Original Article

Health Care System Barriers to Vaginal Birth after Cesarean Section: A Qualitative Study

Mahboobeh Firoozi[1], Fatemeh Tara[2], MohammadReza Ahanchian[3], Robab Latifnejad Roudsari[4]

[1]PhD Student of Reproductive Health, Nursing and Midwifery Care Research Center, Mashhad University of Medical Sciences, Mashhad, Iran, [2]Professor, Nursing and Midwifery Care Research Center, Mashhad University of Medical Sciences, Mashhad, Iran, [3]Professor, Ferdowsi University of Mashhad, Mashhad, Iran, [4]Professor, Nursing and Midwifery Care Research Center, Mashhad University of Medical Sciences, Mashhad, Iran

Abstract

Background: Approximately half of mothers give birth by cesarean section in Iran and two-thirds of them are repeated cesareans. Repeated cesarean is threatening for the mothers and newborns and not compatible with fertility policies in Iran. Vaginal Birth After Cesarean (VBAC) is a reasonable strategy but its prevalence is very low due to some barriers. The aim of this study was to explore barriers to VBAC in health care system. **Materials and Methods:** In this qualitative study, 26 semi-structured individual interviews with maternity care providers and mothers with prior cesarean section as well as one focus group discussion with maternity care providers were conducted. Interviews and focus group discussions were tape-recorded, transcribed verbatim and analyzed with conventional content analysis developed by Graneheim and Lundman using MXQDA10 software. **Results:** Barriers to VBAC in health care system identified in the main category of "the climate of restriction, fear and discourage" and eight subcategories including: "defective access to specialized services," "insufficient encouragement system," "modeling in cesarean section," "physician-centeredness in VBAC," "fear of legal responsibilities," "imposed policies," "marginalization of midwives," and "unsupportive birth team." **Conclusions:** To remove barriers of VBAC in health care system, appropriate strategies including establishment of specialized VBAC counseling centers, performance-based incentive policies, cultural development and promotion of natural childbirth, promoting of teamwork culture, shared decision making, improvement of knowledge and skills of maternal care providers and implementation of clinical guidelines, should be considered. Future research could be focused on the effect of implementing these strategies to decrease repeat cesarean section rate.

Keywords: *Health services, healthcare system, qualitative research, Vaginal Birth after Cesarean*

Introduction

Concomitant with the universal trend of cesarean section, the rate of caesarean birth has risen dramatically over the past several decades in Iran.[1] Although the World Health Organization (WHO) recommends that the caesarean section rate should not be higher than 10–15%,[2] approximately half of mothers (50.77%)(give birth surgically in Iran and almost two-thirds of those (77%) will experience repeat cesarean section.[3] While the complications of cesarean delivery are greater than vaginal birth, with increasing number of repeat cesareans, risk of some of morbidities will increase including: wound or uterine infection, placenta previa/accreta, transfusion, hysterectomy, bowel or bladder injury, admission to an intensive care unit, ventilator therapy, longer hospitalization as well as bowel obstructions and pelvic pain from peritoneal adhesive disease.[4]

Increasing trend of repeat cesarean section alongside with current fertility policies in our country as a challenge to improving the mother and child health should be considered. Vaginal Birth After Cesarean (VBAC) is one of the strategies for decreasing the rate of repeat cesarean and total rate of cesarean section. Oregon Evidence-based Practice Center (2010) reported that VBAC is a reasonable and safe choice for the majority of women with prior cesarean. The occurrence of maternal and infant mortality for women with prior cesarean is not significantly elevated when compared with national rates of overall mortality in childbirth.[5] Bearman (2014) considered that the rate of VBAC has a significant impact on the overall cesarean birth rate and warrants close attention. The total cesarean rate increases as VBAC decreases, even as a reduction in primary cesarean is noted.[6]

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Address for correspondence:
Prof. Robab Latifnejad Roudsari,
Department of Midwifery, School of Nursing and Midwifery, Mashhad University of Medical Sciences, Mashhad, Iran.
E-mail: latifnejadr@mums.ac.ir; rlatifnejad@yahoo.com

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The rate of cesarean in hospitals affiliated to Mashhad University of Medical Sciences in 2017 was almost 44.07% of total deliveries and nearly two-thirds of that (65.06%) was repeated cesarean section, while the rate of VBAC was less than 2% (1.73%).[2] These evidence suggest that despite of access to good international clinical guidelines[7-9] and also the recommendation of Iran's ministry of health to propose VBAC to reasonable candidates as well as document based on high success rate of VBAC (72–75%),[10] but its rate in Iran is very low (0.8%)[11] and it seems that the health care system has not accepted this necessity. According to Behdasht news report (2019), barriers of VBAC in Iran from the physician's viewpoint are legal responsibility, inadequate equipment, stressful and time consuming of caring in VBAC, lake of facility in pain management, and mother's persistency.[11] Bonzon (2017) and Shorten (2014) showed that care providers' recommendation and medical advice to choose a VBAC were the strongest predictors for VBAC at term.[12,13] Torigoe (2016) indicated that in birthing institutions of Japan, opportunities for women to plan VBAC are clearly limited and VBAC accepted by only one-third of responding institutions. Doctors were the sole providers of information about birth options in more than half of the institutions. Many or most prior cesarean mothers were challenged to find an institution that accepts VBAC. Nursing managers expressed challenges in caring for women who strongly desired VBAC, particularly if VBAC was not accepted in their institution or by doctors within.[14] In study of Foureur (2017), one of the central themes for women considering VBAC was navigating the system which highlights how the health system affects women's choices.[15]

Identification of VBAC barriers in health care system is one of the first steps to offer the effective strategies to implement vaginal birth instead of repeat cesarean section and will provide important information to policymakers, managers, and clinicians to facilitate access to VBAC in maternity care sittings and to diminish the complications of repeat cesarean sections as well as total rate of cesarean. But existing literature in this topic in Iran is rare, therefore the aim of this qualitative study was to explore the experiences of maternal health care providers and prior cesarean section mothers regarding barriers to VBAC in health care system.

Materials and Methods

A qualitative content analysis with conventional approach was conducted to achieve a deep understanding and explanation of barriers to VBAC in health care system in Mashhad University of Medical Sciences, Mashhad, Iran from April to October 2018. In this approach of content analysis, researcher allows the subcategories and categories to emerge from the text data and, hence, adheres to the naturalistic paradigm.[16] Participants included 19 maternity care providers and 7 previous cesarean section mothers (totally 26). Maternity care providers (n = 19) including obstetricians and midwives in both clinical and managerial positions from health care centers and hospitals (private and teaching hospitals), who selected based on their age, specialty, work experience, and duration of employment [Table 1]. Also 7 mothers with prior cesarean section either in pregnancy or postpartum period, who attended different maternity care settings were included in the study. Participants were selected using purposive sampling considering the maximum variation strategy. Data were collected through individual semi-structured interviews as well as one focus group discussion with maternity care providers. The data were saturated with 23 semi-structured individual interviews, however, interviews were continued up to 26 with the goal of gaining data with more depth and richness, so some participants were interviewed twice. Interviews were conducted in a quiet place in hospitals and health centers and in the office of managers with an appointment and began with this topic: "tell me about your perceptions and experiences with VBAC?" and continued with questions like "please explain about your experiences of barriers of VBAC in the health care system?" and follow-up questions such as "why the rate of VBAC is low?", "why the mothers do not select VBAC?", " why obstetricians or midwives do not welcome it?", " why mothers with prior cesarean do not accept it?". Individual interviews lasted approximately 30–90 min and conducted following obtaining participants' informed consent. Focus group discussion was held in coordination with nine maternal health care providers that had been interviewed individually, with the aim of completing the information, verifying the validity of the data collected, and providing feedback on the results of analysis of interviews at the conference hall of Um Al-Banin women's specialized hospital. The focus group and all interviews were audio-taped and transcribed verbatim. The researcher was interviewer and the facilitator who assist the researcher provided detail notes of each interview during and immediately after the session of focus group.

The interviews were read through several times to get insight into the whole story. Each interview were regarded as a unit of analysis and analyzed according to Graneheim and Lundman 2004.[17] Each unit of analysis was divided into meaning units that were then condensed. The condensed meaning units were abstracted and labelled with a code. The various codes were compared based on differences and similarities and sorted into eight subcategories. In the later stage, the category of "The climate of restriction, fear and discourage" was emerged [Table 2]. In qualitative research the concepts of credibility, dependability, and transferability have been used to describe various aspects of trustworthiness.[18] Choosing participants with various experiences through various ages, different work settings and employments, also participants in managerial positions contributed to a richer perspective of the phenomena under

Table 1: characteristics of maternity care providers (*n*=19)

Participant	Age (y)	Education	Staff position	Work experience (y)	Work place	Professional experience of VBAC*	Duration of interview (m)
1	47	Bachelor	Staff midwife	25	Delivery room	Yes	93
2	50	Bachelor	Staff midwife	27	Delivery room	Yes	95
3	52	Associate degree	Staff midwife	29	Delivery room	Yes	70
4	49	Bachelor	Staff midwife	23	Health care center	No	45
5	33	Bachelor	Staff midwife	11	Delivery room	Yes	65
6	46	Master	Staff midwife	15	Health care center	N0	38
7	50	MD in obstetrics & Gynecology	Head of Hospital	25	Hospital, Department of Obstetrics & Gynecology	yes	90
8	50	Bachelor	Staff midwife	28	Health care center	Yes	40
9	47	Bachelor	Staff midwife	15	Health care center	Yes	50
10	50	Bachelor	Staff midwife	29	Delivery room	Yes	70
11	59	MD in obstetrics & Gynecology	Professor in Obstetrics & Gynecology	28	Hospital, Department of Obstetrics & Gynecology	Yes	66
12	40	Bachelor	Staff midwife	15	Health care center	no	39
13	42	MD in obstetrics & Gynecology	Assistant professor in Obstetrics & Gynecology	10	Hospital, Department of Obstetrics & Gynecology	Yes	40
14	53	MD in obstetrics & Gynecology	Associate professor in Obstetrics & Gynecology	28	Hospital, Department of Obstetrics & Gynecology	Yes	55
15	47	Master	Staff midwife	22	Deputy of treatment	yes	95
16	40	MD in obstetrics & Gynecology	Staff Obstetrician & Gynecologist	5	Hospital, Department of Obstetrics & Gynecology	Yes	30
17	46	Bachelor	Staff midwife	21	Health care sector	no	35
18	35	MD in obstetrics & Gynecology	Staff Obstetrician & Gynecologist	2	Hospital, Department of Obstetrics & Gynecology	Yes	38
19	46	Bachelor	Staff midwife	21	Deputy of Health	Yes	45

*VBAC: Vaginal Birth After Cesarean

study (source triangulation). Also two members of research team (the first and last author) jointly coded and categorized codes into subcategories and categories through consensus until data saturation was achieved (peer check). Also data collection through semi-structured interviews by the main investigator (the first author) provided the credibility of the findings. Conducting a focus group session provided an open dialogue between the participants and the research team and as a consequence an opportunity for reflection of data to a number of participants (member check[19]).

Ethical considerations

Ethical considerations included obtaining informed consent from participants, anonymous recording of the interviews, secrecy about their experiences, and freedom to withdraw from the study whenever they want. Ethical approval for this study was obtained from local research ethics committee, Mashhad University of Medical Sciences, Iran under code of IR.MUMS.REC.1395.139.

Results

Twenty-six semi-structured in-depth interviews and one focus group were conducted in different maternity care settings affiliated to Mashhad University of Medical Sciences in Iran. Characteristics of health care providers has been presented in Table 1. All mothers had a prior cesarean section; also two of them had the experience of normal birth in the past. Two mothers were pregnant, two members were in early postpartum period and rest of them were non pregnant. One of them was illiterate; three mothers educated more than diploma and four persons were lesser than diploma. The barriers of health care system in VBAC identified the category of "The climate of restriction, fear and discourage" and its eight subcategories consisted of: "defective access to specialized services," "insufficient encouragement system," "modeling in cesarean section," "physician-centeredness in VBAC," "fear of legal responsibilities," "imposed policies," "the marginalization of midwives," and "unsupportive birth team."

Defective access to specialized services

The participants suggested that one of the barriers to VBAC section was the absence of any physician during vaginal delivery bedside the mother. Despite the fact that prenatal care is provided by many doctors, but if a mother chooses vaginal delivery, they do not attend for her childbirth. This issue, especially for mothers with a previous cesarean section in which the responsibility for childbirth lies with the doctor, is a major obstacle to the choice of vaginal delivery by the mothers. A 38-year-old

Table 2: The Process of developing the main category

Code	Sub-category	Main Category
Nonattendance of supportive physicians	Defective access to specialized services	The climate of restriction, fear and discourage
Absence of attending physicians during childbirth		
Low number of physicians agreed with Vaginal Birth After Cesarean (VBAC)		
Lack of providing one-to-one midwifery care		
Lack of pay for performance	Insufficient encouragement system	
Lack of incentive mechanisms		
Midwives' poor motivation due to not being encouraged		
Not paying attention to patients' satisfaction for encouraging birth staff		
The influence of culture of childbirth on pregnant women	Modeling in cesarean section	
Medical staff as role model in choosing cesarean mode of delivery		
Cesarean as a symbol of higher socio-economic class		
Imagining cesarean as a norm due to its popularity		
Physician in the top of hierarchy for VBAC decision making	Physician-centeredness in VBAC	
Physician's acceptance as the main condition		
Not assignment of VBAC responsibility to anyone by the physicians		
Dependence of VBAC rate to physicians' performance		
Giving priority to the physicians to conduct VBAC		
Escaping of health care providers from legal responsibilities	Fear of legal responsibilities	
Unclear legal responsibilities of providing VBAC services		
Lack of legal support in case of complications occurrence following VBAC		
Acceptance of VBAC by mothers due to hospitals policy towards VBAC promotion	Imposed policies	
VBAC as the current population policies, not as the mother's choice		
Obligations of governmental hospitals to follow VBAC program		
Restriction of midwife's role to contribute in decision about VBAC Low authority of midwives to make decision for VBAC	The marginalization of midwives	
Lack of good team collaboration in VBAC		
Negative attitude of birth team	Unsupportive birth team	
Lack of adequate skills in relation to VBAC		
High workload due to lack of manpower or mismanagement		

mother with a history of Vaginal Birth After The Cesarean section (VBAC) said: *". I would tell anyone who came to me whether it is true that they say vaginal delivery is good, but it is not suitable for our country because they (doctors) promote, on the one hand, but do not attend when delivery is happening, on the other hand. It is best that you go straight for the cesarean section, and do not go for vaginal delivery at all!.".*

A few physicians and midwives who supported VBAC also referred to the challenges of mothers to access VBAC in many cases. A midwife with 23 years of experience in headquarters and health centers commented: *". Two people, the midwife and the physician who believe in VBAC, can only contribute to its promotion, But you know, these people are just few …."*

The absence of a resident physician in many hospitals is another barrier to mothers' access to VBAC. A gynecologist with 5 years' experience stated: *". In private hospitals, we do not have qualified residents who are highly skilled and accept VBAC risk. In teaching hospitals, where doctors are resident, they are more inclined because they are there. Of course, in some teaching hospitals, because we have high-risk patients or referrals from other places and need care, the residents spend a lot of time on these patients, which is the reason why specialists in these hospitals are less likely to have VBAC."*

In addition, the impossibility of providing one-to-one midwifery care in labor and delivery room restricts the access of mothers to VBAC. High workload and co-care of several mothers make the midwives less likely to accept caring of mothers who are VBAC applicant, so their performance will lead to mother's withdrawal from VBAC. A staff midwife with 29 years' experience in this relation stated: *". In most hospitals, midwives, at least, have always two patients at the same time in two different rooms. They are constantly moving from one room to another, and are always worried about the patient in the other room! This causes them mental and physical fatigue and waste their energy and unmotivated them to accept care of mothers*

who is going to be a candidate for VBAC. So they do not try to encourage mothers for VBAC."

Insufficient encouragement system

The interviewees acknowledged that the lack of performance-based pay for midwives and the lack of incentive mechanisms to promote VBAC were barriers to promote VBAC. A midwife in an executive post with 23 years of experience stated: *"A midwife whose 10 patients experience cesarean, in comparison with a midwife whose 10 patients have a vaginal delivery, receives an equal pay, tailored to their shifts. This is not true; in my opinion, the midwife who is responsible for VBAC should receive based on the number of vaginal deliveries, you know, the incentive should be considered for her.*"

A midwife working at a health center with 22 years of experience commented: *"For me, as a midwife who is working in the health care system, what does it matter that mother has a cesarean or vaginal delivery? Regardless of the decrease or increase in vaginal delivery statistics, I get feedback only to the extent that the statistics have gone up or down. If I can increase the percentage of vaginal delivery after cesarean, how I will be encouraged?! There is neither written no financial encouragement."*

The weakness in the mechanism of encouragement leads to the elimination or reduction of employees' motivation. They believed that one of the issues related to the encouragement is the satisfaction of patients. The interviewees stated that patients' satisfaction has no worth for encouragement of staff, and this weakens the motivation of the personnel. A midwife with 20 years of experience said: *". When a patient comes to me, she thanks me very much, and writes a thank-you note that you have taken care of me very well over the course of this nine months and you know, the services you provided me was excellent and so on. But unfortunately, this has no value, and makes me not to stay motivated."*

A midwife in a managerial post stated: *". If staff encouraged without evaluating their performance, it neither create a difference in individuals' motivation nor enhance the motivation of other people. Indeed, a midwife must be encouraged based on the factors like rate of vaginal delivery and the satisfaction of her patients."*

Modeling in cesarean section

The participants suggested that pregnant women for choosing mode of delivery are affected by the society and the delivery staff. On the other hand, choosing cesarean section as the first choice for delivery by medical groups and higher socioeconomic classes creates the view that cesarean section is safer and more accepted mode of delivery. A midwife working in a maternity hospital with 25 years of experience said: *"Particularly in our field, the vaginal delivery by the midwife is very effective in the modeling of the mothers. I have seen many times that mothers are asking us whether we have had vaginal delivery ourselves. I am now encouraging our young pregnant personnel to have vaginal delivery."*

A midwife working at a health center with 15 years of experience stated: *"The frequency of cesarean section is higher in those who have a higher sociocultural status. We ourselves are also seeing that new generation of gynecologists as well as specialist, in any discipline, or even general practitioners choose cesarean as the mode of delivery. Those who are educated! You know. Mother says, if cesarean section has problem scientifically, then why they are doing cesarean section?!."*

On the other hand, cesarean section rate is high in our society and when the prevalence of something in society is high, it would be considered as normal. A 38-year-old pregnant mother said: *"Because the normal childbirth has declined, mothers think there is no other option except cesarean section…"*

Physician-centeredness in VBAC

Some of delivery team including midwives stated that a physician who performs the VBAC is the person with the highest authority to make decision about VBAC, so that her acceptance is the main condition. A midwife working in a maternity ward with 25 years of experience stated: *"The role of the physician, as the head of ward and as a person with power, is effective for the final decision. The physician should give preliminary OK, and the rest is left to the mother and the midwife…"*

A midwife working at a health center with 15 years of experience commented: *"About 70% of the cases of VBAC depends on the gynecologist's decision, as they should accept the possible risks of VBAC first and the remaining 30% can be related to the midwives and the mothers' decision. We can change the mother's mind that she has had previously a cesarean section for some reason, and the midwife will be able to prepare her for the likelihood of vaginal delivery. We also try to make families agree with this decision. But the problem is what measure can be taken into account if the main person (physician) does not really accept? Nothing can be done…"*

Physicians do not assign VBAC responsibility to anyone else. This will only allow physicians who believe in VBAC to recommend VBAC to mothers when they are present and welcome their mother's choice. A gynecologist at a managerial position said: *".... Physicians do not dare to assign VBAC to someone else. In our center, because it is an academic campus, a resident and attend in Obstetrics should fulfill a high-risk childbirth unless they are either absent in the department, or so busy. In this case, by observing the caution and the permission of attend responsible for the maternity ward, the midwife can do the VBAC delivery."*

They believed that the physician confirms the mother's condition for VBAC, and is responsible for the mother's initial justification. Therefore, the role of the doctor in the acceptance of the mother is very important. A pregnant mother with a previous cesarean section stated: *". The physician herself is the key, because the patient agrees with the physician's advice most of the times, and visits the physician every month. If the physician recommends VBAC to the patient, the patient can easily accept. In my opinion, the role of the doctor is very effective and critical."*

Fear of legal responsibility

From viewpoint of physicians and health care professionals, many providers escape the legal responsibility of the VBAC, and this is a major challenge for mothers' access to VBAC. A gynecologist with 26 years of experience said: *". One of the barriers for VBAC is the acceptance of legal liability for VBAC. However, the doctors know that the occurrence of any uterine rupture causes the mother to lose her uterus and/or baby. As a result, these possible events make physician more disagree."*

A gynecologist with 5 years of experience stated: *". Legal liability is another obstacle. Indeed, physicians are afraid of subsequent complications and legal issues."*

Midwives also expressed concern over the legal liability of VBAC complications. They stated that even if they introduce the physician to the mother, the midwife is responsible for any problem during childbirth, from the mother's point of view! A midwife working at a health center with 15 years of experience commented: *".... If we say that you go to the doctor, they might do it. Actually if all things go well, there is no problem. But the occurrence of any problem confronts us with accountability, you know, the mother ask us why you recommend me that doctor...."*

The maternal health care providers believed that the legal responsibilities is not clarified in providing services, and legal support is needed for those health care providers who are responsible for delivery. A gynecologist with 29 years of experience said: *"The law, to some extent, must accept that the complications of VBAC might be better than repetitive cesarean section, and the law should not be toughened to this level."*

A midwife working at a health center with 28 years of experience stated: *"Most physicians are afraid of legal liability in the event of complications. If physicians accept responsibility, at least the limits of responsibility in this relation should be determined, and that's much better."*

Imposed policies

The interviewees believed that vaginal delivery is imposed on mothers in many cases within the framework of promoting vaginal delivery and current population policies, probably in this condition, informed decision making is not considered. Although the vaginal delivery is achieved in some cases but in many cases, it encountered with the mother's withdrawal or the lack of cooperation of the staff because it is not the actual choice of mother or childbirth staff. A 36-year-old mother 8 h after VBAC stated: *". When I arrived, I said that I want to do a cesarean section, but they said: no, it's impossible, and I was shocked. I said I don't want cesarean section, I cannot accept, I had cesarean section. They said: It's okay, because you had two vaginal deliveries before, you can have vaginal delivery. I said that my husband and I want a cesarean section. They said your husband was satisfied and signed consent. I was forced to."*

The interviewees stated that the teaching hospitals accept the VBAC despite their desire. In fact, this imposed acceptance is an impediment to achieving the desired outcome in the VBAC course.

A midwife working in a headquarters with 23 years of work experience commented: *"Governmental hospitals also say that because we have the teaching staff, we will accept this, but with unwillingness…"*

Marginalization of midwives

Some of midwives stated that the role of midwives has been only limited to care in labor and referring previous cesarean mothers to physician to choose mode of delivery, and there is no team collaboration in this regard. This causes mothers to face the dichotomy in their midwifery services and the decision taken by the physician. A midwife working in a headquarters with 15 years of experience stated: *"Midwives almost have no authority, because if they have 100% target group educations, the obstetrician will eventually handle the training as soon as the mother arrives in the hospital."*

Although the vaginal delivery should be done in teamwork, and the midwife has an active participation in childbirth process, obstetricians are not willing to give the responsibility of giving birth to the midwife, even when they are present. These are examples of marginalizing midwives in the VBAC issue. A gynecologist with 25 years of experience stated: *".... The midwife should educate the patient, and leave the rest to the gynecologist, she should say to the mother that her gynecologist must decide in this regard...."*

Unsupportive birth team

The analysis of data identified subcategory of "unsupportive birth team." The interviewees stated that maternal health care providers, who have a negative view to VBAC, influence the choice of mother by inducing their attitudes. A midwife with 15 years of experience stated: *"If the midwife likes to have a vaginal delivery, she tells the mother that vaginal delivery is good, but if their vision is not positive for vaginal delivery, they will be reluctant to promote VBAC and would say to the mother: are you naive that want to do VBAC?!...."*

On the other hand, lack of adequate skills in care of VBAC, the uncertainties in the skills required for the management of VBAC and the lack of manpower or mismanagement were some of the issues leading to a lack of acceptance of mother's request or escaping from its responsibility. A midwife in charge of maternity with 29 years of experience stated: *".... Our physicians have no skills. It is seen that the unskilled physicians do not accept VBAC, they need to be trained and their views must be changed. Enthusiastic care providers go to the VBAC and welcome it...."*

A midwife working at a maternity hospital with 27 years of experience commented: *".... The medical team have probably not reached the level of skill required for VBAC, because such cases occur less often, especially before the health system reform that most mothers had cesarean section and typically went towards cesarean section. Also the lack of health care staff skill may exaggerate the condition and these two will work together to push more people to the cesarean section...."*

Also they stated that the stress at work caused by caring of candidates for VBAC due to either the high workload or the lack of one-to-one care in the labor is also influenced by the lack of support of health care providers from VBAC candidates. A gynecologist with 5 years of experience stated: *".... A midwife gets tired because of the consecutive work shifts due to lack of manpower or mismanagement and so cannot accept the responsibility of the VBAC candidates. As a result, she doesn't accept to give care to VBAC cases and does not cooperate well...."*

A midwife in charge of maternity with 29 years of experience commented: *"A midwife due to work pressure imposed by VBAC may tell something, either explicitly or implicitly, that direct the mind of the mother or doctor or resident towards the cesarean section; the residents of obstetrics are under pressure, especially in the first year. Therefore, this ordinary issue can change the mode of delivery to the cesarean section. She (the resident) prefers the cesarean section to save the mother from a high risk circumstances…"*

Discussion

In Iran as many countries, the caesarean section rate is high and shows little evidence of reduction. One of the greatest contributors to the overall caesarean section rate is elective repeat cesarean section. It seems therefore that one of the important strategies in reducing repetitive cesarean sections is an increase in Trial of Labor after Cesarean (TOLAC). Because of the few attempts to perform TOLAC, there are few studies in this regard in Iran. To facilitate women's increased access to planned VBAC, it is necessary to address the barriers of health care system perceived by maternity care providers and decision makers. The current qualitative study examined the perception of maternal health care providers and cesarean section mothers from maternity care system barriers associated with VBAC. Maternity care system barriers point to the factors in the health system of the country and current organizational culture.

The finding of this study showed that due to a lack of access to a resident physician in many centers and a lack of access to a physician compatible with VBAC in most centers, the VBAC advice to mothers with cesarean section is either not given or not welcomed by maternal health care providers, even if the mother is an applicant. Munro *et al.* (2017) also concluded that some of the factors involved in the health system including access to surgical and anesthetic services, the attitude of service providers towards planned VBAC risks, the quality and type of risk information provided in informed selection counseling sessions and the timing of these consultations in the course of care, are health system barriers, which affect women's decision-making. These barriers are the reasons why the choice of delivery type in eligible women in British Columbia is cesarean, where the repetitive cesarean section rate is more than 80%.[20] Leeman (2013) also reported the need for access to gynecologist as an obstacle.[21] In a study of Bearman (2014), non-clinical factors at the organizational and individual levels act as barriers to VBAC. Recommendations from professional organizations, inadequate coverage of anesthesia, and reluctance of service providers are some of the barriers of VBAC. The advice of professional organizations refers to the need for urgent access to gynecologist at VBAC centers. In fact, VBAC rate is increased and decreased depending on the physician's compliance with these guidelines.[6]

According to the findings of this study, insufficient encouragement system is also one of the health system barriers. Due to the absence of a performance-based payment system, the participants in this study stated that there is no incentive mechanism to motivate health service providers. Furthermore, the patient satisfaction is unvalued in the encouragement system of staff, and the motivational levers for mothers in the choice of VBAC are either unavailable or insufficient. According to the experience of researcher as a VBAC counsellor, informing the mother on the benefits of vaginal delivery to relieve the complications of repetitive cesarean sections and her confidence in health care providers are the best encouragement for choosing VBAC. The foundation for encouraging mothers to VBAC is the creation of an uninterrupted care setting that provides counseling services and the provision of ongoing midwifery care for the mental support of these mothers. Keedle (2018) asserts women toward their goal of achieving a vaginal birth strongly influenced by the type of support, either negative or positive, provided by health care professionals. Positive support from health care professionals is more common in confident practitioners and where there is continuity of care relationship with a midwife.[22]

The emergence of subcategory of modeling in cesarean section (induction of C-section pattern) in this study refers to the impact of relatives of mother, medical team, and people with high socioeconomic status in choice of mother. In circumstances that the mother cannot benefit from informed choice and receiving support from the health system in choosing the mode of birth, she will be influenced by factors affecting modeling in cesarean section. Shorten *et al*. (2014) showed that medical advice is one of the most influential factors on women's mode of birth preferences.[13] Concerning the childbirth, the selection is more affected not only by the service provider, but also by sociocultural pressures. The selection has a social structure that is formed by available technology and cultural orders. As some researchers state, society creates values that limit women's choices.[23] Korst (2011) states family and work issues may play a prominent role, but are not routinely included in risk discussions.[24] However, decision-aids significantly decrease women's decisional conflict about mode of birth, and information programs significantly increase their knowledge about the risks and benefits of possible modes of birth.[25]

In this study, physician-centeredness was also identified as another health system barrier to VBAC in the country. The participants stated that the physicians are at the forefront of VBAC decision making, and the initial confirmation and the mother's encouragement for VBAC depend on the physician. In addition, the physician should accept the VBAC responsibility. Therefore, the acceptance and performance of the physician is the focus of VBAC promotion. In fact, the lack of teamwork culture and the centrality of the physician's performance in this area limit the mother's access to VBAC. Renee (2002) reported encouraging the physician for VBAC to be one of the reasons why mothers choose VBAC.[26] Other researchers also claim that the notion of choice in childbirth is a false dream, since the physician community ultimately dictate the result of these decisions directly or indirectly.[23]

Based on this study findings, the focus of the law on the physician in VBAC, the escape of physician from the legal responsibility, the lack of legal protection and support of midwives in VBAC, and the lack of transparency of their legal responsibility are barriers to VBAC. Birth team members believed that even introducing the delivery staff to the mother for VBAC creates responsibility for them. The fear of law was also perceived in the studies of Chaillet (2007) under the title of fear of litigation in uterine rupture[27] and Cox (2011) with the concept of fear of responsibility.[28] It seems that the fear of legal liability is related to the inadequate clinical experience due to low rate of TOLAC and using appropriate strategies, including attending of midwives in training courses of physiologic childbirth and safe motherhood could help them to accept the responsibility of VBAC candidates with more ease. Additionally, encouraging mothers with previous cesarean section to attend VBAC counselling services and also childbirth preparation classes in order to making childbirth as a positive experience will encourage and persuade them to make decision for VBAC.

Another barrier to VBAC in this study was the imposed policies, which refers to the acceptance of vaginal delivery by mothers due to compulsory policies to decrease the cesarean section in the framework of the vaginal delivery promotion project, the admission without the willingness of mothers in teaching hospitals, and the pressure of insurance organizations on health care providers. Although vaginal delivery promotion policies and plans are approaches to reduce the incidence rate of cesarean section, but due to the lack of infrastructures in the community including VBAC development culture, access to necessary facilities, teamwork culture of clinical practice, legal protections, culture of informed and voluntary choice for mothers, and the lack of access to the system for recording clinical outcomes of VBAC, the vaginal delivery plans and policies will be factitious, and the mother after the admission for vaginal delivery will undergo the cesarean section for unrealistic reasons. Monro (2017) stated VBAC decisions resulted from interactions between the clinical, organizational, and policy levels of the health care system. Indeed, physicians acted as information providers of clinical risks and benefits, with limited discussion of patient preferences.[20]

Marginalizing midwives was another concept identified in this research. It means that in our society, limiting the role of midwives to refer mothers to a gynecologist for choice of delivery, disqualifying midwives from making decisions for VBAC, limiting the task of midwives in childbirth care and not assigning VBAC responsibilities by some specialist to the midwives are barriers to VBAC in maternal service delivery. Cox (2011) suggests that midwives are often marginalized, even though mothers are actively seeking their care, due to hospital constraint policies and their physicians as advisors.[28] Keegan (2014) also reported that the person providing care and changes in midwifery performance are the factors raising cesarean section rate. Women who choose an educated midwife have a lower cesarean section rate than those who choose a specialist.[23] Bozzon (2017) also stated that midwifery care during pregnancy is one of the most important predictors of maternal VBAC selection.[12] In addition, interprofessional communication may also enhance safe access to planned VBAC.[20]

Unsupportive birth team was identified as an important barrier in our health care system. Because, many of mothers in our country are unaware about VBAC, they are easily affected by health care providers and their attitude. Kingdon (2018) stated that these mothers respect for professional knowledge, even if it is in contrast to their own. They are confused about their right to choose

the mode of delivery, and are ready to simply see how pregnancy and birth goes.[29] Apart from providers' attitude, high workload as lack of manpower or mismanagement in system, sometime is an obstacle to accept doing VBAC care. Karlstrom (2009) believed that busy workload is a barrier to support adequate decision making.[30] For some providers, lack of adequate skills in relation to VBAC is another barrier. Chaillet (2007) and Foureur (2017) referred to the skill levels[27] and past professional experiences[15] as barriers of VBAC.

The present study for the first time explored the perceptions and experiences of maternal health care providers in relation to the VBAC barriers in the health care system in Iran. The strengths of this study are qualitative methodology and the diversity of participants from the health care service providers (in different occupational positions) to service recipients (pregnant and non-pregnant mothers with the previous cesarean section). One of the limitations of this study was the participation of service providers. The ability to collect appropriate data was provided with the prior coordination of the researcher at the right time and place. Researchers suggest future research based on the findings of this study to determine appropriate solutions to remove these barriers.

Conclusion

Based on identified barriers, it is necessary to plan for appropriate strategies including establishment of specialized VBAC counseling services and introduction of supportive clinicians to the community, policymaking toward performance based incentives, cultural development and promotion of natural childbirth, collaboration between members of medical team, shared decision making, improvement of knowledge and skills of maternal care providers, and implementation of clinical guidelines. In fact it is necessary that health policymakers focus on repeat cesarean rate as an obstacle to reduce the overall cesarean section rate.

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Conflicts of interest

Nothing to declare.

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