

Barriers to Implementing Evidence-Based Intrapartum Care: A Descriptive Exploratory Qualitative Study

Mina Iravani,¹ Mohsen Janghorbani,² Ellahe Zarean,^{3,*} and Masod Bahrami⁴

¹Department of Midwifery, Reproductive Health Promotion Research Center, Faculty of Nursing and Midwifery, Ahvaz Jundishapur University of Medical Sciences, Ahvaz, IR Iran

²Department of Epidemiology, School of Health, Isfahan University of Medical Sciences, Isfahan, IR Iran

³Department of Obstetrics and Gynecology, School of Medicine, Isfahan University of Medical Sciences, Isfahan, IR Iran

⁴Department of Adult Health Nursing, Nursing and Midwifery Care Research Center, School of Nursing and Midwifery, Isfahan University of Medical Sciences, Isfahan, IR Iran

*Corresponding Author: Ellahe Zarean, Department of Obstetrics and Gynecology, School of Medicine, Isfahan University of Medical Sciences, Isfahan, IR Iran. Tel: +98-9163222899, Fax: +98-3132362191, E-mail: zarean.elahe@gmail.com; zarean@med.mui.ac.ir

Received 2014 June 30; Revised 2014 July 26; Accepted 2014 September 3.

Abstract

Background: Evidence based practice is an effective strategy to improve the quality of obstetric care. Identification of barriers to adaptation of evidence-based intrapartum care is necessary and crucial to deliver high quality care to parturient women.

Objectives: The current study aimed to explore barriers to adaptation of evidence-based intrapartum care from the perspective of clinical groups that provide obstetric care in Iran.

Materials and Methods: This descriptive exploratory qualitative research was conducted from 2013 to 2014 in fourteen state medical training centers in Iran. Participants were selected from midwives, specialists, and residents of obstetrics and gynecology, with a purposive sample and snowball method. Data were collected through face-to-face semi-structured in-depth interviews and analyzed according to conventional content analysis.

Results: Data analysis identified twenty subcategories and four main categories. Main categories included barriers were related to laboring women, persons providing care, the organization environment and health system.

Conclusions: The adoption of evidence based intrapartum care is a complex process. In this regard, identifying potential barriers is the first step to determine and apply effective strategies to encourage the compliance evidence based obstetric care and improves maternity care quality.

Keywords: Evidence-Based Practice, Intrapartum Care, Iran, Quality Improvement

1. Background

Improving the quality of obstetric care and especially peripartum care, is one of the most critical challenges to achieve the Millennium Development Goals (1). Evidence-based practice is an effective strategy to improve the quality of obstetric care (2). There is a worldwide concern that no evidence-based interventions and practices in labor and birth remain as standard practices (3, 4).

The world health organization (WHO) has already emphasized that the ineffective and harmful clinical practices should be replaced with evidence-based clinical ones (5). Unfortunately, in many developing countries, some ineffective or harmful interventions are used as routine care during labor and delivery, while beneficial practices are not implemented for a lot of mothers (6).

It is not always an easy process to encourage healthcare providers to change routine interventions in line with evidence based practice (7). Professional behavior change is a complex process and the barriers to change may vary in different clinical environments, groups of health care providers or clinical practices (8, 9).

Previous studies reported some barriers to adopting evidence based practice (EBP) including the lack of time and resources, and conflicts between healthcare professionals and physical environment (10). It is necessary to understand and determine healthcare providers' behavior to develop change effective strategies (10).

In a Cochrane systematic review, Baker reported that efforts to change professional practice have a lower likelihood of success unless the barriers are identified and taken into account. He believed that: "There is insufficient evidence on the most effective approaches to tailoring, including how barriers should be identified and how interventions should be selected to address the barriers" (9).

2. Objectives

The current study aimed to explore the barriers to adopting evidence based normal labor and delivery management of healthcare professional perspectives that provide obstetric care in Iran.

3. Materials and Methods

This qualitative study was part of a Ph.D. dissertation which aimed to explore barriers to implementing evidence-based intrapartum care. A descriptive exploratory qualitative study was conducted from December 2013 to April 2014 in fourteen state medical training centers in Iran.

Participants were selected from midwives, specialists, and residents of obstetrics and gynecology. Purposive sampling was used to recruit the subjects (maximum variation sampling). In purposive sampling, the researcher is seeking the people with rich experiences of the phenomenon and possess the ability and willingness to express them (11). Inclusion criteria were midwives, specialists, and residents of obstetrics and gynecology with a clinical working experience of at least three years, and the desire to express their experience. Exclusion criteria included having less than three years of experience, being dissatisfied, a history of psychological disorders, lack of employment, and request for leaving the study.

Face-to-face semi structured in-depth interviews were used to gather the data. First, the interviews were started by a general question: What are barriers to using EBP during intrapartum care? Then, they were asked to explain their experiences about challenges of EBP application during labor and delivery management. All interviews were undertaken by the first author (Ph.D. student of reproductive health) in a private room in the ward. The interviewer was familiar with interview and communication principles. Duration of the interviews ranged from 30 minutes to an 105 minutes, and some participants were interviewed twice, if necessity. In general, 36 interviews with 34 participants were conducted in the study. None of the participants refused to answer the questions during the interview. Interviews continued until data saturation. Data saturation happened when other new codes or categories does not appear from the last two interviews.

The conventional content analysis introduced by Graneheim and Landman was the basis of data analysis (12). First, after transcribing each interview, the researcher reviewed the text several times until a general impression was received. Second, all texts were broken down into meaningful units. Third, each meaningful unit was summarized to a condensed meaningful unit and then primary codes were obtained. Fourth, the codes with similar meanings were grouped into subcategories. Similar subcategories were grouped into main categories. Eventually, themes were determined as the expression of the hidden content of the text in the fifth stage.

In the current study, to ensure the reliability of data some criteria were considered. Long term involvement with the participants to collect information and feedback from participants was employed to increase the credibility. In terms of enhanced transferability, researchers

used purposeful sampling and selected participants with various experiences. Also, the researchers attempted to describe the study process and performed accurate and consistent activities considering the objectives approach. In order to increase the dependability and confirmability, member checking (participants confirmed samples of codes), and Peer debriefing (approving examples of coded data by skilled and expert qualitative researchers) were conducted.

The current study was confirmed by the Ethics Committee of the Isfahan University of Medical Sciences (No: 391206). The ethical considerations were observed. The purpose of the study was described to all participants, and written informed consent was signed by them according to the Helsinki Declaration. Furthermore, it was explained that the participants could leave the study whenever they wished. They were also told that their information would remain confidential during and after the research.

4. Results

The data were obtained from interviews with 34 participants. The participants comprised seven directors of labor ward, twelve midwives, eight obstetrician, and seven obstetric residents (Table 1). The findings included twenty subcategories and four main categories. The main categories were barriers related to laboring women, persons providing care, the organization environment, and barriers related to health system (Table 2).

Table 1. Characteristics of Participants^a

Variables	Frequency
Age, y	
21 - 30	8 (23.52)
31 - 40	14 (41.17)
> 40	12 (35.29)
Proficiency	
Director of Labor Ward	7 (20.58)
Midwife	12 (35.29)
Obstetrician	8 (23.52)
Resident	7 (20.58)
Experience, y	
3 - 5	12 (35.29)
5 - 10	8 (23.52)
10 - 20	10 (29.41)
20 - 30	4 (11.76)

^aValues are presented No. (%).

Table 2. Main Categories and Sub-Categories of the Them of Barriers to Implementing Evidence-Based Intrapartum Care in Iran^a

Categories and Sub-Categories	Values
Barriers to Laboring Women	
Lack of knowledge in women	71
Request for ineffective or injurious care	35.55
Lack of partnership in women regarding decision making for the type of care	82.5
Barriers to Persons Providing Care	
Lack of knowledge in healthcare providers	41
Lack of skills in healthcare providers	76.5
Lack of motivation to change behavior or adopt new behaviors	91
Lack of authority to make decisions	82.5
Afraid of legal issues	59
Lack of good communication between healthcare providers and women	65
Barriers to Persons Providing Care	
Problems educational system	76.5
Lack of good communication between clinicians and midwives	82.5
limited time of health care providers due to lack of human resources	94
Inappropriate physical structure of birth setting	59
Lack of equipment in the birth setting	35.5
Lack of clinical supervision by the first-line managers	76.5
Barriers to Health System	
Inappropriate planning, management, monitoring, and feedback system	71
Lack of accurate information system	29.5
Lack of good communication between healthcare providers and policy makers	29.5
Lack of good health Policy	47
Lack of financial resources	56

^aValues are presented as percent.

4.1. Barriers to Laboring Women

A number of barring factors were found in association with the laboring women including: lack of knowledge in women, request for ineffective or injurious care, lack of partnership in women regarding decision making for the type of care.

The participants in this study stated that the laboring women did not have the basic knowledge about safety of clinical practices during labor. Sometimes women are not aware of the risks and benefits of unnecessary interventions; therefore they request ineffective or even harmful interventions during the labor (Participant 3).

Lack of partnership in women regarding decision making for the type of care was another barrier. In Iran, the parturient women do not decide on the type of care and treatment, and it completely depends upon the decision made by the midwife or physician. One of the participants reported that: "This is the attitude of Iranian women; they accept physician's decisions and rarely disagree" (Participant 8).

4.2. Barriers to the Person Providing Care

Several barriers were identified regarding the health-care providers, including lack of knowledge; lack of required skills; lack of motivation to change behavior or adopt new behaviors; lack of authority to make decisions; being afraid of legal issues and lack of good communication between health care providers and the patients.

It was observed that the healthcare providers sometimes did not have the basic knowledge about several practices during labor care: "Although I take care of laboring women for several years, I did not know that routine episiotomy is harmful and it should be avoided" (Participant 14). Some of the subjects reported that their little care-related skill was formed empirically during obstetric care. One subject said: "I take care of her with my own experiences. Sometimes I do not know if what I am doing for her is right or wrong" (Participant 4). Some of the health providers did not change professional performance due to their individual belief and attitude. A midwife said: "I believe that when the family members are

in the labor room the women tend to be uncooperative" (Participant 19).

A main concern of midwives was lack of authority to make decisions about performance of practices during labor. A senior midwife said: "We do not have enough power to change women care procedures because, director in our ward do not let the implementation of the EBP during labor" (Participant 22).

The current study specified that legal issues were an important barrier to implementing evidence-based intrapartum care. One executive director explained: "Since the safety of mother and baby is very momentous for all obstetricians, many decisions are made based on fear of legal issues, not evidence based. Doctors are afraid of legal issues" (Participant 18).

Another identified barrier was lack of good communication between health care providers and parturient women. A senior midwife said: "Verbal communication between health care providers and parturient women about the quality of care is very low. Good and honest communication with the doctor and midwife is important for many women in the labor process" (Participant 9).

4.3. Barriers to the Organizational Environment

There were a number of factors regarding the organizational factors, including problems with educational system; lack of effective communication between obstetricians and midwives; lack of time in healthcare providers due to lack of human resources; inappropriate physical structure of birth setting; lack of equipment in the birth setting and lack of clinical supervision by first-line managers.

A barrier was related to the problems of educational system. Subjects reported that: "Inadequate education of health care providers is an essential barrier in the use of evidence based health care. I think that health professionals' education is an important factor in quality improvement" (Participant 31).

There was a barrier related to lack of effective communication between obstetricians and midwives for labor and delivery management. One of midwives explained that: "The healthcare professionals need to work together as a team to apply evidence-based health care during labor and delivery. A number of obstetricians in our hospital do not collaborate with implementing the EBP during labor" (Participant 27).

Another barrier was related to lack of human resources and Limited time of staff. A midwife said that: "Our labor ward is really busy. We are forced to care on two or three laboring women at a time. Not possible for us to provide care steadily. We do not have enough time to implement new practices" (Participant 34).

Other barriers related to the organization were shortage of equipment and inappropriate physical structure of birth setting. One director explained: "The environment was not spacious. The labor room was shared between three mothers. Therefore, women have no privacy during labor. Also, laboring women had a limited space

to walk and change their status. On the other hand, there was not enough equipment to implement the EBP during labor" (Participant 10).

Many subjects suggested that lack of clinical supervision by managers is another barrier at the organization level. A midwife believed that: "The managers have a vital role in the right use of EBP or can be moved to after role; therefore if clinical governance is done properly and regularly incorporated to the managers' meetings, the clinical staff, take more accurate care" (Participant 2).

4.4. Barriers to Health System

There were several barriers to health system including inappropriate planning, management, monitoring and feedback system, lack of accurate information system, good communication between healthcare providers and policy makers, and lack of good health policy.

4.5. Financial Resources

A number of participants identified the need for good planning, management and monitoring to use EBP during labor. An obstetrician suggested: "The better management could improve pregnant women safety. The managers needed more training for appropriate planning, management and monitoring the use of EBP during labor" (Participant 13).

Some respondents identified the need to record and report accurate information about routine practices and quality of care during childbirth. A midwife commented: "I think if the information is not accurately recorded, the problems are not correctly identified and thus we cannot improve the quality of maternity care services" (Participant 30).

Lack of communication between healthcare providers and policy makers were reported as a barrier to apply EBP during labor. A midwife was disappointed that: "It appears that if obstacles are inquired directly from the staff, policymakers can plan to overcome these barriers better" (Participant 26).

Lack of good health policies was reported as a barrier to adapt EBP during labor. An obstetrician offered a solution for this issue. "I believe that a good policy in the field of maternity care is to use of EBP, which is a really effective instrument. Of course, if the policy makers monitor the correct implementation of the policies" (Participant 11).

Many subjects thought that lack of financial resources is a major problem in maternity services. A director said: "More often, lack of financial resources is a major problem for quality improvement in the health system; for example, one of the solutions to overcome the shortage of staff and lack of equipment is financial resources" (Participant 32).

5. Discussion

The current study identified several important barriers to the implementation of evidence-based maternity care.

First, there were a number of barriers related to laboring women. Low awareness of laboring women of the care options during labor was an important barrier. Women should receive adequate information to recognize the benefits and risks of each practice; therefore, they can choose the best care between the different options of treatment. The clinicians often emphasized the fact that parturient women should have the right of choice, but the reality is that most of them do not have the ability to choose (13). Therefore, increasing women's awareness about benefits and risks of interventions is a good strategy to sensitize women and increase effective communication between health professionals and parturient women (14). Low women's participation in decision-making for the type of care was another barrier. Although the involvement of women in decision making about their care has better outcomes for them, the physicians and midwives often do not involve them in making such decisions (15).

Second, there were several obstacles at the level of caregivers. Based on the finding of the study, lack of awareness, knowledge, and skill in clinical personnel were factors affecting the failure to adopt the best practice. Grady reported that the attendance of skilled midwives and essential maternity care are important strategies to reduce maternal and newborn morbidity and mortality. Thus, the shortage of sufficiently skilled birth attendants is a key barrier to achieve this thread (16). Nevertheless, healthcare professionals need to be trained and motivated to adaptation of the newest evidence into their daily practices (17).

Findings of the current study indicated that one of problems and challenges in intrapartum care is the resistance to acceptance and use of EBP by healthcare professionals. The participants believed that health providers may refuse to accept new care because they do not have the needed skills to do new practices, Belizan et al. (18). Furthermore, changing a complex process requires commitment and strong, relentless, and creative leadership within the institution (19). Another barrier at this level was lack of authority to make decisions by midwives. The midwives' ability to use evidence based practice is directly related to the power of professional midwives in the maternity care system that give priority to the power of obstetricians (20).

Being afraid of lawsuits was perceived as another barrier to high quality, evidence based care. Fear of legal issues in clinical decision-making process by the obstetricians causes them to implement unnecessary interventions to prevent unwanted consequences for mother and newborn (13). Another barrier at this level was lack of good communication between healthcare providers and women. Developing honest and effective communication between midwives and women makes positive childbirth experiences for parturient women (21).

Third, there were several major obstacles to organization environment. The problems of training and educating system for physicians and midwives are still potential barriers to use evidence based intrapartum care.

Smith reported that inadequate training and education of healthcare professionals is a problem to achieve safety in maternity services. He believed that due to changes in medical training, junior clinicians have less skill than they had in the past. He also said: "Within the medical profession, gynecology is observed as a more prestigious specialty than obstetrics, which could lead to problems in the future". On one hand, he believed that "The shift in midwives' training from practical training to academic degree has not necessarily improved parturient women's safety" (22).

Thus, according to the statement by Sicily on EBP, it is essential to include knowledge, attitudes and skills of EBP in the curriculum (23). Training needs of healthcare providers also need to be promoted by means of more educational programs (6). Professionals seemed to agree that lack of communication across clinical groups is another barrier to implementing evidence-based intrapartum care.

Lack of proper communication can be considered as one of the causes of preventable injury and death of mothers and newborns. In contrast, establishing good communication and teamwork in the healthcare team could create a safe and friendly environment for the mothers and newborns during labor and delivery (24).

The high workload and shortage of time on health care providers due to limited number of staffs were regarded as an inhibiting factor to apply EBP in the clinical settings. For example, increasing the number of midwives would help to provide continuous care to all parturient women during labor. Also, midwives could be better deployed to improve safety by reduction of unnecessary interventions (22).

The physical structure factor and lack of equipment of birth setting were perceived as other barriers in this study. The most important element of the physical structure that can be considered as a barrier is using common rooms for mothers during labor and delivery management. Also, some subjects reported that using old instruments in the labor ward is a problem in the care process. Gale reported that top barriers to EBP were insufficient time, lack of staff, and not having the right equipment and supplies (25).

There were some barriers to lack of clinical supervision by managers to implement EBP during labor. The study subjects believed that it is critical that the managers support the employment of evidence based practices. Middle managers resistance is often described as a major challenge for upper-level administrators seeking to implement complex innovations such as evidence-based protocols or training new skills (26).

Fourth, a number of barriers were identified to the health system. There were some barriers corresponding to inappropriate planning, management and monitoring of evidence-based clinical standards. Successful implementation and diffusion of any practice change requires careful strategic planning (27). Appropriate management is one of the most important strategies to provide safe and high quality care in the health system (28).

Also effective feedback should be an integral part of clinical practice (29). There were some barriers to record and report accurate information about EBP during childbirth. Inaccurate or insufficient data inhibits health information exchange, and hinders clinical research, performance improvement, and quality measurement initiatives. Accurate data leads to quality information that is required for quality decision making and women's care (30).

There were some barriers corresponding to lack of good communication between healthcare providers and policy makers to use EBP during childbirth. In the study by Uneke, lack of communication between health policy makers and researchers, and the lack of participation of service recipients in health planning were shown as the major challenges to improve evidence-based policy making process and practice (31). Furthermore, specific strategies to improve communication among healthcare providers and policymakers are necessary to adapt EBP during labor.

There were some barriers corresponding to lack of good health policy to apply EBP during childbirth. Health policy and health systems are interdependent to achieve improved health. To successfully implement the policy is dependent on the capacity of the health system; and for the health system, to ensure access to evidence based, high quality care it is dependent on good policies (32). Thus, the policy makers should manage health policies at the national level and then they need to monitor using EBP in the clinical settings.

There were some barriers to the lack of financial resources to use EBP during childbirth. Results of a study suggested that the lack of financial resources is a major contributor to stress among the front line staff, which can be an unrecognized barrier by agency leadership (33).

The study found that the experiences of healthcare professionals working in the field of maternity care during labor are largely congruent with those of the healthcare professionals in various health care settings. However, there were some study limitations that reduced the potential to transfer the study findings. First, since the study was conducted in one country, the findings may not be generalized to other countries. Second, the study subjects may not be representative of all healthcare professionals, according to the purposefully selected collaborators. Some strong points of the study include: first, to date, within the field of maternity care services for pregnant women during normal labor and delivery management, it was the first Iranian study to explore and identify health care professionals' viewpoints on barriers to implementation of evidence-based intrapartum care. Second, subjects were interviewed by the same interviewer; nevertheless data analysis by the four authors contributed to the credibility of the findings.

5.1. Conclusions

Despite the advances in medical science to manage complex health problems, nowadays obstetric care in the

clinical settings has increased dangers for low risk parturient women and their newborns (34).

Sometimes, evidence based practices in obstetrics and neonatal care significantly reduce morbidity and mortality (35). EBP is a target with many challenges in everyday implementation (36).

The current study identified a number of potential barriers according to the viewpoints of health professionals who work in the Iranian maternity services to improve the implementation of evidence based intrapartum care. The findings of the study indicated that the women should feel free to ask if they are receiving evidence-based care.

On the other hand, the knowledge, attitude and skills of healthcare providers should be constantly promoted. The reasons why labor ward staff persists in non-evidence-based practices are that many staff are resistant to change (37). The presence of strong leadership and adequate financial resources affect healthcare provider attitudes toward EBPs and facilitate implementation of these innovations (33).

The professional relationships between midwives, physicians, managers and policy makers providing obstetrical care is essential to succeed the application of evidence based intrapartum care.

Finally, developing evidence based national policies and the quality certainty systems will contribute to the reduction of unnecessary obstetric interventions and strongly emphasize on the needs and requests of women during childbirth (38). Since one of the elements for both evidence-based intrapartum care and woman-centered care is women preferences (39).

Acknowledgments

This article is part of a Ph.D. thesis sponsored by Isfahan University of Medical Sciences, Iran (Registration code: 391206). Hereby, the researchers appreciate Isfahan University of Medical Sciences to have approved the study. Authors would like to thank all subjects for their participation in the study.

Footnote

Authors' Contribution: Study concept and design: Mina Iravani, Ellahe Zarean, and Mohsen Janghorbani. Acquisition of data: Mina Iravani, and Ellahe Zarean. Analysis and interpretation of data: Mina Iravani, Mohsen Janghorbani. Drafting of the manuscript: Mina Iravani. Critical revision of the manuscript for important intellectual content: Mohsen Janghorbani, Ellahe Zarean, and Mina Iravani. Study supervision: Mohsen Janghorbani and Ellahe Zarean.

References

1. World Health Organization . *The World Health Report: Make Every Mother and Child Count*, 2005. Geneva: World Health Organization; 2005.
2. Garner P, Meremikwu M, Volmink J, Xu Q, Smith H. Putting

- evidence into practice: how middle and low income countries "get it together". *BMJ*. 2004;**329**(7473):1036-9. doi: 10.1136/bmj.329.7473.1036. [PubMed:15514355]
3. World Health Organization. *Care in Normal Birth*. Geneva: World Health Organization; 1996.
4. Enkin M, Keirse M, Neilson J, Crowther C, Duley L, Hodnett E, et al. *A Guide to Effective Care in Pregnancy and Childbirth*. Third ed. New York: Oxford University Press; 2000.
5. Gulmezoglu AM, Langer A, Piaggio G, Lumbiganon P, Villar J, Grimshaw J. Cluster randomised trial of an active, multifaceted educational intervention based on the WHO Reproductive Health Library to improve obstetric practices. *BJOG*. 2007;**114**(1):16-23. doi: 10.1111/j.1471-0528.2006.01091.x. [PubMed:17010115]
6. Karolinski A, Micone P, Mercer R, Gibbons L, Althabe F, Belizan JM, et al. Evidence-based maternal and perinatal healthcare practices in public hospitals in Argentina. *Int J Gynaecol Obstet*. 2009;**105**(2):118-22. doi: 10.1016/j.ijgo.2009.01.003. [PubMed:19232607]
7. Shaban IA, Hatamleh R, Khresheh R, Homer C. Childbirth practices in Jordanian public hospitals: consistency with evidence-based maternity care? *Int J Evid Based Healthc*. 2011;**9**(1):25-31. doi: 10.1111/j.1744-1609.2010.00197.x. [PubMed:21332660]
8. Conde-Agudelo A, Rosas-Bermudez A, Gulmezoglu AM. Evidence-based intrapartum care in Cali, Colombia: a quantitative and qualitative study. *BJOG*. 2008;**115**(12):1547-56. doi: 10.1111/j.1471-0528.2008.01930.x. [PubMed:19035991]
9. Baker R, Camosso-Stepinovic J, Gillies C, Shaw EJ, Cheater F, Flottorp S, et al. Tailored interventions to overcome identified barriers to change: effects on professional practice and health care outcomes. *Cochrane Database Syst Rev*. 2010;(3):CD005470. doi: 10.1002/14651858.CD005470.pub2. [PubMed:20238340]
10. Turan JM, Bulut A, Nalbant H, Ortayli N, Erbaydar T. Challenges for the adoption of evidence-based maternity care in Turkey. *Soc Sci Med*. 2006;**62**(9):2196-204. doi: 10.1016/j.socscimed.2005.10.005. [PubMed:16289786]
11. Polit D, Beck C. *Essentials of nursing research*. 6th ed. Philadelphia: Lippincott Williams and Wilkins; 2006.
12. Graneheim UH, Lundman B. Qualitative content analysis in nursing research: concepts, procedures and measures to achieve trustworthiness. *Nurse Educ Today*. 2004;**24**(2):105-12. doi: 10.1016/j.nedt.2003.10.001. [PubMed:14769454]
13. Behruzi R, Hatem M, Fraser W, Goulet L, Li M, Misago C. Facilitators and barriers in the humanization of childbirth practice in Japan. *BMC Pregnancy Childbirth*. 2010;**10**:25. doi: 10.1186/1471-2393-10-25. [PubMed:20507588]
14. Chaillet N, Dube E, Dugas M, Francoeur D, Dube J, Gagnon S, et al. Identifying barriers and facilitators towards implementing guidelines to reduce caesarean section rates in Quebec. *Bull World Health Organ*. 2007;**85**(10):791-7. [PubMed:18038061]
15. Legare F, Ratte S, Stacey D, Kryworuchko J, Gravel K, Graham ID, et al. Interventions for improving the adoption of shared decision making by healthcare professionals. *Cochrane Database Syst Rev*. 2010;(5):CD006732. doi: 10.1002/14651858.CD006732.pub2. [PubMed:20464744]
16. Grady K, Ameh C, Adegoke A, Kongnyuy E, Dornan J, Falconer T, et al. Improving essential obstetric and newborn care in resource-poor countries. *J Obstet Gynaecol*. 2011;**31**(1):18-23. doi: 10.3109/01443615.2010.533218. [PubMed:21280987]
17. Grol R, Wensing M. What drives change? Barriers to and incentives for achieving evidence-based practice. *Med J Aust*. 2004;**180**(6 Suppl):S57-60. [PubMed:15012583]
18. Belizan M, Meier A, Althabe F, Codazzi A, Colomar M, Buekens P, et al. Facilitators and barriers to adoption of evidence-based perinatal care in Latin American hospitals: a qualitative study. *Health Educ Res*. 2007;**22**(6):839-53. doi: 10.1093/her/cym012. [PubMed:17395605]
19. Curl M, Lothian JA. Evidence-based maternity care: can new dogs learn old tricks? *J Perinat Educ*. 2013;**22**(4):234-40. doi: 10.1891/1058-1243.22.4.234. [PubMed:24868136]
20. Hindley C, Hinsliff SW, Thomson AM. English midwives' views and experiences of intrapartum fetal heart rate monitoring in women at low obstetric risk: conflicts and compromises. *J Midwifery Womens Health*. 2006;**51**(5):354-60. doi: 10.1016/j.jmwh.2006.02.008. [PubMed:16945783]
21. National Collaborating Centre for Women's and Children's Health. London: RCOG Press; 2007. *Intrapartum Care: Care of Healthy Women and Their Babies During Childbirth*.
22. Smith AH, Dixon AL, Page LA. Health-care professionals' views about safety in maternity services: a qualitative study. *Midwifery*. 2009;**25**(1):21-31. doi: 10.1016/j.midw.2008.11.004. [PubMed:19095334]
23. Olsen NR, Bradley P, Lomborg K, Nortvedt MW. Evidence based practice in clinical physiotherapy education: a qualitative interpretive description. *BMC Med Educ*. 2013;**13**:52. doi: 10.1186/1472-6920-13-52. [PubMed:23578211]
24. Simpson KR, James DC, Knox GE. Nurse-physician communication during labor and birth: implications for patient safety. *J Obstet Gynecol Neonatal Nurs*. 2006;**35**(4):547-56. doi: 10.1111/j.1552-6909.2006.00075.x. [PubMed:16882001]
25. Gale BV, Schaffer MA. Organizational readiness for evidence-based practice. *J Nurs Adm*. 2009;**39**(2):91-7. doi: 10.1097/NNA.0b013e318195a48d. [PubMed:19190426]
26. Chuang E, Jason K, Morgan JC. Implementing complex innovations: factors influencing middle manager support. *Health Care Manage Rev*. 2011;**36**(4):369-79. doi: 10.1097/HMR.0b013e3182100cc2. [PubMed:21691212]
27. Dana N. Rutledge. Sustaining evidence-based practice initiatives. *Am Nurs Today*. 2011;**6**(2):117.
28. Health Information and Quality Authority. *National Standards for Safer Better Healthcare*. Dublin: Health Information and Quality Authority; 2012.
29. Kaye AD, Okanlawon OJ, Urman RD. Clinical performance feedback and quality improvement opportunities for perioperative physicians. *Adv Med Educ Pract*. 2014;**3**:115-23. doi: 10.2147/AMEP.S62165. [PubMed:24833948]
30. Clark JS, Delgado VA, Demorsky S, Dunagan EA, Eichelmann TA, Hooper LA, et al. Assessing and improving EHR data quality (updated). *J AHIMA*. 2013;**84**(3):48-53. [PubMed:23556405]
31. Uneke CJ, Ezeoha AE, Ndukwe CD, Oyibo PG, Onwe F. Development of health policy and systems research in Nigeria: lessons for developing countries' evidence-based health policy making process and practice. *Health Policy*. 2010;**96**(1):e109-26. [PubMed:21804832]
32. Sanneving L, Kulane A, Iyer A, Ahgren B. Health system capacity: maternal health policy implementation in the state of Gujarat, India. *Glob Health Action*. 2013;**6**:1-8. doi: 10.3402/gha.v6i0.19629. [PubMed:23522352]
33. Bonham CA, Sommerfeld D, Willing C, Aarons GA. Organizational factors influencing implementation of evidence-based practices for integrated treatment in behavioral health agencies. *Psychiatry J*. 2014;**2014**:802983. doi: 10.1155/2014/802983. [PubMed:24772411]
34. Lothian JA. Safe, healthy birth: what every pregnant woman needs to know. *J Perinat Educ*. 2009;**18**(3):48-54. doi: 10.1624/105812409X461225. [PubMed:19750214]
35. Houser J, Oman K. *Evidence-based Practice*. Canada: Jones & Bartlett Learning; 2011.
36. Kennedy HP, Doig E, Hackley B, Leslie MS, Tillman S. "The midwifery two-step": a study on evidence-based midwifery practice. *J Midwifery Womens Health*. 2012;**57**(5):454-60. doi: 10.1111/j.1542-2011.2012.00174.x. [PubMed:22845643]
37. Muda S, Fahy K, Hastie C. Strategies for changing practices: Optimising perineal outcomes through participatory action research. *HNE Handover: For Nurses and Midwives*. 2013;**6**(1).
38. Mohammad KI, Alafi KK, Mohammad AI, Gamble J, Creedy D. Jordanian women's dissatisfaction with childbirth care. *Int Nurs Rev*. 2014;**61**(2):278-84. doi: 10.1111/inr.12102. [PubMed:24762171]
39. Burman ME, Robinson B, Hart AM. Linking evidence-based nursing practice and patient-centered care through patient preferences. *Nurs Adm Q*. 2013;**37**(3):231-41. doi: 10.1097/NAQ.0b013e318295ed6b. [PubMed:23744469]