The Barriers and Facilitators of Iranian Men's Involvement in Perinatal Care: a Qualitative Study

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Abstract

Introduction: Pregnancy and childbirth are crucial events in women's lives that can be done well with the support of people around them, especially their husbands. However, a number of factors can reduce or increase the supportive role of spouses during this period. The aim of the present study was to explain the barriers and facilitators of Iranian men's involvement in perinatal care.

Materials and Methods: This qualitative phenomenological study was conducted with the conventional content analysis approach and with use of purposeful sampling method with the involvement of pregnant women or the women who have recently given birth (one week to six months after childbirth), spouses, policy makers and midwifery service providers. The inclusion criteria included: being Iranian, the ability to understand and transfer the concepts into Persian, and employment in a midwifery center for at least one year (for service providers). Data were collected through in-depth interviews until the data saturation. The collected data were analyzed by conventional content analysis based on Graneheim and Lundman method steps. MAXQDA version 10 software was used to manage the data and Guba and Lincoln criteria were also used to ensure the trustworthiness of findings.

Results: After analyzing of the data, they were classified in 2 sub-categories and 3 main categories including gender authoritarian attitudes (including subjective norms, stereotypes and hidden fears), constraints (including individual, organizational, socio-economic and legislative constraints), and incentives (including individual, family, economic, legislative, and organizational incentives).

Conclusion: The results revealed that men face a number of declining and increasing factors in participating in perinatal care, which have been neglected and it is necessary to pay attention to role of these factors in maternal and neonatal health promotion programs.

Plain English Summary

Pregnancy and childbirth are crucial events in women's lives that can be done well with the support of people around them, especially their husbands. However, a number of factors can reduce or increase the supportive role of spouses during this period. The aim of the present study was to explain the barriers and facilitators of Iranian men's involvement in perinatal care. This qualitative phenomenological study was conducted with the conventional content analysis approach and with use of purposeful sampling method with the involvement of pregnant women or the women who have recently given birth (one week to six months after childbirth), spouses, policy makers and midwifery service providers. The inclusion criteria included: being Iranian, the ability to understand and transfer the concepts into Persian, and employment in a midwifery center for at least one year (for service providers). Data were collected through in-depth interviews until the data saturation. The collected data were analyzed by conventional content analysis based on Graneheim and Lundman method steps. MAXQDA version 10 software was used to manage the data and Guba and Lincoln criteria were also used to ensure the trustworthiness of
findings. After analyzing of the data, they were classified in 2 sub-categories and 3 main categories including gender authoritarian attitudes, constraints and incentives.

**Introduction**

Pregnancy and childbirth is one of the most important and stressful periods of women's lives, which is associated with many physical and mental changes (1), but their ability to tolerate these changes and adapt to the stresses and hardships of this period increases with the support of others, especially the spouse (2). The issue of men's involvement in the area of women reproductive health was first considered in 1994 at the Population and Development Conference in Cairo and later in the achievement of the Millennium Development Goals (3). Based on the studies conducted in this regard, the involvement of fathers in perinatal cares has positive maternal, fetal, and neonatal outcomes (5) and their non-involvement in addition to the direct negative impacts, directly influences the educational, behavioral, and developmental status of children by reducing parent-child relationships and reducing social support and increasing maternal stress hormones (6). Despite these benefits, few men involve in maternal health services (7). The study conducted by Mortazavi and Keramat (2012) on the husbands of pregnant women in Shahrood and Sabzevar revealed that men's awareness of pregnancy problems is low in 77% of cases, 17% of men are not present in the hospital during childbirth and 25% of women are accompanied by their husbands at low levels and 33% reported low men's involvement in home affairs, and 61% of women did not receive any health advice from their husbands (8).

Based on a study conducted by Ongolly and Bukachi (2019) in Kenya, 55.8% of men accompanied their wives to receive prenatal and postpartum care, but about a third of them participated in group health discussions inside clinics, 27 to 30% of them did not involve in home affairs, about a third of them did not support their wives during the perinatal period (31.6%) and about half of them did not accompany their wives for vaccination (45.6%) (9). Studies conducted in Nigeria and South Asia have indicated that factors such as absolute authority in decision-making, having power in financial resources, low awareness of maternal and neonatal health, and cultural barriers are major barriers to men's involvement and restricted access of women to health services (10, 11, 12). In Malawi, lack of infrastructure required for men's involvement in childbirth was found as one of the major barriers to their involvement, since most maternity centers have been designed in such a way that the presence of a woman's husband is considered as another invasion to another woman's privacy (13, 14). The results of studies suggest that some men have low involvement in prenatal care, despite being aware of the positive impacts of their involvement in their spouses' health and having willingness to involve in pregnancy care (15), having a feminine attitude, fear of negative judgments of others, inadequate work hours of providing health services, negative attitudes and inappropriate attitudes of health staffs and the provision of non-friendly services in these centers, etc., (16). In Iran, some barriers including lack of awareness of women's care needs, embarrassment,
belief in non-interference in women's affairs, femininity of health centers and lack of acceptance of men's presence in these centers, social stigmas and women's embarrassment of men's involvement in pregnancy and childbirth care has been confirmed (8, 17). Thus, to increase men's involvement in pregnancy and childbirth care, it is necessary to strengthen the facilitating factors and eliminate the barriers as much as possible. However, due to limited access to documentation, policies and interventions to increase men's involvement, these measures are taken slowly. In Iran, to achieve millennium development and sustainable development goals, men's involvement in affairs related to reproductive health and women's health has been considered in recent years, but unfortunately these programs in many health centers of Iran are not implemented in practice or their implementation and effectiveness are not monitored. As a limited number of studies have been conducted in Qom so far on the men's involvement in perinatal care (18) and no qualitative study has been done with the method of conventional content analysis in the field of barriers and facilitators of men's involvement, this study was conducted to explain the barriers and facilitators of Iranian men's involvement in perinatal care with conventional content analysis. The phenomenological descriptive studies describe the phenomena as they are experienced and seeks to clarify the essence of the phenomena experienced and to accurately describe them through the analysis of participants' experiences (19). Content analysis method is also a systematic and objective way of describing phenomena aimed at identifying the goals, values, culture, and desires of the interviewees (20). Thus, this study seeks to use this method to identify the barriers and facilitators of Iranian men's involvement in perinatal care so that appropriate interventions can provide to increase men's involvement in these areas.

Methodology

This qualitative phenomenological study was conducted using a conventional content analysis approach. Participants in the study, who were pregnant women or those who had given birth recently (one week to six months after childbirth), married men and key informants (including midwifery service providers, midwifery care managers and policy makers), were selected by purposeful sampling method. The inclusion criteria of the research included willingness to participate in the study, being Iranian, the ability to understand and express experiences in Persian and having at least one year of experience in units related to midwifery (for service providers). Providing explanations on the present study and ensuring their willingness to participate in the study and obtaining their written consent, the researcher used in-depth semi-structured interviews and accordingly obtained information on the participants' experiences in the factors affecting men's involvement in prenatal and postpartum cares to identify barriers and facilitators of their understanding and experience. All of the subjects participated in the interview.

In the present study, 21 interviews were performed. A total of 5 pregnant or recently-delivered, 7 men and 9 key informants with an age range of 24 to 60 years and a mean age of 38.3 years (Tables 1 and 2) participated. Interviews were performed in March-August 2018 by the first author of this article (Mrs N.M), who was faculty member and a PhD student in reproductive health and had experience in conducting qualitative studies and is teaching midwifery students in health care centers. All stages of data recording
and analysis were performed under the supervision of the corresponding author of this article (Dr S.H.) as a faculty member with many years of experience in training and conducting qualitative research. The research environment was one of the public hospitals of city, public health centers, or any place where participants felt more comfortable. It lasted 30-90 minutes (average: 55 minutes) and was recorded by digital audio recording with the permission of the interviewees. During the interviews, observation and notes were used. Before the study, an experimental interview was conducted that was not analyzed, but contributed greatly in design of the interview guideline.

Interview with women began with an initial question of "Do you have any experience of your husband's presence with you during prenatal, childbirth, and postnatal period?" and continued with other questions, such as "How effective can men's involvement in prenatal, childbirth, and postnatal period be?", "What factors facilitate men's involvement in their spouse's perinatal care?", and what factors reduce the men's involvement during this period?". The similar questions were asked from men. For example, "Do you have any experience of being with your spouse during prenatal, childbirth, and postnatal period?"

Different questions were asked from key informants, based on the goals of the study. For example, "Do you have any experience of men's presence with their wives during prenatal, childbirth, and postnatal period?"

"Based on your job experience, how effective can men's involvement during prenatal, childbirth, and postnatal period be?", "Based on your job experience, what is needed to increase men's involvement during this period?" "Based on your job experience, what are the barriers of men's involvement during this period?", and "Based on your job experience, how can you increase men's involvement during this period?". The interview process was clarified with exploratory questions such as "Can you explain more?". Immediately after each interview, the full text was heard several times and transcribed by the researcher. Also, if the participants were not satisfied with the recording, their speeches would be written on paper.

The interviews continued until the information was saturated. After 15 interviews, no new data were collected that led to the creation of a new classe. However, 6 additional interviews were performed for further assurance. All of the participants continued the study, and none of the interviews required repetition. If needed, the interviews were returned to the participants so that they could provide feedback and possible changes. After each interview, qualitative data were analyzed based on the convetional content analysis method and based on the steps proposed by Graneheim and Lundman (2004). At the end of each interview, all the notes and the audio file of the interviews were typed word by word. Then, the typed content was read several times to obtain a general understanding of their content. Semantic units and basic codes were determined. Similar initial codes were placed within the more comprehensive categories and the main themes of the categories (which included the main themes of the research) were determined (21). In this section, MAXQDA version 10 software was used to manage the data.

Five Guba and Lincoln criteria were considered to ensure trustworthiness of qualitative results (22). To increase the credibility of data, the methods of reviewing codes by other members of the research team, credibility of the researcher and his scientific and professional background, reflexivity of researcher, and
searching for disconfirming evidence and prolonged engagement were used. To increase the reliability or dependability of the data, the interviews were carefully recorded and transcribed word by word. During writing the report, the participants’ conversations were cited and the study was reviewed by supervisors and experts.

The code-recode method was also used to increase the reliability of the data. In order to increase the transferability of the data, rich descriptions method was used and the researchers tried to conduct interviews, especially the initial interviews, among the appropriate samples (those who had the highest experience and knowledge on the perceived needs). Also, the steps of the study were described accurately and clearly by stating the performed activities, so that other researchers could do it in other conditions and places. Confirmability of data was also achieved by reviewing reports and writings by at least two experts in the field of qualitative research and reproductive health and determining the degree of similarity in results of the studies. This study, which is part of a PhD dissertation, was approved at Ethics Committee dated 2016.1.5. with the code of ethics of IR.SBMU.PHNM.1394.284. ethical considerations of the study included obtaining the necessary permissions from the relevant authorities, obtaining the informed consent of the participants to participate in the study, assuring the participants about the confidentiality of their speeches, freedom of participants to leave the study at any time, determining the place and time of the interview based on the willingness of the participants, and not imposing any costs on the research subjects.

**Results**

After interviewing with the participants, 1856 initial code was extracted, which 33 final codes were obtained in the process of data analysis and comparison after classifying the codes and deleting similar codes. The main theme of the study was the "dual mechanisms of men's involvement in perinatal care", which were classified into three main categories (including incentives, constraints, and authoritarian gender attitudes) and 12 sub-categories.

The main class of "incentives" consists of 5 sub-categories, including "individual factors", "family factors", "economic factors", "legislative factors" and "organizational factors" and main class of "constraints" consists of 4 sub-categories, including "individual factors", "organizational factors," "socioeconomic factors," and "legislative factors". Also, the class of “authoritarian gender attitudes” includes the sub-categories of “subjective norms”, “stereotypes”, and “hidden fears” (Table 3).

1-Incentives

Besides some of the barriers that reduce men's involvement in prenatal, childbirth, and postpartum cares, a number of individual, family, economic, organizational, and legislative factors increase men's involvement. This class consists of 5 sub-categories, including: individual incentives, family incentives, economic incentives, legislative incentives, and organizational incentives.

1-1- Individual factors
1-1-1: Enthusiasm for having children: The passion and interest of some men to become father was a factor that was considered by the participants in this study as a facilitator of men's involvement.

"He is helping his wife for nine months. He is helping his wife for his desire to have a child" (Participant No. 19, self-employed, Diploma, 60 years old)

1-1-2: Optimal Awareness: Some participants believed that some men have good involvement because they are well aware of the importance of their involvement and issues related to prenatal and childbirth and postpartum cares.

"When her husband found out that his wife had to take iron, he forced her to come here to get iron, and when his wife gave birth, he brought his child here" (participant No. 16, midwife of the health center, bachelor, 33 years old).

1-1-3: Individual responsibility: According to some of the participants of this study, men's sense of responsibility and their commitment to their spouse and children cause them to involve more and more in cares of this period.

"Some people think they should be beside their wives always. When they marry, they commit, not that they think they are still single and they should be the same as they were single (participant No.14, faculty member, master, 33 years old).

4-1-1: Positive attitude: Some participants stated that men who have a positive attitude towards their spouse and believe that the duties and responsibilities are shared between husband and wife have a better involvement in family life.

"A man should know that he is a member of the family. Fifty percent of the family's responsibilities are for woman who accepts and does her own work, and the remaining 50 percent is for man and even some men believe that their share of life is more than 50%, so they should be equally involved in the family affairs (Participant No. 5, Woman, Faculty Member, PhD, 41 years old).

1-2: Family factors

1-2-1: Accompanying families: based on the participants, men who are encouraged to involve by their primary family (father, mother, siblings) have better involvement and cooperation with their spouses in midwifery care.

"My mother-in-law also tells him be careful of your wife." (Participant No. 8, Pregnant Woman, bachelor, 35 years old).

1-2-2: Optimal interaction between couples: Some participants in this study believed that proper relationships between couples and the expression of desires by women increase the men's involvement.
"I have told him don't speak about things that you know annoy me when you see I'm sad or tired. When I am mentally occupied, it affects my appetite and causes a stress or tension in my mind that can leave an effect on the child. He usually listens my words and observes these points (participant No. 8, pregnant woman, bachelor, 35 years old).

1-3: Economic factors

1-3-1: Sustainable financing: Most participants believed that despite the high cost of living and the high cost of midwifery services, if a man does not have a reliable and sustainable financial source, he would not have an opportunity and motivation to help his wife. In contrast, having a good income and a reliable and stable financial source will be an incentive for his involvement.

"My brother helps his wife so much and it is due to his income. He has high income. He helps his wife and children in spending." (Participant No. 19, male, self-employed, diploma, 60 years old).

2-3-1: Free childbirth services: Some participants were satisfied with the free provision of some services during pregnancy and childbirth and after childbirth and thus increased men's involvement, and hoped that such services to increase, especially for low-income families in the community.

"We have now contracted with several private clinics to hold free maternity classes for pregnant women and their spouses" (Participant No. 4, female, Head of Maternal Health Department, master, 44 years of old)

4-1: Legislative factors

4-1-1: Implementation of Health Transformation Plan: Some participants in this study believed that health transformation plan and reduction of midwifery service costs as an important turning point in increasing men's involvement in midwifery cares.

"Fortunately, health transformation plan has reduced the costs significantly, including costs of maternity, hospitalization, and tests. We are currently performing some of our tests in comprehensive health centers for free" (Participant No. 4, female, Head of Maternal Health department, master, 44 years old).

2-4-1: Supportive role of officials and legislators: The cooperation and support of some managers of centers and political officials in increasing men's involvement was one of the facilitating factors mentioned by some key informants.

"We have many phone calls with the women's husbands. In general, our center accepts the cost of the phone call, and it is not something to say, because these are men, you shouldn't call" (Participant No. 9, clergyman, 35 years old)

"The postpartum leave dedicated for fathers, of course, if the government does not regret (laughs), will have a great impact" (Participant No. 16, midwife of health center, bachelor, 33 years old).
1-5-organizational factors

1-5-1- Factors related to health service providers: Some participants believed that adequate skills of midwifery providers were influential factors in increasing men's involvement.

"In the classroom, as they hear these teachings from an expert, they are accepting them more. The same things may be said by his wife, but he may think that his wife says these things to make me aware of him." (Participant No. 13, midwife of the maternity ward and instructor of preparation classes for childbirth, bachelor, 41 years old).

2-5-1: Physical structure appropriate to health service recipients: The appropriate space of some centers, good facilities of the centers and the separation of the rooms were among the factors that were mentioned as facilitators of men's involvement by key informants of this study.

"our other bases are very good, for example, Safashahr center, all are good rooms. For example, In Meysam center, all rooms are partitioned" (participant No. 16, midwife of health base, bachelor, 33 years old).

2-Constraints

According to participants, in addition to authoritarian gender attitudes, a number of individual, economic, organizational, and legislative factors can also reduce men's involvement in prenatal, childbirth, and postpartum care. This class consists of 4 sub-categories, including individual constraints, organizational constraints, socio-economic constraints, and legislative constraints.

1-2: Individual factors

2-1-1-Emotional-social immaturity: Some participants stated that problems in emotional and social personality of some men could be a barrier to their involvement in midwifery care.

"Many men are also jealous. I really had a client and I saw that he told the woman not to breastfeed the baby, because I want my wife to be mine and I don't want to breastfeed the baby and every time they came together, the baby was in the father's arm" (participant No. 16, midwife of the health center, bachelor, 33 years old).

2-1-2: Lack of knowledge: According to the majority of participants in this study, men's non-involvement was due to lack of knowledge about issues related to pregnancy and childbirth and changes and needs of women in this period and lack of familiarity with way of participating and so on.

"They don't know that a woman has these needs, and in this way, for example, they can meet their wife's needs." (Participant No. 5, female, faculty member, PhD, 41 years old).

2-1-3: High-risk behaviors: The presence of high-risk behaviors such as addiction, leaving life, remarriage, inappropriate behavior of women, etc. are among the factors that were mentioned as reducing factors in
men's involvement by some participants.

"When I see some people worried, I talk to them for a while and ask them and I realize that either their husbands are addicted or they have a second wife" (Participant No. 13, midwife and instructor of childbirth preparation classes, bachelor, 41 years old).

2-1-4: Conflict in couples: According to some participants, marital conflicts and misunderstandings between couples can negatively affect men's involvement.

"I think their cultures must be adapted with each other. I always say it might take three to five years so that couples culture to be adapted with each other. If a woman has a sensitive spirit, when her husband's family says something might be important for her, while it does not important for man. They need to be adapted with each other "(Participant No. 13, midwife and instructor of childbirth preparation classes, bachelor, 41years old).

2-2: Organizational factors

2-2-1: Human resources: The low number of midwifery service providers in each work shift, despite the large volume of works, was one of the barriers to men's involvement, which was mentioned by some key informants of this study.

"It's not easy for men to enter and exit the ward where so many sick women have been hospitalized. We do not have that much strength, and we have high-volume work (Participant No. 15, midwife of maternity wife, bachelor, 42 years old).

2-2-2- Allocated Budget: Some of the key informants participating in this study were complaint of the budget allocated to centers and considered it a barrier to men's financial involvement in midwifery care.

"Of course, we have a budget constraint in this regard and we have a cost ceiling to introduce low-income people" (Participant No. 4, female, head of the Maternal Health Department, Master, 44 years old).

3-2-2: Inappropriate physical structure: Small space, lack of separating rooms and low number of seats in health service centers are among the organizational factors that were mentioned as barriers of men's involvement by some key informants of this study.

"You see how small the waiting space for our clients is here. When men come here, they see that women have sated here, they see there is no more than 4 seats and women have seated and their child on their arm. Our space is very small. If space is enough, men will welcome well (Participant No. 16, health base midwife, bachelor, 33 years old).

3-2: Socio-economic factors

1-3-2: Lack of economic security: According to the participants, lack of job security in men and the possibility of dismissal from work, if they take leave to accompany their spouse, as well as high cost of
services during this period are among the factors making men prefer their job over accompanying their spouse.

"All contracts are short-term and they can be easily dismissed and when they see the conditions, they refuse taking leave and cannot help his wife " (Participant No. 19, male, self-employed, diploma, 60 years old).

2-3-2: Lifestyle changes compared to past: Some participants believed that changing the lifestyle of families compared to the past, high costs and concerns of today's lives have caused men to have less opportunities and motivation to help their spouse.

"In old days, only men managed it well. They did not have today's concerns (Participant No. 19, male, self-employed, diploma, 60 years old).

2-3-3: Changing roles: Some participants considered change in the roles and responsibilities of men and women in today's community and increasing men's expectations of women, even to fulfill men's responsibilities, as a barrier to men's involvement.

"Unfortunately, both before and after childbirth, the only expectation is from the spouse, while the duty and role of the man is forgotten" (Participant No. 9, clergymen, 35 years old).

2-4- legislative factors

2-4-1: Defect in the existing rules: Some participants believed that the rules to protect men and increase their involvement are defected and need to be reformed.

"All contracts have become 3-month contracts and they are dismissed easilly" (Participant No. 19, male, self-employed, diploma, 60 years old).

2-4-2: Lack of supportive laws: Some participants stated that there were no rules to support men's involvement, and even the rules that had previously been passed in this regard were removed after a while.

"The two-week postpartum leave rule considered for men was very good and helpful in that regard, but unfortunately it was removed." (Participant No. 4, female, Head of Maternal Health Department, Master, 44 years old).

"Unfortunately, we have no plans to train men." (Participant No. 14, female, faculty member, master, 33 years old).

2-4-3: Lack of integrated implementation of related rules: Some participants complained of lack of coordinated and integrated implementation of some rules between different public and private centers.
"In private hospitals, the presence of men is not a problem, but in public hospitals, conditions are different" (Participant No. 9, clergyman, master., 35 years old). At least during pregnancy, employer should give a leave for a husband whose wife is pregnant, when his wife has an ultrasound or a physician's appointment so that he can accompany his wife. If he says, I want to go after my wife, they should agree with him, whether it is private or public. Private clinics do not support at all." (Participant No. 12. Pregnant woman, bachelor, 42 years old).

3: gender authoritarian attitude

Considering male gender as a superior gender is one of the factors that are effective in men's involvement by most key informants. This class consists of 3 sub- categories, including subjective norms, stereotypes, and hidden fears.

1-3: Subjective norms:

The subjective norm refers to the social pressure perceived by the individual to do or not to do the desired behavior. Individuals do often according to their perception of others (friends, family, co-workers, etc.) (23). Models that men adopt them as norm are extremely influential in their participatory behaviors. These norms can be family, friends, acquaintances, or the media, whether real or virtual media.

3-1-1-Other important people: some participants referred to high effect of man's primary family (mother, father, siblings), friends and relatives on men's participatory behavior.

"I know someone who has a PhD level of education but when I said these things in class, his mother said, 'What do you expect men to do? Don't say that to men. It is clear that the family is reminding the man not to help his wife. " (Participant No. 13, midwife of the maternity ward and instructor of preparation classes for childbirth, bachelor, 41 years old).

3-1-2: Media: Some participants referred to the role of TV series and movies in creating authoritative attitudes in men and reducing their involvement.

"When a family series is played, the whole family sits at the TV and watches it, but what do we see? We see the man go to work and then he comes home with a newspaper on his hand and he sits on sofa and watches the TV and drinks a tea, and then, at the end of the night, after eating the dinner, he goes to bed. " (Participant No. 13, female, midwife of the maternity ward and instructor of preparation classes for childbirth, bachelor, 41 years old).

3-2- Stereotypes:

People stereotypes and beliefs about men have a great effect on men's involvement.

3-2-1- Social conformity: Some participants believed that some men, as a result of following the values and behaviors of the majority of society, agreed with them and considered it shameful to involve and accompany their spouse.
"In private conversations with each other, working at home and taking care of their child is a shame and disgrace" (Participant No. 5, female, faculty member, PhD, 41 years old).

3-2-2- Habits: According to the participants, some of the habits of men reduce their involvement in prenatal, childbirth and postpartum care.

"I think, one of the needs of a person is receiving psychological attention as well as emotional support, understanding it and expressing it. Sometimes, we are thinking that man is understanding but men do not tend to express many things verbally (Participant No. 15, midwife, midwife of maternity ward, 42 years old).

3-2-3: Socialization: Some participants believed that accepting the values and norms of society can affect men's involvement.

"The norm of society is that the man earns money and it is a social anti-norm for the man to help his wife at home. And these norms of society have a great impact on men's performance and their involvement and, in fact, their behavior." (Participant No. 5, female, faculty member, PhD, 41 years old).

3-3-Hidden fears

3-3-1: Fear of judgment: According to some participants, some men refuse to involve because of the possibility of negative judgments about them.

"Someone may like to work, to collaborate, but he says to himself, 'I'm a man, it is non-accepted to do that work (Participant No. 11, midwife of the maternity ward, bachelor, 40 years old).

3-3-2- Fear of rejection: According to some participants, some men think that actively participating in midwifery care causes them to be rejected by those around them.

"For example, a man may think 'If I want to say to my wife let me listen to baby's heart, or if I want to talk about the classes on childbirth, I will be rejected by others (Participant No. 11, midwife of maternity ward, bachelor, 40 years old).

3-3-3: Fear of power inversion: Some participants believed that some men think that if they involve, their spouse may become a superior power at home over time, so they have to do the their wife's duties and responsibilities.

"I saw that some men were saying that if we involve, our wife might be spoiled and she does not do her works and we have to their works and duties (Participant No. 13, midwife of the maternity ward and instructor of preparation classes for childbirth, bachelor, 41 years old).

Discussion
The aim of this qualitative study was to explain the barriers and facilitators of Iranian men's involvement in perinatal care. The results of this study are presented in three main categories of incentives, constraints, and authoritarian gender attitudes. From the perspective of pregnant women or women who have given birth recently, men and key informants of this study, authoritarian gender attitudes in society and individual, organizational, socioeconomic, and legislative constraints reduce men's involvement and individual, family, economic, legislative, and organizational incentives increase their involvement during this period. Review of the subjects expressions and statements in the class of incentives shows that from the perspective of pregnant women or women who have given birth recently, men and key informants of this study, along with factors such as desire and enthusiasm to be father and having a positive attitude towards it, support of families and desirable interaction between husband and wife, having a sustainable source of financial support and the supportive role of officials and service providers, and proper structure of health centers have a significant impact on promoting men's involvement during pregnancy, childbirth and postpartum periods. The results of studies conducted by Mortazavi, Mirzaei, Aborigo et al support those of our study (15, 17). In the study conducted by Eskandari et al, presence of a good paternal model, having a positive attitude toward involvement in parenting, acquiring childcare skills, increased attendance at home, and reduced intellectual concerns were reported as factors affecting their involvement during pregnancy and breastfeeding (24). Having an appropriate model and defining a clear role for men were among the factors influencing their parental role. The support of other people, such as spouses, family, and friends, and the formation of male support groups can play a major role in this regard (26), which is unfortunately often overlooked (25). Also, work environments can be a good source of support for fathers who, in addition to providing information support and raising men's awareness, help men to play a paternal role by providing financial support and creating flexible working hours (26).

Another main class of this study was the constraints that reduced men's involvement. Lack of knowledge and awareness, lack of emotional-social maturity and high-risk behaviors of men, conflicts between husband and wife, lack of sense of economic security in men, change of roles and lifestyles compared to the past, limited budget and human resources, improper physical structure of health centers and defects in social rules were among the barriers to men's involvement during the perinatal period based on expression of participants in the present study. These results are consistent with the results of many similar studies, as participants in the study conducted by Mortazavi et al also referred to the problem of poor awareness, women's reliance on their families, economic problems, limited human resources, and inappropriate space for health centers (17). Studies show that despite men's great interest in their spouses' health during pregnancy, most pregnant women referred to their husband's poor awareness and knowledge about appropriate health behaviors during this period and their lack of understanding of the particular changes and this weakness is considered as major barrier for supportive behaviors by them (17). The results of the study conducted by Jahani how that some men, despite stating their involvement and support for their spouse during this critical period, do not play effective role in practice in improving the current status due to lack of awareness of their roles and responsibilities and their lack of information about the needs of a pregnant woman (27). Nesane et al realized that most men may wait behind the
door of these centers for more than one hour and even complain of this situation due to a lack of awareness of what is expected of them and lack of knowledge of the services provided by prenatal care centers (28).

The results of the studies conducted by Simbar et al and Mortazavi and et al also suggest the need to provide educational services to men and enhance their level of knowledge and awareness (17, 29). Inappropriate behavior of health care providers was another factor in reducing men's willingness to accompany their wives in perinatal care, as the results of a study conducted by Kaye et al (Davis, 16, 30, 31) confirmed this issue (16, 30, 31).

Most men tend to support their wives during this time, to accompany them in prenatal care, and to learn about their roles and responsibilities, but unwillingness and threatening behavior of health care providers on the presence of men reduces their presence in cares of this period. Thus, it seems that even service providers need training on in the ways of dealing with men so that they can easily and competently work with male clients (27, 31). Participants of the present study, like some studies, reported job issues and economic problems as one of the most important barriers to men's involvement. Prolonged and time-consuming administrative procedures for providing perinatal services to women prevent their husbands to wait for their wives for long periods of time for fear of losing their jobs or low wages. Despite their inner desire, they are unable to accompany their spouse to receive health care. The results of the study conducted by Nesane et al confirm this issue (28). Statements made by the participants in the class of authoritarian gender attitudes in the present study indicated that subjective norms of people around them and the media, the stereotypes of society, and men's hidden fears of being judged, rejected, and inversed power in family were the factors that could influence authoritarian gender attitudes in society. Pregnancy and childbirth were also considered to be one of the gender processes that involvement in issues and problems related to it is unique to women (32). Since the behavior of individuals in the family arises from specific norms of the same society, the performance of men in each society on issues related to pregnancy and childbirth can also be influenced by cultural beliefs, gender roles and norms of that society (29).

The model that men accept as norm in their mind (subjective norms) have a great impact on their participatory behaviors. These norms can be family, friends, and relatives, or the media, whether real or virtual media. Some men, following the values and behaviors of the majority of society, are adapted with them (social conformity) and consider participating and cooperating with spouses as disgrace and stigma. Some also refuse to involve in reproductive affairs by following their own wrong habits or by accepting the values and norms of society. Fear of negative judgments and being rejected by others is another reason for the low involvement of some men.

Some people also think that if they involve in prenatal or postpartum care, their spouse may become a superior power at home over time, and accordingly, duties and responsibilities of home will be imposed on them (power reversal). In addition to the promising results of some studies on changing norms of societies and changing men's behaviors over time and increasing their presence in prenatal or postpartum cares (17), negative attitudes governing the society in many cultures still prevent active men's
involvement, as this issue has been confirmed in other studies (33, 34). Misconceptions about people, social stigma, wrong family upbringing, a kind of masculine pride, a sense of shame for men, and humiliating labels on men who involve in household chores are all obstacles to men's involvement. They have been mentioned in some studies (16, 29, 17). Misconceptions about people, social stigma, wrong family upbringing, a kind of masculine pride, a sense of shame in men, and humiliating labels on men who involve in housework are all barriers to men's involvement, as it has been proven in some studies (16, 29, 17). Although reforming the negative norms governing societies and institutionalizing and promoting a culture of men's involvement in perinatal care is obvious and necessary, it will certainly not be possible without public education and the support of community leaders and NGOs (29). This study, despite the emergence of new results in this also, also suffer some limitations. For example, some men non-willingness to participate in the study was one of the limitations of the study, although the researcher tried to solve this problem by explaining the objectives of the study to them and to ensure confidentiality of information and interviews at their desirable time and place. In addition, non-willingness of some of them to talk too much and to give short answers was another limitation of the study, which researcher tried to get more detailed answers by asking more open-ended questions. In general, results of the study showed that despite the positive consequences listed in various studies for men's involvement in perinatal care, some dual mechanisms such as authoritarian gender attitudes and individual, organizational, socio-economic and legislative constraints prevent men's involvement in these cares, while individual, family, economic, and organizational incentives facilitate such behaviors (Figure 1). Results revealed that many men, despite their inner desire, can not involve properly with their spouse in the perinatal period due to barriers such as social norms, lack of knowledge and awareness, economic pressures, problems in health care centers and lack of support from officials and policymakers, etc.. It is recommended health officials to pay attention to designing appropriate training programs for men and perinatal care providers, planning to promote men's involvement culture to enhance maternal health, designing and implementing supportive policies and efforts to remove existing barriers.

**Conclusion:**

The present study was conducted to determine the barriers and facilitators of Iranian men's involvement in perinatal care. Based on the findings of this study, individual, organizational, socio-economic and legislative constraints and some gender authoritarian attitudes can decrease the men's involvement and incentives such as individual, family, economic, legislative, and organizational incentives can increase their involvement in perinatal care.

**Abbreviations**

ICPD: International Conference on Population and Development

**Declarations**

Ethics approval and consent to participate
The Ethics Committee of the Shahid Beheshti University of Medical Sciences in Tehran, Iran approved the protocol of this study (code number: IR. SBMU.PHN.M.1394.284). Voluntary verbal informed consent is obtained from each participant of this study after explaining the procedures by researcher. This verbal consent was witnessed by a supervisor. Procedures for obtaining informed consent were approved by the abovementioned ethics committees.

**Consent for publication**

Not applicable.

**Availability of data and material**

The datasets used and/or analyzed during the current study are available from the corresponding author on reasonable request.

**Competing interests**

The authors declare that they have no competing interests.

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**Authors’ contributions**

All authors participated in various stages of study design and implementation and also in writing the manuscript. NM drafted the first and final version of the manuscript and included the COREQ checklist for reporting this qualitative research. SH read, revised and approved the final manuscript. In addition, MS and HAM revised the manuscript. All authors approved the final version.

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**Tables**

Table 1- Demographic characteristics of pregnant women and women who have given birth recently and men who participated in the study
| Variable          | pregnant women and women who have given birth recently | Men | Total |
|-------------------|--------------------------------------------------------|-----|-------|
|                   | N (%) | N (%)          | N (%) |
| **Age**           |       |                |       |
| under 40 years old| 4 (80) | 4 (1.57)       | 8 (6.66) |
| 40 years old and older | 1 (20) | 3 (9.42)       | 4 (4.33) |
| **Job status**    |       |                |       |
| housewives        | 1 (20) | 0 (0)          | 1 (4.8) |
| employee          | 4 (80) | 4 (1.57)       | 8 (6.66) |
| Self-employed     | 0 (0)  | 3 (9.42)       | 3 (25) |
| **Level of education** |       |                |       |
| Diploma and lower | 2 (40) | 1 (2.14)       | 3 (25) |
| Bachelor          | 2 (40) | 5 (6.71)       | 7 (4.58) |
| Master and higher | 1 (20) | 1 (2.14)       | 2 (6.16) |
| **Number of children** |       |                |       |
| 0                 | 3 (60) | 1 (2.14)       | 4 (4.33) |
| 1                 | 2 (40) | 1 (2.14)       | 3 (25) |
| 2                 | 0 (0)  | 2 (7.28)       | 2 (6.16) |
| 3                 | 0 (0)  | 3 (9.42)       | 3 (25) |
| **Total (for each variable)** | 5 (100) | 7 (100) | 12 (100) |

Table 2 - Demographic characteristics of key informants of study
| Variable               | N  | %   |
|------------------------|----|-----|
| Age                    |    |     |
| under 40 years old     | 4  | 5.44|
| 40 years old and older | 5  | 5.55|
| Level of education     |    |     |
| bachelor               | 5  | 5.55|
| master                 | 3  | 4.33|
| PhD                    | 1  | 1.11|
| job                    |    |     |
| Midwife of maternity ward | 3  | 3.33|
| Midwife of health base | 1  | 1.11|
| Midwife of the Maternal Health Department | 1 | 1.11|
| University faculty member | 2  | 3.22|
| clergyman              | 2  | 1.11|
| employment history     |    |     |
| 5 years and younger    | 1  | 1.11|
| 6-10 years             | 3  | 3.33|
| 11-15 years            | 2  | 3.22|
| over 5 years           | 3  | 3.33|
| total (for each variable) | 9  | 100 |

Table 3: Final codes, sub-categories and main categories extracted from the study
| Code | Sub-Categories | Main Categories |
|------|---------------|----------------|
| Enthusiasm for having children | individual factors | incentives |
| desirable level of knowledge of awareness | | |
| Individual responsibility | | |
| positive attitude | | |
| Accompanying families | family factors | |
| Optimal interaction between couples | | |
| Sustainable financing | economic factors | |
| Free childbearing services | | |
| Implementing a health transformation plan | legislative factors | |
| The supportive role of officials and legislators | | |
| Factors related to health care providers | organizational factors | |
| Physical structure appropriate to health care recipients | | |
| Emotional-social immaturity | Individual factors | constraints |
| Lack of awareness and knowledge | | |
| High-risk spouse behaviors | | |
| Misunderstanding between couples | | |
| Human resource constraints | Organizational factors | |
| Allocated budget constraints | | |
| Improper physical structure | | |
| Economic insecurity | socio-economic factors | |
| Lifestyle changes compared to past | | |
| Changing roles | | |
| Defect in existing rules | Legislative factors | |
| Lack of supportive rules | | |
| Lack of integrated enforcement of relevant rules | | |
| other important people | Subjective norms | authoritarian gender attitudes |
| media | | |
| Social conformity | Stereotypes | |
| Habits                      | Hidden fears                        |
|----------------------------|-------------------------------------|
| sociability                |                                     |
| fear of judgment           |                                     |
| fear being rejected        |                                     |
| fear of power inverse      |                                     |

**Figures**

facilitating factors

inhibitory factors

gender authoritarian attitudes

consstraints

Men’s involvement in perinatal cares

Figure 1
Conceptual model of factors affecting men's involvement in perinatal care.