Original Article

The Challenges and Achievements in the Implementation of the Natural Childbirth Instruction Program: A Qualitative Study

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Abstract

Background: The natural childbirth instruction program, which aims to reduce the cesarean section (C-section) rates in the country and pay attention to demographic policies, has achieved significant accomplishments in the short time span since it was implemented throughout the country. In the present study, the advantages and challenges of the implementation of this program have been analyzed. **Materials and Methods:** This qualitative study carried out with the participation of 32 knowledgeable individuals who were selected using purposeful sampling and snowball sampling methods among the personnel of Kerman University of Medical Sciences, and it's affiliated educational (university) hospital. The data were collected through semi-structured interviews based on the research objectives, review of texts, and experts' experiences. Data analysis was performed using content analysis method in MaxQDA software. **Results:** Data analysis provided the 5 main categories of implementation instructions' strengths, implementation instructions' defects, implementation instructions' achievements, implementation instructions' challenges and threats, and suggestions. **Conclusions:** Accountability in the system that provides health care services for pregnant mothers in public hospitals has been created through the implementation of the natural childbirth promotion package. If managerial barriers and executive and legal inefficiencies are followed up and suitable measures are taken for solving the intra-system conflicts, we can hope that the package, which has been one of the most serious efforts made by the Ministry of Health over the past decades to reduce cesarean delivery, will achieve significant accomplishments.

Keywords: *Cesarean section, health plan implementation, health planning, natural childbirth, qualitative research*

Introduction

Childbirth (delivery) is the process in which the fetus, placenta, and fetal membranes exit or are pushed out of the uterus.[1] Childbirth is performed in two ways, natural or vaginal delivery and cesarean section (C-section).[2] In natural childbirth, the fetus exits through the birth canal,[3] while C-section is performed through a surgical incision in the mother's abdomen and uterus[4] when the life of the mother or the child is threatened.[5] Due to the side effects of surgery, the costs of hospitalization, and prolongation of hospitalization, natural childbirth is preferable.[6] The increasing rate of C-section is a concern for public health at an international level.[7]

According to the studies conducted in this domain, 85–90 percent of childbirths can be performed through the natural process.[8] Moreover, according to the World Health Organization (WHO), the expected portion of C-section in different countries should be 10–15% of the total childbirths.[9] However, this portion is more than 50% in most developing countries.[8] According to the 2014 report of the WHO, the prevalence of C-section in countries with low income, below average income, above average income, and high income have been 6%, 9%, 32%, and 28%, respectively. Currently, Iran has the second highest prevalence of C-section in the world and during past years different policies and plans have been devised to reduce this prevalence.[10]

The Mother-Friendly Childbirth Initiative (MFCI) was developed in the 1990s in order to manage the delivery process, promote maternal and neonatal health, reduce treatment costs resulting from increased labor interventions, and increase breast feeding. As labor is a natural process,

How to cite this article: Dehnavieh R, Ghorbani Nia R, Nazeri Z. The challenges and achievements in the implementation of the natural childbirth instruction program: A qualitative study. Iran J Nurs Midwifery Res 2020;25:502-13.

Submitted: 22-Jan-2020. **Revised:** 23-Feb-2020. **Accepted:** 09-Aug-2020. **Published:** 07-Nov-2020.

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Access this article online

Website: www.ijnmrjournal.net

DOI: 10.4103/ijnmr.IJNMR_295_19

Quick Response Code:

the MFCI was introduced in 1996.[11] Implementation of the MFCI plan requires a set of country-specific standards.[12] Therefore, the Ministry of Health and Medical Education developed the following 10-step principle of MFH in 2002 in Iran.[13] In 2014, the Ministry of Health and Medical Education of Iran devised the natural childbirth promotion instruction in state universities aiming to improve mothers' and newborns' health indices by protecting their privacy through optimizing the physical space of delivery rooms, reducing the costs (free natural childbirth in public hospitals), and increasing the service providers' motivations for promoting natural childbirth.[14] The natural childbirth promotion program is one of the health system's evolution plans which aims to reduce the rate of C-section in the country and pay attention to demographic policies through providing free natural childbirth services and educating pregnant mothers. This program has achieved significant accomplishments in the short time span since it was implemented throughout the country.[15]

The study conducted by Moradi *et al*. to assess the natural childbirth promotion package from the point of view of beneficiaries showed that this package has satisfied the gynecologists to a high extent and has encouraged mothers to choose the natural childbirth method.[16] Paying attention to midwives and health staff (the first contact point for pregnant mothers among health service providers) can increase the effectiveness of this package.[16] Shams *et al*. showed in their study that in order to devise an effective tailored intervention for the promotion of natural childbirth among primiparas, we need to consider their needs and demands. Education, phone consultations, and reduction in interventions by physicians and midwives in health care centers are the main parts of a tailored intervention.[17]

Now that 4 years have passed since the implementation of the health system evolution plan in the country, efforts made to analyze and assess the extent of the success or failure of this plan (analyzing strengths, weaknesses, implementation opportunities, and challenges) have created suitable conditions in which the accuracy of implementing this great national plan is improved through receiving feedbacks and making necessary predictions, timely modifications, and adjustments in strategies and mechanisms to overcome the problems, which has led to an improved health system status in the country. An extensive review of evidences by the research team showed that, until now, only a limited number of studies have addressed the advantages and challenges of implementing the natural childbirth promotion package in Iran. The present research was conducted with the aim to analyze the advantages and challenges of the natural childbirth promotion package in the experiences of personnel of a selected hospital in Kerman, Iran, in 2018.

Materials and Methods

This qualitative study was carried out using the conventional content analysis approach on the experiences of personnel of a selected hospital in Kerman in 2018. Qualitative content analysis is a research approaches in which concepts and contents of the data are extracted, interpreted, and reported using a systematic approach.[18] In this approach, the codes and their classification are directly extracted from the interviews. In content analysis, the researcher interprets the results by presenting data in words and themes in order to understand, interpret, and conceptualize the underlying meanings of the qualitative data. After conducting each interview, the text was transcribed verbatim, and then, coded.[19] Data analysis was performed using the constant comparison technique and Graneheim and Lundman's qualitative content analysis approach. Accordingly, we took the following 5 steps for analyzing the data: (1) transcribing the whole interview immediately after conducting it; (2) reading the whole transcript in order to obtain a general understanding of it; (3) identifying meaning units and primary codes; (4) categorizing similar codes into main categories; and (5) identifying the main themes of the categories.[20] The data collection tool was a semi-structured interview. In order to conduct the interviews, an interview guide was devised the questions of which were designed based on the objectives of the research and a review of the texts and experiences of experts. First, 4 in-depth interviews were conducted so that we could gain a better understanding of the concept, design the interview guide questions, and identify the points to be considered during the semi-structured interviews.

The interview questions were designed with the aim to collect the respondents' (interviewees) experiences on the subjects of the barriers to providing natural childbirth inputs, strengths of the university in providing natural childbirth inputs, reasons for increased rate of C-section, reasons for the delivery choices of mothers, factors, and beliefs in choosing the delivery type among physicians, the appropriateness of the division of labor between gynecologists and midwives, the role of private hospitals in providing childbirth services, financial problems, and issues in paying natural childbirth and C-section service providers, and legal issues and barriers (payment laws, laws for dealing with medical errors, and patients' complaints…).

Thus, 32 knowledgeable people from the university and the affiliated hospital who were selected through purposeful and snowball sampling were interviewed; the researcher achieved saturation at this number. Saturation is a condition in which no new data is gained from conducting more interviews. Each interview lasted 45 minutes on average. The interviews were recorded with the permission of the participants and were then demodulated.

The study inclusion criteria included possessing a managerial or executive position at the parturition clinics of the hospitals or Vice Chancellor for University Treatment, having sufficient expertise and experience in providing gynecological clinical services in a university hospital,

and having connoisseurship and reputability in the subject under assessment [Table 1]. The experts and nurses, who were willing to take part in the study and had the inclusion criteria, were individually interviewed until data saturation was achieved and no new data was acquired from the interviews.

The qualitative data analysis was carried out through content analysis method using MaxQDA software (version 10.2, VERBI Software GmbH, Berlin, Germany). The interviews were recorded and note-taking was done simultaneously. Subsequently, the interviews were transcribed, and information was collected, coded, and analyzed. All of the recorded content was entered into Microsoft Word and, in order to immerse in the data, we studied the content of interviews several times to gain a complete understanding of the text. In this study, after coding, we learned what information was needed and must be added. Then, we read the text line by line and words, sentences, or paragraphs that had important points regarding the advantages and challenges of the implementation of the natural childbirth promotion package were defined as meaning units. Next, concepts and codes were highlighted and placed in the framework of key concepts, and the text was coded. In the course of the study, we used the scientific rigor criteria for qualitative research defined by Lincoln and Guba,[21] and the reliability, validity, confirmability, and fitness of the data were evaluated.

In this study, we tried to improve the reliability of the findings using the following procedures through the conducting performance of in-depth interviews in several sessions, mixing several data collection methods such as interview and field notes, integrating into participant selection, reviewing of the written files by the respondents to confirm the validity of the data, reviewing the data by supervisors, and advisors and colleagues to ensure the conformity of the categories with the respondents' statements. In order to achieve confirmability, the interviews, codes, and categories were analyzed by not only the researcher, but also the research team. Furthermore, the texts of a number of the interviews, and their codes and categories were given to colleague researchers and some experts so that the agreement on the concepts among several researchers could be evaluated.

Table 1: Job position and the number of the participants in the interview

Job Position	Numbers
Personnel of maternity ward (gynecologist, midwife, and nurse)	9
Educational supervisor of the hospital	2
Head nurse of the maternity ward	3
Faculty member of the school of midwifery	3
Director of the clinic, head or manager of the hospital	8
Directors or officers of the university vice-chancellor of curative affairs	4
Faculty members of the school of management and informatics	3
Total	32

Moreover, 2 of the researchers who were responsible for collecting qualitative data spent 6 months among the participants. This long-term involvement and contact with participants led to the creation of trust between them and the participants, and an improved understanding on the part of the researchers. Maximum variation sampling method which improves the fitness and transferability of the data was utilized in this study, and participants with a high variation rate and different hospital positions, work experiences, age, and gender took part in the study.

The present study is one of the first studies related to the assessment of the free-of-charge natural childbirth package, which aims to promote natural childbirth; therefore, it can clarify many aspects of the package and also identify a large number of challenges, and, to a great extent, rectify the barriers to its implementation. Moreover, using the findings of the study, we can define fundamental approaches to promote natural childbirth.

Ethical considerations

The ethical considerations observed in this research included obtaining informed consents from the participants before their participation in the research and recording the interviews, not listing the names of the participants in the transcribed texts, and observing the principle of confidentiality (ethical code: No. IR.KMU.REC.1398.180). Receiving informed consent in writing in order to participate in the interview, observing anonymity and secrecy in recording the interviews, and assuring the participants of the confidentiality of their information and the right to participate in or leave the study were some of the moral principles of the study. The participants could skip any question they were not willing to answer. In order to conduct the research, the researcher went to the participants' workplace and interviewed them there. The participants were informed that they might be contacted again to complete the process. Moreover, they were told that if they wished, they could have the results of the study.

Results

In the present qualitative study, five concepts (implementation instructions' strengths; implementation instructions' defects; implementation instructions' achievements; implementation instructions' challenges and threats, and suggestions) were extracted from the interviews through several reviews of the contents of the conference and mixing the codes in multiple instances. Moreover, in the framework of these five concepts, we identified 17 categories and 31 subcategories. The key concepts and codes related to the implementation of the instruction in Kerman University of Medical Sciences, Kerman, Iran are presented in Table 2.

Implementation instructions' strengths

In addition to the effects it has had on the health care services quality improvements, the natural childbirth promotion program has positively affected hospitals. Based on the analysis of the interviews, we identified 2 ancillary codes.

Defining quantitative and measurable objectives

One of the aspects of the efficient implementation of a plan is accurate monitoring to obviate the weaknesses and assess the implementation process. Therefore, appendix 1 (the instruction for monitoring the performance of public universities and hospitals regarding natural childbirth promotion) is one of the strengths of the instructions, which can be rigorously assessed through performance monitoring at 3 levels, hospital, university, and the Ministry of Health.

One of the respondents admitted that the knowledge of indices has increased and believed that the objectives have become quantified and measurable. "*Facts such as the C-section rates, pregnant mothers'satisfaction, free-of-charge child birth, and doctors'frequent visits to the maternity ward have shown us what we have achieved" (P9).*

Another participant stated: *"According to the main programs, we have to report the mothers' health improvement assessment in maternity health care and the mortality rates of children" (P. 11).*

Devising a monitoring mechanism

Another thing that can be considered as strength is that the objectives of this instruction are quantitative, easily understood, and measurable. According to the program, all hospitals are obliged to reduce C-section rates. In order to encourage the mothers to choose natural childbirth and reduce their costs, natural childbirth in public hospitals is performed free-of-charge, and the patient does not pay for natural childbirth. Moreover, in order to protect the privacy of mothers and make the natural childbirth process pleasant for them, optimizing the physical space of maternity wards has been considered. Motivating and encouraging public centers and service providers to provide pain reduction methods including pharmaceutical and non-pharmaceutical approaches is another measure taken. Furthermore, promoting the culture of natural childbirth by holding classes for preparing pregnant mothers and empowering service providers are other measures taken in the natural childbirth promotion program.

A participant pointed out the fact that: "*It is clear now that the midwife can talk to the patient and calm her, teach her methods for reducing the pain, and train her to have a painless delivery, and thus, the baby will be healthier*" (P. 2).

A respondent stated: "*Pregnancy is a natural matter, and it is better to follow its natural course. We have tried to segment the delivery ward, we separated the physical space by partitioning so that the mother can have a more comfortable delivery, there is a midwife present, and the doctor visits the mother regularly*" (P. 6).

In addition, a participant noted that: "*Holding classes for mothers will reduce their fear, especially if it is their first delivery. Most people choose C-section because of their fear of natural delivery. When they are informed that there are several ways for reducing pain, that the baby will be healthier, they will not have post-delivery pain, their pain will be gone after the delivery is finished, and infection is less probable, their fear is reduced and they choose natural delivery*" (P. 18).

Table 2: Main categories and subcategories related to the implementation of the natural childbirth promotion instructions in Kerman University of Medical Sciences, Iran

Main categories	Subcategories
Implementation instructions' strengths	Defining quantitative and measurable objectives
	Devising a monitoring mechanism
Implementation instructions' defects	Segregating the private and semi-public hospitals in the implementation of the instructions
Implementation instructions' achievements	Emphasizing the role of midwives in natural childbirth services
	Changing the society's attitude towards natural childbirth
	Paying more attention to maternity hospitals
Implementation instructions' challenges and threats	Reasons for choosing cesarean delivery
	The challenge of providing natural childbirth inputs
	Disproportion in the division of labor between midwives and gynecologists
	The role of private hospitals in providing maternal services
	Financial challenges in natural childbirth and cesarean delivery
	Legal limitations for promoting natural childbirth
Suggestion	Rational allocation of budget
	Improving physical space
	Training proficient manpower
	Promoting the culture
	Building a culture of teamwork and interaction in maternity wards

Implementation instructions' defects

Segregating private and semi-public hospitals in terms of the implementation of the instruction

Although, one of the objectives of the instructions is to reduce C-section rates in the country, there is no mention of the procedure of monitoring private and semi-public hospitals such as hospitals affiliated with the army, Sepah, or the department of education, while the C-section statistics of these hospitals are a part of the total statistics of the country. In this regard, one of the respondents pointed to the high rates of C-section in the private sector.

"*Childbirth in private hospitals in 90% of the cases is performed through C-section, and they do not have a delivery room, and if the patient does not have any problem with this, the private sector admits her*" (P. 5).

The experiences of participants showed that there must be a comprehensive monitoring of the natural childbirth promotion. "*The private sector has high C-section rates, but the Ministry does not do anything about it; as hard as we try to increase natural childbirth, the rates of C-section are high from the point of view of the Ministry. Although they see that the public sector does not perform C-sections, the private sector does it easily'* (P. 7).

In this regard, a participant stated: "*If they want to reduce the rates, they need to force the private sector to provide them with its statistical data. In other words, make them go through the same process that the public sector is going through. Only then can we affect the statistics and expect them to change. Nothing will happen if they only tell us to do this and that, and the people go to a hospital which is not a public or university hospital*" (P. 19).

Another participant notes that: "*Doctors are inclined towards C-section since they get money for each service*" (P. 25)

Implementation instructions' achievements

Through implementation of the instructions, the midwives received attention more than before, and the opportunity was created to enhance the position of midwives in maternity wards. Moreover, maternity wards and their equipment gained more importance. Another fact to which the respondents pointed was the opportunity for the society to change its attitude toward natural childbirth due to the implementation of the instructions. Despite the high number of side effects of C-section compared to natural childbirth, no serious decision has been made to change people's attitude toward this issue. However, by implementing these instructions, an opportunity to promote natural childbirth is created.

Emphasizing the role of midwives in natural childbirth services

One of the positive aspects of the instructions is that the role of midwives in natural childbirth services is emphasized and highlighted.

In this regard, a participant stated: "*The role of a midwife is beyond maternity and we should not limit ourselves to pregnant mothers in our education. Our role must be respected in different domains of health*" (P. 26).

On the importance of Labor, Delivery, Recovery (LDR) centers, a participant said: "*If the LDR center becomes operational, midwives can benefit from it. The significance of establishing this center is that it covers all the services from the reception to the delivery time, and a midwife is responsible for the whole process, from reception to delivery and even post-delivery care. If this center is established, the role of midwives will be highlighted*" (P. 28).

Changing the society's attitude towards natural childbirth

Regarding the opportunity to change the society's attitude toward natural childbirth, one of the respondents said: "*Mothers are not educated. They do not know about the side effects of C-section and the fact that C-section pain starts 24 hours after delivery. All these factors drive mothers toward C-section. Holding educational classes can change people's attitudes*" (P. 9).

A respondent also stated: "*Mothers' death due to elected C-section is 2-3 times more than natural childbirth as it causes infections and increases side effects. If mothers are informed about these risks, their attitude toward choosing safe delivery will change"* (P. 21).

"If we want to improve the indices, we need to use midwives. The health system evolution plan will increase the involvement of midwives and, since natural childbirth has become free of charge in order to reduce C-section rates, the role of midwives becomes even more significant. There is the hope that we can further improve mothers' health status by the implementation of this plan" (P. 30).

Paying more attention to maternity hospitals

The opportunity to pay more attention to maternity wards and their equipment is another positive aspect of the natural childbirth promotion package. "*Optimizing maternity wards and encouraging mothers have led to a decrease in C-section rates. Improvement of services, physical space, and suitable services in public hospitals are some of the advantages of the package. Renovation and standardization of equipment and also reconstruction of the physical space of the centers is in progress"* (P. 27).

A participant stated: "*In the natural childbirth promotion package, sufficient and appropriate physical space has been considered for the patient and suitable equipment for promoting natural childbirth is being provided*" (P. 32).

Implementation instructions' challenges and threats

Still, great challenges exist, which require more effort. Some of them are reasons for choosing C-section, the challenge of providing natural childbirth inputs, the disproportion of the division of labor between midwives and gynecologists, the role of private hospitals in providing maternal services, financial challenges in natural childbirth and C-section, and legal limitations for promoting natural childbirth.

Reasons for choosing C-section

One of the important challenges in the implementation of these instructions is the society's false beliefs about natural childbirth. From the point of view of the respondents, most women choose C-section because of fear of natural childbirth, side effects of natural childbirth, and lack of sufficient knowledge about the side effects of C-section. Moreover, the gynecologist's experiences are also influential on choosing the method of delivery. Often, gynecologists suggest C-section for their own benefit and comfort. In addition to the aforementioned issues, the privacy issues in hospitals lead to the disinclination to have a natural childbirth.

A participant noted that "*The lack of knowledge of the positive effects of natural birth on mental and physical health, the fear of not being able to bear the pain, and fear of natural childbirth lead to choosing C-section. However, knowledge of uterus bleeding and adhesions due to C-section, and the pain caused by C-section leads to choosing natural childbirth"* (P. 2).

Another participant also stated: *"Mothers choose C-section since they think it causes less pain"* (P. 4).

"*One reason for choosing C-section that I witnessed myself was that mothers cannot bear the pain and the waiting at the delivery room door. Most pregnant mothers have been living in comfortable conditions, so they cannot bear the natural delivery pain. Some mothers have wrong information about natural childbirth. For instance, according to one of my colleges, after the delivery, a mother asked why she is not blind because she had been told that mothers become blind after natural childbirth. Similar false information and fear of natural childbirth due to lack of knowledge about natural childbirth makes them choose C-section. Mothers must be informed about pain reduction methods in the preparation classes so that they can gain sufficient preparation for a healthy delivery*" (P. 8).

Another participant stated: "*Other reasons for choosing C-section include fear of pain, doctors' suggestions, and husbands' false belief that natural childbirth widens their wives' vagina*" (P. 13).

The challenge of providing natural childbirth inputs

Insufficient facilities and number of midwifery personnel are serious problems considering the high rates of childbirth. The respondents stated that, In European countries such as Netherland and Sweden, the ratio of manpower to patients is one to one (one midwife for each patient), while in Iran this is not the case. The problem of the insufficient number of midwifery personnel is mostly due to the lack of suitable needs assessment to create a balance between the number of students entering universities and hospital demands, insufficient attention to students' education due to lack of experienced instructors, and lack of hospital educational space.

In this regard, a participant stated: "*Drastic shortage of midwifery and nursing assistants, weak educational system, and lack of required facilities in maternity wards are some of the deficiencies of the package"* (P. 1).

Another noted that: *"Lack of sufficient manpower, lack of companionship in the maternity ward, and the high rates of childbirth compared to the low manpower can be considered the weaknesses of the natural childbirth promotion package"* (P. 4).

A participant also said: *"Since natural childbirth has become free of charge, more people come to public hospitals and the childbirth rates have increased,which leads to a shortage in manpower, space, bed, etc.....Public hospitals do not have sufficient facilities"* (P. 6).

"*The recruiting of midwifery forces is low, the organizational chart has difficulties and has few positions, gynecologists are women and do not dedicate sufficient time to their job, the available physical space has problems, midwifery personnel are not sufficiently skilled and educated, women have familial concerns and prefer to have C-section so that they can go back to their families. In European countries like Netherland and Sweden, there is a one to one ratio of manpower to patient (one midwife for each patient) and there are private rooms, which we do not have here*" (P. 9).

Disproportion in the division of labor between gynecologists and midwives

The division of labor between midwives and gynecologists in hospitals is not proportional. Gynecologists do not give the midwives enough opportunities to provide midwifery and maternity services, and midwives are often providing nursing care which makes their role seem less important. Another important point is the payment of midwives, which is unfair. Some specialists are not present at the time of delivery and put the burden of their responsibilities on the shoulders of midwives, while the salary is unreasonable considering the work they do.

A respondent believed that: "*Gynecologists barely give midwives opportunities to do their intended job*" (P. 14). Another stated: "*The division of labor is unfair. Natural childbirth should be performed by midwives and only*

if things get out of hand in some special cases should the specialist interfere. In my opinion, in our country gynecologists are usurping midwives' rights" (P. 20).

"*Gynecologists do not stay with the patient and tell the midwives to prepare the patient while this is the specialist's duty when she is responsible for the natural childbirth. In addition, general practitioners do not help the midwives properly in deprived areas since they are not properly educated. The problem is that specialists always want to do all the work (managerial, research, and medical) at the same time. However, some of their criticism of midwives is true since the midwifery personnel are not as able as they used to be*" (P. 23).

A participant affirmed: "*Midwives are doing nursing duties which makes them less important and the residents do the childbirth procedure"* (P. 29).

A participant remarked: "*The division of labor and payment is unfair because doctors are paid more despite the easier work and are usually taking over midwifery positions* (P. 31).

The role of private hospitals in providing maternal services

According to the statistics, most C-sections are performed in private hospitals; however, based on what the respondents said, no particular measures are taken to promote natural childbirth in these hospitals. Patients receive better care and services from nurses and doctors in exchange for the money they pay and the conditions in private hospitals are in favor of C-sections. Therefore, despite the high number of people demanding private hospital services, practically no support is given to natural childbirth in these hospitals.

A respondent declared: "*In private hospitals, the mothers, midwives, and specialists should be encouraged to choose natural childbirth, and the hospital needs to be motivated to increase the statistics of natural childbirth. More importantly, experienced midwives should be employed more than specialists in natural childbirth so that the services in both sections are proportionate*" (P. 8).

Another believed that: "*Since, for each case, the specialist paid, most of the time, mothers encouraged to go to private centers and benefit from the specialist's presence in all stages*" (P. 23).

A participant disclosed that sometimes they see "*…that all the classes are held and mothers are prepared, but with some talks and persuasions, mothers are attracted toward private centers. In private hospitals mothers will be admitted only if they do not have any problems and there are good indications for a comfortable C-section*" (P. 27).

"*Mothers like to have the doctors by their side, and this is probably because the role of midwives is not properly appreciated, and there is not much talk of their companionship and capabilities, so mothers with delivery pain phobia want the doctor to accompany them. This leads to stories about some doctors in some hospitals who stay by the bedside and do the job quickly and painlessly, which persuades mothers to go to these hospitals while there are many side effects*" (P. 29).

One individual believed that: "*If in private or semi-public hospitals there was the same monitoring as there is in public and university hospitals, there would be a decrease in cesarean rates in these hospitals. However, it seems that no measures have been taken to control hospitals other than public hospitals*" (P. 31).

Financial challenges of natural childbirth and cesarean section

Now that natural childbirth has become free of charge, more patients tend to come to the hospital; thus, the expenses of the hospital will rise, while the personnel are not sufficiently paid for the extra services they have to provide. Moreover, there is not a sufficient budget from the university for per case payments. Moreover, due to the low per case payment for natural childbirth, doctors are more inclined toward C-sections.

On this topic, one of the participants stated: "*Right now, there is no problem with the health system plan, but with natural childbirth becoming free of charge, more patients tend to stay and this will cause a rise in the expenses of the hospital, and subsequently, the personnel will be paid less for providing more services*" (P. 2).

Another individual stated: "*Until now, per case payments for C-section have been good, and this persuaded specialists to favor C-sections, while per case payments for natural childbirth have been low. By increasing per case payments to midwives and gynecologists, we can promote natural childbirth*" (P. 3).

One respondent declared that: "*Per case payment is not made to midwives or it is very low*" (P. 4).

Another announced that: "*Although there is a rise in payment right now, per case payment is not increasing due to more patients asking for services*" (P. 5).

One participant also noted: "*We have problems such as low per case payment, delayed per case payment, and no overtime work payment to midwifery personnel*" (P. 6).

"*Midwives and nurses receive the same pay and only per case payment might increase, but doctors' income is high and they are paid more for C-section or natural childbirth. The degree of* tough jobs *of Midwifery is two, and for nurses, it is three, while previously they were the same. Residents are paid a fixed amount for the childbirth operations they perform. Another problem is that hospitals do not have a clear constitution, for instance, doctors are paid by the government and they also charge the patient*" (P. 9).

Legal limitations for promoting natural childbirth

It seems that in order for the personnel to support natural childbirth, some laws need to be revised. In fact, the existing legal necessities place midwifery personnel under more pressure than they do the specialists. Therefore, the personnel prefer C-section because of their lack of involvement in the related legal issues. From the point of view of the respondents, in case of any error by the midwife in providing services related to natural childbirth, there are penalties, but these penalties do not exist for specialists. Furthermore, although natural childbirth creates more risks for the personnel and the chances of complaint and asking for bodily injury liability pay (Diya) is higher, there is no motivation or encouragement for performing natural childbirth, so the personnel prefer C-section.

A respondent stated: "*There are legal problems. For instance the midwives must arrive on time or they will be punished, but doctors come whenever they want, and no one says anything. They choose C-section for their own benefit and spend their remaining time on other things*" (P. 10).

Another declared that: "*Other than budget, there is no serious problem*" (P. 14).

One respondent pronounced that "*In case of midwives' errors, there are penalties, but this is not the case with the specialists*" (P. 22).

Another noted that: "*There is no encouragement or punishment for natural childbirth, while it has more risks and the chances of complaints and bodily injury liability pay are higher*" (P. 25).

Suggestions

Through analyzing the qualitative data, we identified 5 strategies as key codes which are discussed in detail in the following section.

Rational allocation of budget

One of the basic strategies for overcoming some of the problems is allocating sufficient budget to preparing skilled manpower, improving the condition of hospital equipment, and timely payments. According to our respondents, a pay raise for the doctors and midwives for natural childbirth will push the doctors toward natural childbirth.

Improving physical space

Establishing new maternity wards in hospitals, dedicating private rooms to observe patients' privacy, and segregating women's emergency ward from the natural childbirth ward to improve the physical space in maternity wards were some of the suggestions made in this regard.

Training efficient manpower

Insufficient manpower, especially proficient midwifery experts, is one of the important problems in the implementation of the instructions. From the point of view of the respondents, in addition to improving the quality of education, there must be appropriate planning to employ contractual personnel. Furthermore, another fact mentioned by the respondents was the attention to conscription personnel, which are one of the main sources of manpower for hospitals. Presently, we lose many of this personnel when their conscription period is over. Therefore, by making appropriate plans for these personnel, we can compensate the shortage of experienced midwifery personnel to a high extent.

Promoting the culture

According to the respondents, solving cultural problems is the first and most important step in the process of the implementation of the instructions. In recent years, C-section has been accepted as a more reasonable method for childbirth and we need to promote the culture that health is more important than other things and even good financial status cannot justify the selection of C-section. In order to change the existing culture, we can use mass communication media. Furthermore, childbirth preparation classes are good opportunities for informing mothers. Therefore, we need to create strategies for improving the interaction between doctors and midwives so that doctors encourage mothers to take part in these classes.

Building a culture of teamwork and interaction in maternity wards

According to some of the respondents, one of the ways to improve the natural childbirth process in hospitals is to perform the delivery process as a team in such a way that each specialist have a unique specialist team, and train them and have a long-term interaction with them. For instance, to perform natural childbirth, it is preferable that several painless delivery (anesthesiologist, anesthesia technologist, gynecologist, and midwife) and natural delivery teams (gynecologist, midwife, and surgical technologist) be created to facilitate the process.

Discussion

In the present study, the strengths, weaknesses, achievements, and challenges of the natural childbirth promotion package were analyzed. Overall, the respondents were in favor of the plan and its advantages and believed that we must take measures to rectify its inefficiencies and weaknesses. The measures they suggested include providing budget, improving the physical space of the ward, training proficient manpower, promoting the culture, informing people, and creating opportunities for interaction and teamwork in maternity wards.

They also pointed to the strengths of the content of the natural childbirth promotion executive instruction package and said that this program has had impact on the health services quality improvement and has positively affected

the hospital. The instruction for free of charge natural childbirth and promoting it as a part of the health system evolution plan was compiled to promote natural childbirth, reduce C-section rates, increase mothers' satisfaction, reduce people's costs, and increase the motivation of service providers in public hospitals; in addition, it was irrevocable after its announcement.[22] In their study, Afshari *et al*. showed that in hospitals in Isfahan, Iran, the C-section rates were reduced by 12.5% after 8 months.[23] Moreover, the natural childbirth promotion program has been successful regarding costs reduction, and no payment has been asked for natural childbirth, which shows that the budget is being provided by the Ministry of Health. In this regard, Goudarzi *et al*. found that this has been the most favorable aspect of the program.[24] It seems that the accurate definition of criteria and indices for measurement, and efforts made to improve the conditions, which affect natural childbirth, have been successful in the promotion of the package. However, we need to assess it in the long run and pay attention to its results.

The respondents believed that one important weakness of the promotion package was the segregation of private and semi-public hospitals. The C-section rates in public centers are lower than that in private centers.[25] Studies have shown that the C-section rates of private centers are 1.2 times higher than those of public hospitals and 1.3 times higher than those of university hospitals. The C-section rates in Iran, especially in the private sector, are much higher than international standards, and we need to make plans to reduce them.[26] Moreover, based on the findings of the present study, in the private sector, the patient expects better services in exchange for money, and the private sector sees itself obliged to provide better services; however, in public hospitals, doctors are paid by the government, and they provide services at a lower quality. Other findings of the present study showed that private hospitals have a significant role in the increasing C-section rates in all areas. It seems that if there is no appropriate monitoring system for assessing the indications of C-section and natural childbirth, natural childbirth with all its observable and undeniable advantages will be replaced by C-section, which has more side effects.

The respondents mentioned the emphasis of the role of midwives and paying attention to maternity wards as the achievements of the package. Studies have shown that the existence of a real relationship among midwives, doctors, and mothers, building of real trust, respect, midwives' skills and proficiency, the capability of using delivery technologies in case of emergencies and keeping calm and transferring that calmness to mothers before delivery and during delivery are some factors that can help mothers and medical teams in choosing the delivery type and having a good feeling about it. Furthermore, a good interaction between midwives and mothers during delivery at home has significantly reduced C-section rates.[27] The items in the midwifery empowerment section of the package include supporting mothers during delivery pain, providing a suitable space for pregnant mothers, improving the quality of nursing care provided for pregnant mothers, establishing consulting clinics along with LDRs, making fundamental changes in unnecessary interventions in hospital maternity wards, providing facilities and non-medicinal or medicinal methods for a painless delivery or reduction of pain, providing suitable circumstances without any kind of sound and noise by other patients (LDR centers), holding short-term educational courses in modern skills of midwifery, forming an educational core consisting of midwifery faculty members to teach pain-reduction methods to instructors across the country, adjusting the method of services provision by midwives in the family physician team according to their job description and medical council code number, allocating suitable per-capita income for reproductive health services, monitoring of hospitals by the Ministry of Health, giving the directorship of delivery rooms to midwives under the administration of specialists, increasing the number of delivery rooms in public centers and observing the privacy of mothers in natural childbirth, and employing midwives in matters related to mothers' health. It seems that by making the required preparations, having the support of the Ministry of Health, and empowering midwives we can achieve the goal of reducing C-section rates.

The respondents mentioned the change in the society's attitude as another achievement of the promotion package. This has been achieved through the allocation of financial resources and credit to the promotion program, preparation classes, and development of delivery blocks. The national health system in England, in addition to investment in educating and informing people about the advantages of natural childbirth, has established a website that provides exhaustive information on all fields of health including natural childbirth. Alternative methods to C-section such as painless delivery, water birth, delivery at home, and delivery with the husband's presence are provided in this system.[28] In less developed countries such as Thailand, considering the increasing rates of C-section, some strategies have been developed such as monitoring the private sector to control doctors and midwives, stopping the immethodical provision of C-section, taking financial measures, creating clinical instructions and surveys, providing sufficient general information for mothers on pregnancy, and improving the quality of midwifery services in the public sector.[29] It seems that increasing knowledge and mental education and support is helpful in deciding about the delivery type among women.

The respondents believed that the high rates of childbirth, the lack of sufficient facilities, and shortage of midwifery personnel are serious problems in providing services. The respondents believed that there must be a one to one ratio of midwife to patient (one midwife for each patient), but

this is not the case in Iran. In addition, another challenge is that the midwifery personnel are not skilled. The promotion of natural childbirth required some inputs and by providing these inputs the preparations are made for this promotion.[22] It seems that in the case that appropriate management is established in the health system for employing appropriate medical staff in the field of natural childbirth, C-sections suggested by doctors with no medical indication and performance of repetitious C-sections—despite its obsolescence—are managed, and a hospital which loves the mother and the baby is created, mothers' health can be improved.

The respondents also mentioned the reasons for the selection of C-section. The factors which affect the increase in C-section rates in Iran are related to both the providers and mothers. First pregnancy at advanced maternal age, fear of natural childbirth pain, previous C-sections, and pregnant women's tendency to deliver through C-section are factors that encourage mothers to choose C-section.[30] Furthermore, legal issues related to the results of natural childbirth and previous complaints, lack of sufficient skill to perform it, and difference in payments are factors that persuade the service providers to favor C-section.[31] Moreover, most gynecologists and anesthesiologists are experienced in this common operation, but lack sufficient experience for difficult deliveries. In other words, most C-sections are performed because of complicated deliveries, and doctors are less educated in this field.[32] It seems that the aforementioned factors are influential on the performance of specialists and mothers' choice of delivery type.

In recent years, C-section has had an increasing rate. However, due to the side effects of surgery, financial expenses, and the time of hospitalization, natural childbirth is preferable. Regardless of these facts, women's demand for and inclination toward C-section is one of the basic factors in the increase in C-section rates. Factors effective on the inclination of mothers toward choosing C-section include fear of natural childbirth, lack of knowledge of natural childbirth and C-section, false advertisements about natural childbirth, and doctors' suggestions.[33] Previous studies have shown that one of the reasons for choosing C-section is suggestions made by doctors. Therefore, it seems that women use their doctors' suggestions in making their decisions.[34] According to some studies, lack of knowledge of the side effects of C-section was one of the reasons that mothers chose C-section,[35] which is in accordance with the present study findings. It seems that the manner of providing care services during pregnancy, the performance of the health and medical systems, doctors' attitude, and socio-economic status are related to this issue.

Some of the most important reasons for midwives and gynecologists to suggest C-section without indication are legal issues. Some less important reasons include the fear that doctors and midwives do not get to the pregnant mother in time, inappropriate time, the long process of delivery for midwives, and specialists' fear of damaging the perineum.[36] Moreover, according to the defensive theory, young gynecologists choose C-section in order to reduce the chances of complaints, especially from husbands, about medical errors, reduce the risks of natural childbirth, and manage their personal time and solve the conflicts between their occupational and familial roles. This will reduce the risks for doctors, while increasing the risks for mothers.

According to the findings of the present study, the division of labor and payments are unfair. Midwives and nurses will get the same wages regardless of the number of deliveries they perform and only per case payment might increase while doctors receive a higher pay for C-sections and natural childbirths. Therefore, midwifery personnel's motivation, and thus, their capabilities in performing natural childbirth will decrease. According to WHO reports, in Brazil, safeguarding women's health is one of the priorities of the Ministry of Health and they have developed several strategies in this regard such as increasing the payments for natural childbirth to prevent unnecessary C-sections and establishing cooperation between private sectors and social groups.[37] Attracting the support and cooperation of other sections of the system such as medical council organizations and insurance companies is one of the managerial concerns of our society and it has received insufficient attention in recent years. Suitable management leads to justice in payments and incomes and creates the necessary motivations for constant care in the pregnancy, delivery, and postpartum periods.[38] Maintaining consistency in care while observing the principles of the referral system is a difficult task and calls for strong material and spiritual motivations. Lack of attention to these issues results in a discontinuity in care, lack of follow-up, and errors in documentations. Moreover, the necessity of care management in accordance with the situation and time, easy discharge, and receiving appropriate support are mentioned in some studies.[39] Furthermore, injustice in payments, lack of a structure for reward and payment, which is accepted by all, along with legal issues and executive instructions problems are the most important barriers to doctors' cooperation with midwife-centered programs.[40] Therefore, by implementing the evolution plan and the natural childbirth promotion package, we might be able to improve the efficiency and capabilities of midwives and create justice in payments and the division of labor.

The most important barrier to promoting natural childbirth is the incorrect culture among mothers and their husbands, which has made them unaware of the side effects of C-section and resulted in them preferring it due to their fear of natural childbirth. In addition to the aforementioned facts, there are many factors which prevent the promotion of natural childbirth including problems related to equipment and physical space. Moreover, there are other problems such as lack of experienced manpower,

inappropriate behavior of personnel toward mothers who cannot bear the pain of natural childbirth, mothers' concern about the problems that can hurt the fetus. In order to eliminate erroneous beliefs among pregnant mothers, we need to emphasize pregnancy education, and inform them of the side effects of C-section and the advantages of natural childbirth for mothers and babies. Moreover, we need to hold educational courses for midwives and gynecologists.

Findings of qualitative studies are dependent on the participants and by selecting different people for participation in the study, different aspects of the subject can be addressed. In qualitative studies, the researcher is the primary tool of research, and his/her insight and views affect the collection and analysis of the data. Nevertheless, since the research team did not have a previous intense study on the subject, they did not have any conflicts of interest in this study, and they accurately documented the research stages. It seems that there was no bias in collecting and analyzing the qualitative data. Furthermore, in the interviews, the participants could have omitted some parts of their answers due to the fear of exposure of their statements. Therefore, there is the chance that they have censored some parts of their statements.

Conclusion

Considering the conditions of the health care system in the country, accountability in the system that provides health care services for pregnant mothers in public hospitals has been provided through the implementation of the natural childbirth package. If managerial barriers and executive and legal inefficiencies are followed up and suitable measures are taken for solving the intra-system conflicts, we can hope that the package, which has been one of the most serious efforts made by the Ministry of Health over the past decades to reduce cesarean delivery, will achieve significant accomplishments.

Acknowledgements

The authors wish to thank all the people who helped them in conducting this study. This study is the product of the dissertation in Health Service Management numbered 84152 in Kerman University of Medical Sciences.

Financial support and sponsorship

Kerman University of Medical Sciences

Conflicts of interest

Nothing to declare.

References

1. Boone KW, Whittenburg L, Saba VK. Profils. IHE Patient Care Coordination (PCC) Technical Framework Supplement. 11st ed. 2011. p. 19-21.
2. Venes D. Taber's Cyclopedic Medical Dictionary. 2th ed. London: F. A. Davis Company; 2013.
3. Black M, Bhattacharya S, Philip S, Norman JE, McLernon DJ. Planned repeat cesarean section at term and adverse childhood health outcomes: A record-linkage study. PLoS Med 2016;13:e1001973.
4. Mei-Dan E, Asztalos EV, Melamed N, Willan AR, Barrett JF. Induction of labor versus cesarean section in twin pregnancies: A secondary analysis of the Twin Birth Study. Am J Obst Gyncol 2016;214:S164-5.
5. Amiri Farahani L, Abbasi Shavazi MJ. Caesarean section change trends in Iran and some demographic factors associated with them in the past three decades. J Fasa Univ Med Sci 2012;2:127-34.
6. Alikhani S, Jabbari A. Cost-benefit analysis of vaginal delivery and cesarean delivery. Proceedings of the International Conference on Sustainable Evolution in the Health System 2015 Feb 24-26; Isfahan, Iran.
7. Kazmi T, Sarva Saiseema V, Khan S. Analysis of cesarean section rate-according to Robson's 10-group classification. Oman Med J 2012;27:415-7.
8. Yazdizadeh B, Nedjat S, Mohammad K, Rashidian A, Changizi N, Majdzadeh R. Cesarean section rate in Iran, multidimensional approaches for behavioral change of providers: A qualitative study. BMC Health Serv Res 2011;11:159.
9. Baghianimoghadam MH, Zolghadar R, Moghadam BB, Darayi M, Jozy F. Related factors to choose normal vaginal delivery by mothers based on Health Belief Model. J Educ Health Promot 2012;1:17.
10. A national guide for normal vaginal delivery and the pharmacological and non-pharmaceutical methods for reducing labor pain. Iran's Ministry of Health and Medical Education. Maternity Health Office, Family and population Health Office. 2011.
11. Lothian JA. Introduction: The coalition for improving maternity services. J Perinat Educ 2007;16(Suppl 1):1S.
12. Kassebaum NJ, Barber RM, Bhutta ZA, Dandona L, Gething PW, Hay SI, *et al*. Global, regional, and national levels of maternal mortality, 1990–2015: A systematic analysis for the Global Burden of Disease Study 2015. Lancet 2016;388:1775-812.
13. Department of the Author (on request) Ministry of Health. Country guidance for obstetrics and gynecology services. Tehran: Medical Education and Training, Family and Population Health Office, Maternal Health Office; 2017.
14. Ministry of Health and Medical Education. Set guidelines for health reform program. Executive Edition 2014;20:52-61.
15. Babaei F, Aghajani M, Estambolichi L, Joshari M, Mazaheri Z, Kykhosravi F, *et al.* Study of the promotion of normal delivery program in government hospitals in line with the health transformation plan and its achievements. Hakim Health Syst Res 2017;20:44-53.
16. Moradi Gh, Farhadifar F, Piroozi B, Mohamadi Bolbanabad A. An assessment of promoting natural childbirth package in health reform plan from the opinion of stakeholders in hospitals of Kurdistan university of medical science, 2015. Hakim Health Syst Res 2016;19:103-10.
17. Shams M, Mousavizadeh A, Parhizkar S, Maleki M, Angha P. Development a tailored intervention to promote normal vaginal delivery among primigravida women: A formative research. Iran J Obst Gynecol Infertil 2016;19:9-25.
18. Lacey A, Luff D. Qualitative Data Analysis. USA: The NIHR RDS for the East Midlands/Yorkshire & the Humber; 2009. p. 266-324.
19. Holloway I, Wheeler S. Qualitative Research for Nurses.

Australia: Blackwell Science; 2002.
20. Graneheim UH, Lundman B. Qualitative content analysis in nursing research: Concepts, procedures and measures to achieve trustworthiness. Nurse Educ Today 2004;24:105-12.
21. Sadoughi M. Criteria of evaluating qualitative research. MSSH 2008;14:55-72.
22. MOHME. Health Sector Evolution. Islamic Republic of Iran, Minstry Of Health and Medical Education. Available from: http://tahavol.behdasht.gov.ir/. [Last accessed on 2015 Feb 19].
23. Afshari S, Ebrahimzadeh J, Yadegarfar G, Solymani F. The impact of Health Sector Evolution on the rate of cesarean section in hospitals affiliated with the University Isfahan University of Medical Sciences. Proceedings of the International Conference on Sustainable Evolution in the Health System 2015 Feb 24-26; Isfahan, Iran.
24. Goudarzi L, Khayyeri F, Meshkini A, Khaki A. Health Sector Evolution plan with an emphasis on natural birth promotion in public hospitals. Proceedings of the National Conference on Review of Government Performance in 0.2015 May 5-6; Tehran, Iran. the Field of Health.
25. Klasko SK, Cumming RV, Balducci J, DeFulvio JD, Reed JF III. The impact of mandated in hospital coverage on primary secarean delivery rate in a large non university teaching hospital. Am J Obst Gynecol 1995;172:637-42.
26. Ghadimi R, Izadpanah F, Zarghami A, Rajabi M, Baleghi M, Basirat Z. Effective factors for choosing the delivery method in primiparous women in Babol, Iran. J Babol Univ Med Sciences 2013;15:52-8.
27. Bagheri A, Masoodi-Alavi N, Abbaszade F. Effective factors for choosing the delivery method among the pregnant women in Kashan. Feyz 2012;16:146-153.
28. Health Department. Expert advisory group on cesarean section in Scotland. Report and recommendations of the Scottish executive health department. Edinburgh, Scotland: Scottish Executive, Health Department; 2001. 30 p.
29. Hanvoravongchai P, Letiendumrong J, Teerawattananon Y, Tangcharoensathien V. Implications of private practice in public hospitals on the cesarean section rate in Thailand, health systems research institute and Thailand research fund Thailand: Health Systems Research Institute. Available from: http://www.who.int/hrh/en/HRDJ_4_1_02.pdf. [Last access on 2020 Oct 21].
30. Latifnejad-Roudsari R, Zakerihamidi M, Merghati-Khoei E, Kazemnejad A. Cultural perceptions and preferences of Iranian women regarding cesarean delivery. Iran J Nurs Midwifery Res 2014;19:28-36.
31. Lotfi R, Tehrani FR, Dovom MR, Torkestani F, Abedini M, Sajedinejad S. Development of strategies to reduce cesarean delivery rates in Iran 2012–2014: A mixed methods study. Int J Prev Med 2014;5:1552-66.
32. Sherwen N, Scoloveno M, Weingarten T. Maternity Nursing. London: Schuster co.; 1999. p. 790-6.
33. Mohammadpourasl A, Asgharian P, Rostami F, Azizi A, Akbari H. Investigating the choice of delivery method type and its related factors in pregnant women in Maragheh. J Knowl Health Basic Med Sci 2009;4:36-9.
34. Kwee A, Cohlen BJ, Kanhai HH, Bruinse HW, Visser GH. Cesarean section on request: A survey in the Netherlands. Eur J Gynaecol Obstet Reprod Biol 2004;113:186-90.
35. Chong E, Mongelli M. Attitudes of Singapore women toward cesarean and vaginal deliveres. Int J Gynecol Obst 2003;80:189-94.
36. Moeini B, Allahverdipour H, Mahjoub H, Bashirian S. Assessing pregnant women's beliefs, behavioral intention and predictive factors for cesarean section in Hamadan. Iran J Obst Gynecol Infertil 2010;14:37-44.
37. WHO. Improving Health Through Community Participation: Concepts to Commitment. London: Health Development Agency; 2000.
38. Waibel S, Henao D, Aller MB, Vargas I, Vazquez ML. What do we know about patients' perceptions of continuity of care? A meta-synthesis of qualitative studies. Int J Qual Health Care 2012;24:39-48.
39. Haggerty JL, Reid RJ, Freeman GK, Starfield BH, Adair CE, McKendry R. Continuity of care: A multidisciplinary review. BMJ 2003;327:1219-21.
40. Munro S, Kornelsen J, Grzybowski S. Models of maternity care in rural environments: Barriers and attributes of inter professional collaboration with midwives. Midwifery 2013;29:646-52.