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Iranian midwives' experiences of using the World Health Organization's Safe Childbirth Checklist: A qualitative research

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Abstract:

BACKGROUND: The goal of natural childbirth care is to have a healthy mother and baby with minimal interventions that are contrary to health. Worldwide, there is concern that non-evidence-based interventions and care in labor and childbirth will remain standard practice. Therefore, access to care related to pregnancy and childbirth is considered a priority. To address safety concerns during organized births, the Safe Childbirth Checklist (SCC) was created by the World Health Organization (WHO). This checklist is a tool that combines evidence-based practices that should be provided before, during, and after childbirth. As midwives have a vital role in using this up-to-date evidence, this study was conducted to explore Iranian midwives' perception of using SCC.

MATERIALS AND METHOD: This qualitative study was conducted from January 2022 to April 2023 in two public (teaching and nonteaching) hospitals in Ahvaz, Iran. Seventeen semi-structured interviews were conducted with midwives who had more than one year of work experience in maternity wards. Participants were selected purposefully. A content analysis approach was used to analyze the data and extract themes.

RESULTS: All midwives had a positive attitude toward using SCC. The midwives' reasons for being in favor of using the checklist during the clinical procedures of childbirth are summarized in four main themes, namely "standardized maternity care practices," "SCC as a guide for performing essential childbirth practices," "self-efficacy of midwifery care," and "improved maternal and neonatal outcomes."

CONCLUSION: Midwives have endorsed this checklist as a guide to standard childbirth management. It seems that the use of this checklist will help to improve the health outcomes of mothers and babies by strengthening the self-efficacy of midwives.

Keywords:

Midwives, qualitative research, safe childbirth checklist, World Health Organization

Introduction

Quality of care and patient safety are top priorities of health services around the globe.[1] The care provided during parturition and the postpartum period is vital for the survival of the mother and the baby as this period is associated with severe complications for the mother and the baby.[2] It seems that adoption of innovative strategies to improve the quality of care in health centers is on the rise.[3] One of the well-known strategies to support evidence-based practice is the implementation and application of checklists.[2] The use of checklists in health care is becoming increasingly common to manage the complexities of clinical care and improve communication during clinical practice. Studies on health checklists show

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their potential to reduce risk through standardization and improvement of information transfer between providers, which ensures a consistent standard of care and reduces human error under stressful situations.[4,5] Checklists are widely used as a cognitive aid in different high-risk environments to improve the reliability and performance of individuals and teams. When checklists are well-designed, thoughtfully implemented, and carefully monitored, there is an opportunity for improving the performance of healthcare provision teams and promoting patient safety. Furthermore, in appropriately selected clinical settings, checklists can help to standardize care, improve communication, and contribute to optimal team performance.[6]

The World Health Organization (WHO) developed the Safe Childbirth Checklist (SCC) in 2015, in an effort to support health workers to perform essential tasks and improve the quality of care for mothers and babies during childbirth. This 29-item checklist (Additional file 1) targets four phases: on admission, just before childbirth, soon after birth (1 hour), and before discharge.[7,8] SCC includes items that provide a brief reminder to prevent, diagnose, and treat the main causes of maternal death (hemorrhage, hypertension, and infection) as well as fetal and neonatal death (asphyxiation, infection, and prematurity).[9] SCC has a set of standards for improving the quality of maternal and neonatal care in health centers.[10] Despite the increasing use of checklists in health care, few studies have yet examined the views of healthcare providers and their challenges when implementing and using checklists.[11,12] Therefore, this study was aimed to compare Iranian midwives' experiences of using the SCC from admission to discharge.

Materials and Method

Study design and setting

This study is a part of a mixed-methods Ph.D. dissertation with the aim of implementing and evaluating management of labor and childbirth based on SCC. In this study, the mixed-methods research design with the embedded approach was used. After written permission was obtained from the WHO for the translation of SCC to Persian, the study protocol was approved by the Ethics Committee of the Ahvaz Jundishapur University of Medical Sciences (IRAJUMS.REC1401.049). Informed written consent was obtained from all participants, and they were assured that their identity and information would remain confidential at all stages of the research implementation and publication. Sampling was conducted from June 5, 2022, to December 6, 2022. After the first phase of the study was implemented, the second phase started which involved a qualitative investigation of midwives' perceptions and experiences of managing labor and childbirth based on SCC, which was completed by the midwives. The research setting in this study included two teaching and nonteaching public hospitals in Ahvaz. In these hospitals, management of labor and childbirth was based on SCC. A metropolis in southwest Iran, Ahvaz is the capital of Khuzestan Province and the seventh most populous city in Iran. To conduct this study, necessary permits were obtained from the university. The respective hospitals agreed with the implementation of the plan, and written consent was obtained from all the participants.

Study participants and sampling

Seventeen midwives, including those in charge of hospital departments, with different work experiences at different hospital departments including labor and childbirth, postpartum care, and operating room participated in this study. These midwives had already used SCC in the management of labor and childbirth from the time of admission to the time of discharge in the intervention phase of the project. This checklist was attached to the medical records of the patients, and care was carried out based on the SCC.

Data collection tool and technique

After informed consent was obtained from the participants, qualitative data were collected from January 2022 to April 2023 by conducting in-depth semi-structured interviews with the participants to delve into Iranian midwives' experiences of using the checklist. The interviews were conducted by the first author (a Ph.D. student of midwifery) before, during, or after work shifts at the participants' workplace. All interviews were audio-recorded, conducted individually, and lasted between 30 and 55 minutes. The time and place of the interviews were chosen at the participants' convenience. Interviews began with open-ended questions such as "Can you please tell us about your experience of using the SCC?" followed by probing questions such as "Please elaborate on that" or "Could you please give an example?" and "What do you mean by this?" The responses of the participants were carefully scrutinized by the interviewer. Seventeen midwives and gynecology residents with different years of experience, working in different departments including labor and childbirth, postpartum, and operating room, including department heads, were selected to participate in the study.

Ethical consideration

The study protocol was approved by the Ethics Committee of the Ahvaz Jundishapur University of Medical Sciences (IRAJUMS.REC1401.049). To conduct this study, necessary permits were obtained from the university. The respective hospitals agreed with the implementation of the plan, and written consent was obtained from all the participants.

Data analysis

In this research, the contractual content analysis method was used according to the steps suggested by Graneheim and Lundman.

Data accuracy and robustness

Lincoln and Guba's four concepts of credibility, dependability, confirmability, and transferability were used to confirm the trustworthiness of the study results.[13]

To ensure the accuracy of the research findings, four criteria (validity, reliability, transferability, and verifiability) were evaluated.

A—Validity or acceptability: In this study, to ensure the validity of the findings, the following things were carried out: In-depth interviews were conducted at different times and places. Mothers with maximum diversity in terms of age, education, employment status, and socioeconomic status and care providers with maximum diversity of educational qualifications and experience were selected. The coded text was provided to four participants for review to confirm the accuracy of the interpretations and make the necessary corrections. Also, the data were provided to the first supervisor and the qualitative advisor of the study, to match and ensure the concordance of the classes with the participants' statements, and their opinions were collected in writing regarding the codes, classes, and analysis.

B—Reliability: To achieve this criterion in this study, the implementation steps of the work are presented in detail in the research methodology section, and the primary codes are derived from the interpretation of the participants' experiences and examples of how to extract themes and a part of the text of the interviews are presented.

C—Transferability: The study process has been described in detail so that it is possible to examine the research path by other researchers.

D—Verifiability: Verifiability refers to the agreement between two or more independent people about the accuracy, relevance, and meaning of the data.

After the interviews were recorded, they were transcribed verbatim, and then, conventional content analysis was conducted to analyze the data.[14] To this aim, the transcript of the interviews was read several times by the first author who was immersed in the data. Afterward, the process of selecting semantic units and coding was conducted. The researcher did the initial coding by re-reading each interview and continuously reviewing the data. Then, the transcripts of the interviews, the primary codes extracted from the transcripts, and the classification of the codes were provided to the second and third authors, both of whom were experts on qualitative research and midwifery topics, to ensure the trustworthiness and accuracy of the data and their analysis. Corrective comments of the second and third authors were used to make modifications. Also, the primary extracted codes along with the emerging sub-themes and themes were given to the third researcher (corresponding author), and her additional comments on the coding process were used to make further modifications. In addition, the extracted codes, sub-themes, and themes were provided to the participants to ensure the accuracy of data interpretation.

Results

The age range of the midwives was 26 to 59 years, and their work experience ranged from 2 to 29 years. Most of the participants had a bachelor's degree and were staff midwives [Table 1].

Midwives' perception of using checklists in the clinical procedures of childbirth was organized into four main themes including "standardized maternity care practices," "SCC as a guide for performing essential childbirth practices," "self-efficacy of midwifery care," and "improved maternal and neonatal outcomes" along with nine sub-themes [Table 2]. According to most of the interviewed midwives, SCC can be used as a quality improvement tool by reminding a list of evidence-based practices that should be performed [Table 2].

Standardized maternity care practices

Using a checklist guarantees that every practice is performed uniformly, regardless of who is doing it. Of

Table 1: Demographic information of the participants

Variable	Frequency
Age (year)	
25–35	6
35–45	9
40 and older	2
Education	
Bachelor's degree	15
Master's degree	1
Ph.D.	1
Work experience (year)	
2–5	2
6–10	5
10–15	6
15–20	2
20 and more	2
Department	
Labor and childbirth	12
Postpartum	3
Operating room	2

Table 2: Sub-themes and themes resulting from qualitative study

Sub-themes	Themes
SCC as a road map of care for identifying the real needs of women and babies	Standardized maternity care practices
Simplified identification of shortages in essential equipment for providing midwifery care	
Preventing negligence and forgetfulness regarding the essential childbirth practices	
Reduced errors in obstetric and neonatal care provision	
Proposing practical strategies to increase mother and baby safety	SCC as a guide for performing essential childbirth practices
Integration of knowledge and skills	Self-efficacy of midwifery care
Empowerment of midwives in care provision	
Enhancing quality improvement in midwifery care	Improved maternal and neonatal outcomes
Enhancement of the quality of care due to the presence of a companion during labor and after childbirth	

course, different individuals may do things differently and even make errors in the implementation of different items of the checklist. According to most of the midwives participating in this research, SCC can be used as a warning and reminder tool to achieve the ultimate goal of mother and baby care, which is to ensure the health of both. This is because this checklist can serve as a road map and framework for midwifery evidence-based practice in maternity practices. This theme includes the sub-themes of "SCC as a road map of care for identifying the real needs of women and babies," "simplified identification of shortages in essential equipment for providing midwifery care," "preventing negligence and forgetfulness regarding the essential childbirth practices," and "reduced errors in obstetric and neonatal care provision."

SCC as a road map of care for identifying the real needs of women and babies

Most of the midwives interviewed in this study admitted that even though they used to perform many SCC items before actually using it, after using the checklist, the performance of the practices was evaluated in an orderly manner as if a specific road map was defined for the midwives. The ultimate goal of this road map is to provide safe services to the mother and the baby. According to a midwife with 11 years of work experience: "We used to do many of the items of the checklist before, but this checklist seems to show the order of providing services in an organized manner and tells you what needs to be done for the client step by step, and you will recognize what is more important for your client." (Midwife No. 3)

Another midwife with 11 years of work experience stated: "After using the checklist for mothers several times and by repeating the practices and acting based on the checklist, the midwife subconsciously learns how to perform the practices regularly and consecutively, and in fact you become a part of the checklist." (Midwife No. 5)

Simplified identification of shortages in essential equipment and supplies for providing midwifery care

Providing quality care is directly related to availability of the required equipment. Some participants stated that using the checklist was helpful to identify the shortages in the necessary equipment, that is, if a particular piece of equipment was not available, the provision of quality care would be difficult. In this regard, a participant with a 6-year work experience stated: "After using the checklist, I always check the necessary equipment and supplies in the childbirth room according to the checklist before the childbirth of the client, and this has been very helpful. For example, once or twice, sterile gloves were not available, which if I hadn't checked, I might've had to attend birth with disposable gloves because of the emergency." (Midwife No. 17)

Another participant said: "As a midwife with 29 years of work experience, While using the checklist, there were things that I forgot to do because I was busy or tired, but after looking at the checklist, I never forgot them anymore. Usually, there is a midwife in charge of the baby in each shift, and that midwife checks the supplies next to the baby's bed." (Participant No. 13)

A midwife with 14 years of experience who was in charge of a department stated: "After using the checklist, midwives report more shortages of equipment and supplies in the department." (Participant No. 16)

Preventing negligence and forgetfulness regarding the essential childbirth practices

Sometimes midwives' fatigue or busyness can cause them to forget or neglect some essential childbirth practices. In this regard, a midwife with 12 years of work experience said: "I used to follow many of the items in the checklist before even using it, but sometimes due to the fatigue and busyness of the ward, I didn't do some of them, such as checking the vital signs of the mother after giving birth every quarter; I used to take the mother's blood pressure only once. But now I am more sensitive about doing those practices and I don't miss an important practice." (Participant No. 7)

Another midwife with three years of work experience stated: "Before using the checklist, I didn't encourage the companion to attend the labor because of the busyness of the room, or I used to do the skin-to-skin contact between

the mother and the baby for a short time, but after using the checklist, I became more accurate and sensitive regarding these items." (Participant No. 2)

Reduced errors in obstetric and neonatal care provision

Sometimes the quality of doing repetitive tasks decreases because they become a habit, and the mind becomes less alert when doing them. Care practices are no exception. According to midwives in our study, the SCC with its reminders of essential practices reduces errors in providing care. As a midwife with 10 years of work experience put it, "I admitted a parturient mother with a closed cervix. My gloves were dry during the examination, and I reported healthy amniotic sac, but when I was completing the checklist, I remembered that I hadn't ask the mother herself about feeling any discharge, and when I asked her if any fluid had come out of her vagina, she said that last night she had noticed a few drops of watery discharge. When I did the AmniSure test, the result was positive, and I gave her antibiotics." (Participant No. 4)

Another midwife with two years of work experience said: "In a busy shift, immediately after giving birth, I put the baby in the mother's arms and started to write the record. While ticking the items on the checklist, I came to the item on danger signs of the baby, and I remembered that I hadn't checked the baby, and when I checked the baby I noticed that the baby was moaning and after informing the doctor, the baby was hospitalized." (Participant No. 10)

A guide for performing essential childbirth practices

According to the midwives participating in this study, by helping midwives to identify care priorities, the SCC sets the stage for a more accurate examination of women and babies by midwives, ultimately leading to the best care methods to increase the safety of the mother and the baby (sometimes) through specific care interventions. This theme includes only one sub-theme, namely "proposing practical strategies to increase mother and baby safety."

Recommending practical strategies to increase mother and baby safety

Most of the participating midwives believe that SCC facilitates provision of safe services to mothers and babies by helping midwives to perform standard practices and by adapting clinical procedures to midwifery knowledge.

A midwife with seven years of work experience believed that the checklist plays a very helpful role in identifying the care priorities of the mother and the baby: "In this checklist, the midwife's attention is drawn to a particular thing in each phase of labor and what should be done accordingly. For example, the uterus should be checked immediately after childbirth. Another example is that the baby should have skin-to-skin contact with the mother." (Participant No. 6)

A midwife working in the postpartum department with a work experience of 11 years was of the opinion that the SCC allows midwives to more closely examine the condition of mothers and babies: "Before injection of antibiotics, I asked the parturient mother about her history of antibiotic allergy, and she said that she was not allergic. When I checked that item in the checklist, I realized its importance and asked her again, but this time with more details about the symptoms of an allergy, and I found out that she was actually allergic to that antibiotic, and this checklist helped me to avoid making a mistake." (Participant No. 3)

A midwife with 29 years of work experience believed that the treatment strategies proposed in the checklist will lead to the provision of the best evidence-based care in the management of labor and childbirth until discharge: "The checklist actually provides a complete summary of the evidence-based midwifery and neonatal care that we studied in university, which is expressed simply and clearly and includes all the necessary care from the time of admission to the discharge of the mother and the baby." (Participant No. 13)

Strengthening self-efficacy of midwives in care: Some of the midwives participating in this research believed that using the checklist enhances their self-confidence in performing essential childbirth practices and increases their efficiency by transforming their tacit knowledge into explicit knowledge and by promoting their skills. This theme includes two sub-themes, namely "integration of knowledge and skills" and "empowerment of midwives in care provision."

Integration of knowledge and skills

According to the interviewed midwives, by integrating care based on clinical practice and care informed by professional knowledge, the checklist increases the self-efficacy of midwives in care provision.

A midwife with two years of work experience stated that this checklist can be effective in improving the professional practice of new recruits by integrating the knowledge of midwifery that they have learned in university with the practices indicated in the checklist.

"As a midwife who has been employed for two years, when I first started working, I had no clinical work experience. If this checklist was available at that time, it would have been very helpful for me because it has all

the clinical procedures necessary for childbirth, and with the help of my midwifery knowledge from university I could have a better performance." (Participant No. 10)

Another midwife with 25 years of work experience indicated that the SCC can be effective in improving the professional practice of the experienced staff by encouraging implementation of clinical practice based on scientific knowledge.

"I have about 25 years of work experience, and before using this checklist, I used to inject oxytocin after the placenta was delivered, but after using this checklist, I started to inject oxytocin after the birth of the baby, which was greatly effective in reducing bleeding after childbirth. This checklist was very effective in updating my midwifery knowledge." (Participant No. 12)

Empowering midwife for care providing: According to some midwives, by virtue of using the checklist, they gained a sense of control and mastery over the client's conditions, which increased their self-confidence in their work environment.

A midwife with eight years of work experience argued that providing safe care to the mother and the baby instills self-confidence in the midwife: "By using the checklist, the midwife can feel at ease that she is doing the best practice for the mother and the baby, and she is sure that what she is doing for the mother and the baby is based on scientific principles and is safe, and that the mother and the baby are not harmed. It is as if the midwife gains mastery over the client's conditions." (Participant No. 1)

Another midwife with four years of work experience stated that as she has started using SCC, in cases where the mother or the baby suffers complications, she is no longer worried about the legal and judicial consequences because she is sure that she has acted according to the checklist and has not committed malpractice.

"Before using the checklist, there were cases where although I had done the correct practice for the mother and the fetus, I was worried about the legal issues if the mother or the baby suffered complications for any reason, because I wasn't sure about my own performance, but since I've been using this checklist, even if there is a complication for the mother and the fetus, I feel at ease in terms of legal issues, because I am sure that I did my best and I'm not charged with malpractice." (Participant No. 14)

Improved maternal and neonatal outcomes

The midwives in this study believed that using SCC is effective in improving maternal and neonatal outcomes by reducing maternal and neonatal complications and enhancing the quality of care. This theme includes two sub-themes: "enhanced quality of midwifery care" and "enhanced quality of care due to the presence of a companion during labor and after childbirth."

Enhancing quality improvement in midwifery care

A charge midwife with 15 years of work experience stated the following regarding the reduced number of uterine atony cases in the ward and the consequent significant reduction in the use of uterotonic drugs after using the checklist:

"Before the use of the checklist, there were a large number of atony cases because oxytocin was not injected to the mother until after the childbirth of the placenta. However, according to the studies conducted after using the checklist and with the active management of the third stage of labor, the cases of atony and postpartum bleeding, as well as the use of uterine drugs, decreased a lot." (Participant No. 15)

Another charge midwife with a 14-year work experience expressed her happiness regarding the increase in the consumption of magnesium sulfate and antihypertensive drugs after using the checklist:

"After using the checklist, the consumption of magnesium sulfate and antihypertensive drugs has increased, which shows that maybe this checklist increases midwifery interventions or that mothers' blood pressure is more controlled by midwives." (Participant No. 8)

Regarding the contribution of using the checklist to reducing neonatal admission to the intensive care unit, another charge midwife with 15 years of work experience commented:

"According to the available statistics, admission of newborns to the neonatal intensive care unit has significantly decreased since the SCC has been used." (Participant No. 15)

Enhancement of the quality of care due to the presence of a companion

The midwives participating in this study were of the opinion that the presence of a companion during labor and after childbirth could contribute to the enhanced quality of care by facilitating communication between midwives and parturient mothers and by performing part of the care processes of the mothers. Because parturient mothers are willing to receive part of their care from those they trust, with the presence of a companion, midwives can better control the conditions of the ward when the ward is busy. According to two of the midwives interviewed in this study:

"Before using the checklist, we didn't recommend mothers to have a companion, but after using the checklist, they could choose a companion. The presence of a companion is helpful for the midwife, and if the mother has a request, she can inform the companion and the companion will tell the midwife about it." (Participant No. 9)

"After using the checklist, the companion would massage the mothers' back or help them to walk by the side of the bed. These helped the midwives to better control the conditions of the ward when the ward was overcrowded." (Participant No. 11)

Discussion

This study investigated Iranian midwives' perception of using WHO's SCC from admission to the discharge of mothers and babies. According to our results, the midwives participating in this study believe that the use of this checklist in the clinical procedures of childbirth can help standardize midwifery services and reduce errors during care provision. They maintained that the SCC acts as a guide for them to perform essential practices of childbirth, which increases their care self-efficacy through enhancing their self-confidence. Also, they acknowledged that SCC encourages performance of evidence-based practices, integration of knowledge and skills, and improvement of the quality of care by improving maternal and neonatal outcomes. A case in point of improved maternal outcomes is the reduced rate of postpartum hemorrhage and postpartum atony. Also, the use of uterotonic drugs was reported to decrease due to the active management of the third stage of labor after using the SCC checklist, as confirmed by hospital statistics. The findings of four quantitative studies have reported a similar significant improvement in the active management of the third stage of labor after using the WHO's SCC.[7,15-17]

Another example of improved perinatal outcomes is the reduced admission rate of newborns to the neonatal intensive care unit after using the checklist. Studies in India have reported that in centers with more than 85% adherence to the checklist, a significant reduction in stillbirth and in-hospital mortality was reported.[7,16] Also, accumulating evidence has shown that SCC is effective in promoting evidence-based practices.[7,18,19] Although using a checklist may seem time-consuming at first, the WHO's SCC emphasizes that successful implementation of the checklist allows birth attendants to perform their actions safer, easier, and faster.[20] A systematic review on the effects of using safety checklists in clinical settings concluded that safety checklists seem to be an effective tool to improve care in different settings.[12] Consistent with these findings, in our study, the majority of midwives expressed content with using the checklist because it encouraged safe practices for mothers and babies. According to another study, WHO's SCC is an innovative checklist, and it serves as a career aid tool that promotes the best essential practices at different phases of childbirth process by reminding healthcare providers of these practices,[8] which is in line with the findings of our study.

In our study, midwives believed that using the checklist promoted their care self-efficacy by instilling in them self-confidence in performing midwifery practices. Self-efficacy is a person's belief about their abilities to do a behavior at a certain level, and based on the theory of social cognition, it affects a person's behavior. If health service providers' self-efficacy in providing certain services is enhanced, they are more likely to achieve the desired outcome, and as a result, they will be more capable in their performance.[21] In a qualitative grounded theory study on midwives' perception of SCC, it was shown that the main concern of midwives regarding the checklist is "lack of a common understanding of the purpose of SCC or consensus on how to use it." The grounded theory developed in that study was the individualistic interpretation of the checklist, which included the following three strategies that all seemed to explain how the midwives resolved their primary concern: 1) no questioning of SCC, 2) continual evaluation of SCC, and 3) getting away from the checklist. In this study, one of the conditions that seemed to encourage midwives to change their strategy to use SCC was that the midwife herself experienced an unfortunate event related to the mother or the baby (e.g., no follow-up of Rh-negative mothers), which would not have occurred, had she used SCC.[22] This finding confirms the findings of this study that the use of the checklist can be effective in reducing errors during care. Checklists are inexpensive and apparently easy to implement,[23] and they are often used when healthcare providers are faced with a variety of challenges related to quality and safety.[12,24] None of the studies reported negative effects related to the use of such a checklist.[25] In this study, none of the participants mentioned any negative effect associated with the use of SCC. The 2015 WHO recommendations on interventions aimed at improving the health of the mother and the baby lay particular emphasis on identifying a companion during labor and childbirth and preparation for childbirth, allowing women to choose their desired companion during pregnancy.[26] Studies have shown that labor companions support mothers in many ways. They can bridge communication gaps between healthcare providers and the parturient mothers. More particularly, a labor companion can express the woman's needs and preferences to healthcare providers or may speak on her behalf as an advocate. Labor companions can also

provide practical assistance, including encouraging women to move, offering massage, or holding hands to facilitate non-pharmacological pain relief.[27] In this study, the midwives indicated that they encourage the companion to be with the mother based on the requirements of SCC. According to these midwives, the presence of the companion not only increases the quality of care by creating a bridge between the midwives and the mothers but also assists midwives in doing care processes such as massaging the mother's back. Put in a nutshell, the midwives participating in this study believed that SCC can serve as a quality improvement tool by reminding a list of evidence-based practices that should be performed in midwifery service centers.

Strengths and weaknesses

One of the major strengths of this study is that we included participants who could provide an in-depth and comprehensive view of their experience. These participants included midwives who worked in labor and childbirth, postpartum care, and the operating room. Therefore, they can represent different hospital departments dealing with maternity care. In addition, we investigated the views and experiences of midwives working in both teaching and nonteaching hospitals, which guarantees maximum variation of experiences in using the checklist. Despite these strengths, there were a number of limitations. First, implementing a checklist may result in double documentation of several tasks and observations. As recording the same information more than once is problematic in health care, at the beginning of the study it was very difficult to convince the midwives to use the checklist. Also, this study was conducted on Iranian midwives working in different maternity departments in public hospitals. Therefore, the findings cannot be generalized due to the nature of the qualitative study, but can be transferred to similar situations; so, further studies are recommended for the participation of midwifery educators, midwifery students, and accompanying or private midwives in private hospitals.

Conclusion

Participants' experiences showed that SCC helps midwives to provide better and higher quality care to women and their babies not only by reminding and suggesting evidence-based care practices, but also by establishing a standard of midwifery care. Therefore, it is suggested to include this checklist in the records of mothers to improve maternal and newborn outcomes by reducing the possibility of errors in the performance of midwives.

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Conflicts of interest

There are no conflicts of interest.

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