collection through observations and interviews using the six-stage thematic analysis (Braun and Clarke 2006):<sup>[21]</sup>

- Stage 1: Getting acquainted with the data
- Stage 2: Constructing primary codes
- Stage 3: Searching themes
- Stage 4: Reviewing themes
- Stage 5: Defining and naming themes
- Stage 6: Preparing reports

At the first of data collection, two primary interviews were conducted which followed by the main interviews. Questions were around the following topics:

- What does cesarean mean to you?
- What are the factors affecting your decision?
- Why do some women give priority to cesarean?

Written text of every interview was transcribed after several times of reading in cases needed. To analyze data, every interview was first transcribed word by word and line by line and codes were written in the margin of texts, and those from participants' conversations were written. Through data analysis 150 non-repetitive codes were extracted, and then similar codes were arranged in sub themes. The most important and preferred cultural perceptions and beliefs

about cesarean delivery were grouped in 20 sub themes and 4 themes. The following measures were taken for the trustworthiness of the data: Long term involvement with the participants during the data collection, continuous observation, using different methods to collect data including individual interviews, participant observations, writing field notes, providing thick descriptions, peer debriefing, member check and searching for deviant cases.

The recent study was confirmed by Mashhad University of Medical Sciences Ethics Committee. Before conducting the study, oral and written letters of consent were obtained from each participant including pregnant women, women who had given birth, non- pregnant women, midwives, gynecologists and obstetrics. There were all reminded that the participation would be voluntary and they could withdraw any time during the study.

## RESULTS

The mean age of the participants was  $25.19 \pm 4.68$  years. Majority (80%) of them had high school diploma and majority (70%) of them were housewives. Nearly half (49%) of the women were primiparous. One-third of women have had previous cesarean section.

The most important perceived points in making decision for cesarean can be classified into four classes: Personal beliefs, fear of NVD, cultural norms and values about cesarean and social networks. Several sub-themes and sub-sub themes also emerged from the data (e.g. a process without pain, a surgical technique, a process with future complications, and protecting the genital anatomy).

### Personal beliefs

some beliefs refer to personal experiences or others' experiences of previous delivery. The results of the present study showed that personal beliefs about cesarean root in personal experiences, information from others and one's own inference of others' delivery behaviours and these beliefs may even be the simultaneous products of these factors. One of the main factors that form persons' beliefs to delivery is the personal experience in previous deliveries, i.e. having satisfaction from and desirable experience of previous cesarean delivery is a factor in choosing it again.

*"My surgery was very light and satisfactory. When I went home, I did my baby's care myself. I embraced my baby two days after cesarean. I was only worried about my surgery location. When the stitches were removed in the tenth day, everything was ok. Because of this I want to do cesarean."* (A pregnant woman, 34 years old, second pregnancy, with cesarean delivery history)

One of the midwives who had done cesarean recently for the second time, expressed her satisfaction from her previous cesarean as the reason for her giving priority to cesarean delivery.

Most of the midwives, delivered and pregnant women believed that others' delivery experience is an effective factor in determining women's perception about cesarean and its selection. From all of the participants, among midwives' and physicians' and others' advices, others had the most important role and women were heavily affected by them. One of the midwives said that was due to lack of delivery experiences and having no information about cesarean delivery.

*"I think the most important thing is others... especially they mostly pay attention to others' words. I think because of having no experiences, women notice others' viewpoints."* (A midwife, 30 years old, with 6 years' working history)

Most pregnant women stated some advantages of cesarean delivery that this positive belief to cesarean delivery resulted from information obtained from others, especially those who themselves delivered by NVD or cesarean. Advantages that most of them mentioned for cesarean included lack of labor pain, ensuring fetal health, preservation of genital system's beauty, fast delivery, pain after delivery as an only problem, lack of numerous examinations, lack of great pressure to abdomen, lack of uterine and ovarian dysfunction, painless delivery, the need for short time care, and independence in doing individual tasks. Most of participants believed that the most important advantage of cesarean was preservation of genital system's beauty and lack of vaginal relaxation, which they regarded it as a main factor for maintaining intercourse.

*"One's milieu, i.e. those who contact with the person are, mainly effective. In my own case, my colleagues' views were very useful to me because some of them who delivered in cesarean method said the delivery had no pain and ensured baby's health and more important than these was that the intercourse problems didn't exist. So I liked delivery in cesarean method."* (Delivered woman by cesarean, 32 years old, holding BA degree)

Based on personal experience and sampling from others, most persons who selected cesarean and some persons who delivered in cesarean method believed that cesarean delivery was a painless one. While one of the midwives teaching at NVD preparation class and also three gynecologists believed that although in cesarean delivery severe pains of NVD did not exist, the pain after cesarean was severer than labor pain.

Another factor forming personal beliefs about cesarean is individual's own inferences from previous delivery history. Pregnant women believed that by delivering in cesarean method, they must deliver in cesarean method section for the next deliveries. In other words, cesarean delivery was a predictor of the kind of next deliveries for them.

*"I feel I have to deliver in cesarean method in my second delivery. Because my previous delivery was in cesarean method despite my will, I couldn't deliver NVD and I went to surgery room. My second decision is somewhat obligatory."* (A pregnant woman, second pregnancy, diploma, cesarean delivery history)

Inferences from others' behaviors about the kind of delivery, especially from mother and physician, are among the effective factors on pregnant women's preferences about cesarean. It is interesting that most of the women believed that problems happened during NVD or afterward for family members, relatives, and friends would be repeated for them as well. Hence, they avoided NVD and preferred cesarean. Some pregnant women believed that because their sisters and mothers could not deliver in NVD or they delivered badly, so they themselves cannot deliver in NVD and voluntarily select cesarean delivery.

*"I asked my mom about the time she delivered me. She told, 'you were really big and I suffered a lot.' I think that I'm like my mother and can't deliver in NVD, so I prefer cesarean."* (A pregnant woman, 28 years old, nullipara, diploma)

Midwives and physicians believed NVD was difficult among north women. The gynecologist who worked in Kerman's hospital in the past expressed north women had more unfit pelvic and bigger fetuses than south women. So, north women are badly delivering ones in NVD.

*"I was in Kerman. Kerman's women delivered better than north women. There are cases as CPD<sup>1</sup>, macrosomia and meconium in the north of Iran which increase cesarean rate. North women are not perfect cases for surgery because they have special tissue perfusion, despite being badly delivering women."* (A gynecologist, 50 years old, 23 years' working history)

### Norms and cultural values

Society members' and others' viewpoints, beliefs, and attitudes affect women's viewpoints about cesarean and its preference. Hearing positive or negative stories of others lead their tendency to do cesarean delivery. Following mode in choosing cesarean delivery or being a prestigious method as a cultural belief and social norms in society played effective roles in pregnant women's delivery behaviors. So, most pregnant women and midwives considered it one of

the factors in preferring cesarean delivery.

*"I think if one does cesarean, she is a high class person. Because cesarean is more expensive, everyone cannot afford it, and since it is in vogue nowadays I want to do it."* (A pregnant woman, 28 years old, nullipara, diploma)

Cesarean is accepted as an expensive delivery method that is exclusive for rich persons among the common men. One of the important factors in choosing delivery tariffs, and on the other hand, the financial power of persons for affording hospital and delivery costs. Overall, cesarean has become an indicator of a stratified gap among pregnant women because cesarean tariff is higher than NVD and in most cases persons with high economic status select this kind of delivery.

*"Cesarean is performed in cities, especially rich ones afford it."* (A pregnant woman, 30 years old, third pregnancy, resident of a village)

### Fear of NVD

Most participants expressed fear of NVD as the most importantly perceived factor about cesarean. Fear of NVD has reasons which will be discussed in following. Participants believed that the most important reason for fear of NVD in the first place is pain and complications of NVD, and then delivery in an educational hospital and numerous examinations by students.

*"Students bother you; examine you several times, hence you are afraid of NVD."* (A pregnant woman, 24 years old, second pregnancy and one NVD history)  
*"NVD causes pelvic floors dysfunctions but cesarean surgery doesn't bring this problem. Sometimes it causes urinary and intercourse dysfunctions in future."* (A gynecologist, with 15 years' working history)

Another factor which caused women to be afraid of NVD was fear of the lack of midwives' support during labor and delivery. One of the gynecologists believed that it was due to the low number of midwives and their fatigue. One of the other most important roots of fear that was referred to observing severe labor pain in other pregnant women that led to forming false beliefs and behaviors in some participants and deciding to do cesarean.

*"The environment is very effective..... sometimes a client enters a delivery room, suddenly a problem happens for another one. All women cries, then the client scares and prefers to do cesarean."* (A midwife, 30 years old, 6 years' working history)

One of the pregnant women indicated that the fear of death during NVD was one of the perceived points about cesarean. According to some of the pregnant women's,

<sup>1</sup> Cephalopelvic disproportion

midwives' and gynecologists' views, fear of NVD relates to low age, lower levels of education, low self-confidence, non-hospital jobs, culture change, and lack of receiving enough training.

### Social networks

Pregnant and delivered women believed that others' viewpoints and values about cesarean were important in forming the meaning of cesarean and in preferring it. Since most pregnant women had no experience or information about the kinds of deliveries and had a bad image of NVD, midwives and students, they were escaping it. Usually pregnant women request help from others to complete their information and they seek their experiences. From among physicians, midwives, and others, others played the most important role. So, they were the powerful stimuli in women choosing to perform delivery in NVD or cesarean. But the main point in these interviews was that there were cases in which others remarked about the kind of one's delivery, i.e. they encouraged the pregnant women to do a certain kind of delivery or scared her. But those who had enough information about deliveries selected the delivery method confidently.

*"Most of my friends and my two sisters tell me not to do cesarean. Because we performed cesarean, now our stitches' places are painful and ... but I've decided to choose cesarean because it has no pain and I can deliver every time I want."* (A pregnant woman, 23 years old, nullipara)

An interesting point in this regard was that the pregnant women sampled their gynecologists' kind of delivery (cesarean) for choosing their own kind of delivery. One of the pregnant women expressed her reason for selecting cesarean in this way:

*"Since most of gynecologists themselves delivered in cesarean method, so it is superior to other kinds of deliveries and is a better option. I know gynecologists around here who didn't deliver by NVD, so cesarean is good."* (A pregnant woman, 20 years old, nullipara, diploma)

During interviews, husbands also played a main role in selecting cesarean. They believed the most important advantage of cesarean was lack of vaginal relaxation and so, lack of intercourse dysfunctions.

*"My husband says if you deliver in NVD, we will expose to problems in intercourse later."* (A pregnant woman, 27 years old, nullipara, associate of arts)

### DISCUSSION

Based on the findings of this study, fear of NVD and its complications in the first place and then frequent students' examinations were the main factors in preferring cesarean.

The most important concern among NVD's complications was related to the effect of NVD on genital system' beauty, vaginal relaxation and intercourse dysfunctions in future, which some women, midwives, and even gynecologists believed it. Other factors which caused fear of NVD included lack of midwives' support during labor and delivery, observing labor pain or delivery problems in other pregnant women's case, and death during labor and delivery.<sup>[22]</sup> Results of the study conducted by Nisar *et al.*, showed the greatest reason for choosing cesarean was avoiding labor pain and decreasing risks of fetal distress.<sup>[23]</sup> Results of the study performed by Kinglee *et al.*, in China showed that four factors played a main roles in shaping positive perceptions about cesarean and preferring it which included avoiding labor pain, maternal and fetal risks, cultural and belief systems, autonomy testing in decision-making process and disseminating cesarean.<sup>[24]</sup> Also, the study by Poikkeus *et al.*, reported that exaggerated fear of NVD and labor pain, false image of disability from NVD encouraged women to prefer voluntary cesarean.<sup>[25]</sup>

Results of this study indicate that pregnant women's personal beliefs to cesarean resulted from others' delivery experiences or experiences resulting from the observations of delivery outcomes in others, awareness of cesarean nature of cesarean and its advantages and disadvantages. The participants who were satisfied with their previous cesarean prefer it again. Those who observed complications of NVD in others avoided and tended to do cesarean. Hodent *et al.*, showed that pregnant women believed delivery satisfaction or positive experiences of delivery were related to four key points: Their relation to midwife or physician, midwife's or physician's support, personal expectations and participation in decision-making.<sup>[26]</sup>

Almost all pregnant women who had positive perceptions about cesarean and preferred it considered many advantages for cesarean such as ensuring fetal and maternal health especially in cases like infertility, lack of vaginal relaxation and hence lack of negative effect on intercourse, independence in doing individual tasks and caring the baby, and doing cesarean on scheduled time. The study by Movahed *et al.*, indicated that most people had a false perception following each of these two methods of deliveries even after a delivery without any complications, and that was the disability or dysfunction in sexual relations and decreasing sexual satisfaction of the husband. While these researchers showed sexual function and satisfaction from it are mental and emotional perceptions rather than being affected mostly by physical factors and it wasn't affected by the number and method of delivery.<sup>[2]</sup>

Also in this study, one of the reasons which caused pregnant women to tend to cesarean was lack of sufficient

awareness of the nature of deliveries and their advantages and disadvantages. Gamble *et al.*, also showed women who had lower awareness about the kinds of deliveries preferred cesarean.<sup>[27]</sup> Result of the studies by Faramarzi *et al.*, showed pregnant women's awareness of NVD and preferring it was lower than cesarean. Only 4.8% of women were well-informed and those who had lower knowledge in this subject selected cesarean.<sup>[28]</sup> Kamran *et al.*, confirmed the effects of personal beliefs and motivation on quality of women's behaviour.<sup>[29]</sup>

Social norms and values to cesarean are very effective in accepting it. In this study, social norms of cesarean delivery included high social class and following mode. Since cesarean tariff was higher than NVD, most people believed cesarean was a delivery that the rich and those from higher economic status select it and since would be considered more prestigious. While Wiklund *et al.*, reported that in Sweden, lower class people or aged women select cesarean.<sup>[9]</sup> Also in this study some of the pregnant women blindly and unwittingly prefer cesarean delivery, despite having economic problems. Recently, Gamble *et al.*, showed the reasons of cesarean selection. In most cases, medical norms of health services root in nonmedical matters.<sup>[30]</sup> A few studies in social sciences have showed that social class plays an important role in pregnant women's perception about the kind of delivery and its selection.<sup>[31]</sup> Bolajoko *et al.*, showed social class affected women's perceptions and exceptions of their body and kind of delivery.<sup>[32]</sup>

Social network is another factor that plays a role in selecting cesarean. Usually husband and others play prominent roles in selecting the kind of delivery. Pregnant woman selects her kind of delivery based on her husband's, families' and friends' opinions regarding the kind of delivery because their ideas are important to her. It is obvious that pregnant women prefer a special kind of delivery based on the collection of others' ideas about the kind of delivery or preferring some of them. Also, in this study, women's subjective norms about cesarean resulted from the effect of others in the first place, and then physician and husband. Results of the studies in social sciences on giving priority to a special kind of delivery have showed that women rely heavily on the informal information obtained from sources as friends, families, television, internet, and common men's advices about pregnancy and delivery, while formal centers such as places for presentation of prenatal care or educational classes had minimum effects on women's perceptions about delivery and pregnancy.<sup>[33]</sup> Also, in a study by Shahraki *et al.*, factors forming improper subjective norms for selecting cesarean voluntarily included encouragement by the family members (in half of the cases), husband (in a few cases), and physician (in a few cases).<sup>[34]</sup> Results of study by Sharifirad *et al.*, showed physicians were ranked first in

forming pregnant women's subjective norms, and husbands, mothers, friends, books, mass media and presentation of health services gained other ranks.<sup>[35]</sup>

Social protection plays an important role in giving priority to cesarean because some pregnant women placed their criteria for selecting the kind of delivery based on presence or absence of a companion during and after delivery, i.e. they expressed having a companion and, so, existence of social and emotional support as one of the reasons for giving priority to cesarean. Even many women imagined by doing cesarean they would gain others' attentions more and more and enjoy more social support. In this study, companion's presence and suggesting disability for NVD to pregnant woman, and also companion's insistence and request from physician for doing cesarean were one of the factors that midwives attached to increasing cesarean rate i.e. physicians deliver their clients with cesarean because of the fear of legal problems and their companions' complains following not accepting to do cesarean. Adjustment of punitive rules, making professional accountability insurance obligatory for midwives and physicians, presenting correct information to midwifery cadre regarding rules of professional offences and how of enjoying law points advocating care cadre in cases of unpremeditated offences and so on are among the solutions to alleviate this problem.<sup>[22]</sup> As it was shown in a study by Belizan *et al.*, the patient's and her family's insistences were among the factors increasing cesarean rate.<sup>[36]</sup> In preparation classes for delivery, companions are advised to participate in these classes to help pregnant women during labor. But in practice these persons are stimulus for cesarean delivery. So this issue necessitates more attention to more careful training of companions about the nature and advantages and disadvantages of deliveries and delivery outcomes in mothers and their fetus in this class.

The strength of the present study is the use of a qualitative approach in achieving first-hand information regarding pregnant women's perceptions and preferences about cesarean in Iranian culture. To this aim, maximum variation of sampling was used in this study, i.e. different groups consisting of pregnant women, those who delivered in cesarean method, non-pregnant women, midwives and obstetrics with different characteristics including the number of pregnancy and delivery, level of education and age were interviewed.

Data were collected from various centers like health care centers, clinics, gynecologists' offices and hospitals. Another point of strength in this study was its novelty. No other investigation has been done so far to determine Iranian women's perceptions and preferences about cesarean in Iranian culture. This study can take important steps in changing society's beliefs and convictions regarding

cesarean by determining pregnant women's views and beliefs about the meaning of cesarean.

This study had some limitations, though. Lack of sufficient motive among some of the participants for interview and observation was one of the limitations of this study. Furthermore, in this study, only Iranian pregnant women's perceptions about cesarean were studied. So, other qualitative researches to determine Iranian pregnant women's preferences about NVD and society's beliefs and opinions regarding the kind of delivery are suggested as well.

## CONCLUSION

Today cesarean rate is ever-increasing and choosing cesarean is converted to a culture and is accepted as a social class. WHO has suggested maximum cesarean rate to be 15% based on medical indications, while this amount is 50% in Tonekabon. It seems that the lack of awareness and wrong beliefs may cause this high rate of cesarean. Since fear of NVD complications and labor pain include most of the reasons for tendency toward cesarean, it is suggested to present enough information on advantages and disadvantages of different modes of delivery to pregnant woman and their companions as well as training them the methods of pain relief in NVD cases. Also training the methods of coping with anxiety and fear during pregnancy and before delivery could help pregnant women to select NVD as their choice of delivery. Highlighting the role of midwives in delivering prenatal care services and adjusting delivery tariffs are alternative ways to decrease cesarean and increase NVD rate.

In order to change the social and cultural beliefs in favor of NVD, it seems that positive sociocultural beliefs toward vaginal delivery should be improved and negative ones decreased in different ways. Using health and medical media programs with focus on the advantages of NVD, developing electronic health networks and disseminating useful books and educational materials in high schools and universities, disseminating bulletins to convey proper easy-to-understand messages in the local communities could be possible ways to enhance community awareness of NVD advantages

Also emphasizing on the benefits of NVD in family planning classes, making films in which NVD is introduced as the best method to end pregnancy, designing childbirth preparation classes. making pregnant women familiarize with delivery room and midwives before birth and taking them to postpartum wards to observe the problems of postpartum mothers who have undergone cesarean to learn lesson

from their experiences could be useful to change pregnant women's culture and direction toward NVD in the society .

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