

## **Clarification of risk management in safe delivery, by Iranian experts: A qualitative study.**

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### **Abstract**

**Background:** Dealing with the risk and the risk management, will improve the quality of health planning and policy making in safe delivery. This study is aimed to express the views of experts on risk and risk management in the safe delivery in Iran.

**Methods:** The current study was part of a qualitative research conducted by content analysis method in 2013 and purposive sampling, performing 24 in-depth interviews based on semi-structured questions and analyzed using thematic content analysis. The participants in this research included midwives, obstetricians and managers.

**Results:** In the present study, experts considered both the social and medical approaches of risk. Midwives had more attention to social and community-based approaches, while professionals and managers had more attention to medical approach of risk.

**Conclusions:** The best solution is paying attention to both approaches. Doctors and midwives should have the skills and flexibility required to use two approaches at the same time and always attention to the environmental and personal background of women and their families. In this way, the low-risk mothers will get more benefits during delivery and the high-risk mothers will use special care.

**Keywords:** Risk management, Safe delivery, Experts, Qualitative research.

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### **Introduction**

More than two decades ago, the international global health community gathered at a conference in Nairobi, Kenya and Safe Motherhood Initiative was launched. It aims to mobilize resources, build political will and identify effective interventions for maternal survival [1]. The formation of this conference was accelerated by two major events: provocative publishing by Rosenfield and Maine about great neglect of mothers in most of the maternal and child health program [2] and announcing the issue, which each year about 500,000 women (99% in low-resource countries) were dying in pregnancy and childbirth, at the end of an international conference of the United Nations on the occasion of "Decade for Women" (1985-1975) [3]. The International Conference on Population and Development (ICPD) held in 1994 was a turning point for holding Safe Motherhood Conference in other parts of the world [4-5]. Regardless of so many technological achievements of the 21<sup>st</sup> century, about 44 million pregnant women in developing countries do not have access to prenatal

cares services and annually 200,000 Asian women die because of the complications of pregnancy and baby delivery. Insufficient prenatal and delivery cares is the cause of mortality for 5 million neonates in each year [6].

The significance of mothers' health is because it is one of the eight major goals set for the millennium development [7]. Safe delivery is one of the main factors that leads to a safe motherhood. Safe delivery is a delivery assisted by educated and skillful individuals in a proper environment which is accessible at an affordable cost and within a short time, where delivery is performed at the highest level of standard and through a proper method, and the result will be a healthy neonate and a healthy mother [8]. While central indicators show a significant improvement in so many countries of the world including Iran, the research shows the necessity of attending to new aspects of this phenomenon such as the quality of the services provided for individuals [9]. Observance of clinical governance principles helps improving the quality of clinical services. England follows clinical governance

principles in providing prenatal services and in its daily reporting system. Mothers' mortality rate in England is 13 per 100000 labors. According to an assessment conducted in 2007, 89% of women were satisfied with the delivery services they received [10]. In order to improve the quality of the clinical services, clinical governance was officially introduced in our country since 2009. The seven pillars of clinical governance are as follows: public private involvement, patient safety and risk management, personnel management, education and personnel management, use of information, clinical audit and clinical effectiveness [11].

More and more of us believed that we can prevent, manage and control the risk of dangerous situations to compensate after the event. It is not surprising that contemporary midwifery with a large extent tends to the establishment of clinical governance and risk management (NHS Quality Improvement Scotland) [12]. Midwives assess women and classify them based on the risk-based evidence [13]. With this work, they influence on the choices available to women during pregnancy. The development of risk management systems often is a result of increased litigation that occurs in this field [14]. Although risk management has a supportive role to care low-risk mothers [15], but in critical and high risk cases is more limited to promoter [16]. The theoretical components of risk in maternal care include the following:

- Society exposed to risk and reflecting modernity
- Cultural and social construction of risk
- Regulatory and self-regulatory aspects of risk [17]

Risks in the field of care of pregnant women can be divided into two main areas: First, the absolute risk that is specified as the consequences of delivery and its information, which is very important for the care of mothers, is collected and analysed [18]. Second, the effects of social/cultural risk or perceived risk in the field of maternal care [19]. Social model of risk in the field of pregnancy is based on this idea that childbirth is a natural physiological phenomenon and requires no intervention and most women are able to get through this step without intervention. Women who are predicted not able to pass these steps naturally must be recognized [20]. Medical model is based on the idea that pregnant women need to control and medical monitoring to guarantee the safety of women [21]. In twentieth century, increased risk as a key cultural identifier brought delivery toward the medical model. A social model in accordance with the idea of midwifery knows the pregnancy and childbirth as a physiological phenomenon. The medical model can be considered in aspects of supervisory, social, organizational and interpersonal that obstetricians and some of midwives and mothers supporter it that have been caused by differences in perceived risk. This perceived risk is effective for decision-making in this field for type and place of care [22]. In Iran, managers, specialists and midwives disagree about the nature of risk in safe delivery. As there are many facts about risk approach in safe delivery and people in their social interactions express a phenomenon with different ways due to their previous experience, we conducted a qualitative research to study the experts' opinion. This study aimed to

investigate the experts' opinion about the nature of the risk and risk management in the field of safe delivery. Results of this study can be used to improve policy-making and planning in the field of safe delivery.

## Materials and Method

This is a qualitative content analysis conducted in three cities in Iran including Shahroud, Quazvin and Tehran, in 2013. The content analysis is beyond extraction of visible content taken from textual data. In this study, Colaizzi model was used for content analysis [23]. Participants in this research include: 10 midwives (Master of Science), 4 obstetricians (Specialist physician), 5 managers (PhD), 5 hospital doctors (Specialist physician and experts). Totally 28 samples were selected for interview that 4 persons were left out according to lack of interest to continue cooperation, and by interviewers' discretion. Participants were selected based on their experiences and the research objectives. Inclusion Criteria of this study were based on their own tendency to participate in the research and they were all familiar with the concepts of safe baby delivery and risk management. Exclusion criteria of this study were based on lack of tendency toward continuing the cooperation, presenting dishonest answers and revoking conscious satisfaction.

Purposive sampling through maximum variation sampling was initially used for data collection. In this sampling method, the basis of selecting participants was having special information about the considered phenomenon, and the aim of their selection was to collect these data. Following a goal-oriented sampling, we performed semi-structured interviews to extract the themes. Each session lasted 1 to 1.5 hours. The interview process lasted until data saturation. Sessions were held at the peoples' workplaces (hospital, maternity center, clinical office, Ministry of Health and Universities). The questions were developed by researcher. These questions which were concordant with the goal of the predesigned plan and were used to control the interview sessions, were as follow:

1. What in your opinion is a safe delivery?
2. What is your opinion on the approach of risk in the safe delivery?

Interviewer had good communication skills and specialty about interview. Interviewees' written consent was obtained prior to recording their voices, and the research aims were explained to them. In addition, they were assured that all of their information will remain confidential. All of the participants studied and signed the form of conscious satisfaction designed by the research team. The interviews were conducted face-to-face. For data analysis, after each interview, the interview tape was transcribed and analyzed. Finally, the findings were compared to the researcher's interpretations. This finally led to explanation detailed description of "safe delivery" as perceived by the experts. Comparative analysis was performed on the data in order to extract primary codes. In the next stage, themes were organized based on their concept into categories. In this part, the primary codes were classified based on differences

and similarities in abstract categories and key concept [23]. The continuous analysis of data began from the beginning of codification, and continued until the end of data collection. Two of the authors participated in data coding process.

The credibility was owed to the researcher's sufficient experience, scientific knowledge and academic degree. An ongoing engagement was accomplished as a result of the researcher's constant mental engagement with the data and this led to an increase in the depth and size of the data. Persistent observation was accomplished through data reading and analyzing for several times and through applying a combination of methods such as face to face observation and interview. The participators' handwritten texts were studied to verify the credibility of the extracted themes. The researcher's

reports and notes were submitted to another expert so that the similarity among the findings could be approved by both experts. The MAXQDA10 software was employed to manage codes. All Ethical issues (such as conflict of interest, misconduct, co-authorship, double submission, etc.) have been considered carefully. Ethical permission (No. 9227) for the study was obtained from Shahroud University of Medical Sciences on February 17, 2012.

### Results

In the present study, experts considered both the social and medical approaches of risk. This part of the study was attended by 24 experts. The findings are presented in Table 1.

**Table 1.** Themes, major categories, subcategories and main codes extracted the research.

Theme	Main Categories	Subcategories	Codes	
Definition of safe delivery	Educated person (midwife and obstetrician)	physical health	The minimum need for intervening actions and the need for decreasing undesired interventions.	
			Midwives should identify themselves as supporters rather than managers and presenters.	
			The delivery should accompany the least amount of risk.	
			Be avoided cesarean section without medical reasons.	
			A trained person to accompany the mother.	
			Deliveries must be accompanied with the least complications and mortality rate for mothers and newborns.	
		mental and emotional health	The delivery should be accompanied with the least complications both at the time of the delivery and in postpartum period.	
			There is a need for paying attention to mothers' mental health, dignity and privacy.	
			Midwives should be trained to introduce normal vaginal delivery as a pleasant process.	
		Proper environment, facilities and equipment	Equipment	Painless delivery methods should be applied.
				The need for existence of a blood bank and CPR facilities.
			Environment	Monitoring facility must be proportionate to the number of the beds.
				Tranquility and safety of the environment.
				The place should be properly designed to be used by patients at any position.
				The delivery ward should be regarded as the emergency ward.
Type of baby delivery	Vaginal delivery	Senior authorities do not pay sufficient attention to normal vaginal delivery.		
	Cesarean	Social culture does not recommend the proper type of delivery.		
Risk management	Traditional approaches	Social	Childbirth is a physiological process.	
			Low-risk mothers do not need hospital care.	
			Mothers' culture is effective in acceptance of the childbirth risks.	
			Mothers' culture is effective in selecting the type of childbirth.	
			Mothers' culture is effective in accepting the role of mother.	
	Modern approaches	Medical	The authorities should pay attention to the childbirth at home.	
			Childbirth process cannot be predicted.	
			Childbirth should always be done in a center, which has required equipment and facilities to control high-risk childbirth.	

Opinion of experts for increasing safety	Social/Medical	Midwives and specialists should know that each child birth can be high risk.
		Listing risks and communicating them to different wards to prevent them.
		The fault itself must be the focus of report not the violator.
		A case report system must be established in the ward.
		Specialists should be more involved in different methods of safe delivery.
		Risk analysis must be based on precise recording of events at the delivery room.
		We manage the files and not the risks.
		The childbirth of the each mother should be considered individually.
		Midwives and professionals should be able to separate the low risk childbirth from high risk childbirth and have to be followed by high risk mothers system.
		The tariffs, social education, education of specialists, legal issues are all of the same importance and have to be addressed simultaneously.
		Decentralization should be carried out in different provinces because each province has its own problems.
		More information should be given to the society in regard with safe delivery.
		NGO's services can help make changes in the attitudes.
All people should be morally committed to implement it.		

As to the definition of a safe delivery: one of the experts, who was an obstetrician said: "Safe delivery is a cycle beginning with prenatal cares and continues with delivery services, postpartum cares, and services provided for mothers when she is being discharged. On the other hand safe delivery requires the least number of interventions and contributes to the mother's mental and physical health, esteems her dignity and leaves the least number of complications. The present indicators only address physical demands, while her comfort and spiritual needs must also be addressed". As to the status quo, current obstacles and problems: One of the midwives of delivery ward said: "All pregnancies are not high risk. Culture of mother in accepting the mother's role and understanding the risk by mother plays an important role. Delivery should be done with a minimum of intervention and attention to social and cultural factors of mother can be helpful. We must consider appreciate other aspects of delivery as well as the risk of delivery to provide a delivery with good memories for mother. We must also consider the quality of low-risk deliveries as well as the importance of high-risk pregnancies. This is only possible by suitable separating low-risk delivery from high-risk delivery".

As to the role played by risk management in a safe delivery: One of the midwives Head of delivery ward said "To separate low-risk delivery from high-risk delivery, fundamental changes should occur in the system of care for mothers from the beginning of pregnancy. It sometimes is better to consider the social approaches of delivery and the role of mother and grandmother is not disregarded to guide mothers to accept their role as mothers". One of the managers of the Mothers' Health Office said "Possible faults must be listed and proper reporting methods should be applied. Avoid increasing the growth rate of caesarean. The faults should be reported but without naming the violator; personnel should be remunerated for reporting the

faults; they should exchange views about these faults and should conduct fault analysis, and mothers with high risk conditions have to be followed up". One of the obstetricians uttered "It is unfortunate that it is the files that we manage and not the risks; the tasks are defined at the official surface and are not operational, while risk analysis should be based on accurate recording of the delivery room events".

One of the specialists said "The views of midwives and specialists about the dangers of safe delivery should be changed. Delivery is a physiological process that can sometimes be along with risk and side effects. Delivery should be done with minimal intervention". One of the experts said "Specialists should be more involved in other different delivery types; educational courses held for midwives and specialists should be revised based on the demands of the system; the society should be provided with information about safe delivery; patient training should be addressed. NGOs should be more involved in providing services". One of the experts, who was an obstetrician working at mothers health department conveyed: "To organize the safe delivery system, it is necessary to build another world, and a new man".

## Discussion

In the present study, experts considered both the social and medical approaches of risk. Midwives had more attention to social and community-based approaches, while professionals and managers had more attention to medical approach of risk. The research findings revealed that there is a vicious cycle of causes and factors that hinders implementation of risk management in a safe delivery; high risk mothers to be separated from low risk mothers, Avoid increasing the growth rate of cesarean, midwives and specialists should be trained in concordance with the new demands of the system; risk analysis

should be done based on a detailed record of events in the maternity ward. In a research conducted by Sabaratnam Arulkumaran in 2010 in UK, it was revealed that maternity service should be organized according to the principles that are accessible, acceptable and safe. The best quality will be achieved when the best services are given to the mothers at the lowest cost. Risk management elements may be sufficient for monitoring safety but it does not increase itself quality. The experiences of mothers and their families should be understood to improve the quality. The purpose of risk management is to maintain and develop a safe environment, which causes promotion of the clinical values and positive experiences of the mothers [10].

In a research conducted by Abbaspoor, et al. in an urban area of Iran, a vicious cycle of causes and factors was found that affects the delivery method chosen by mothers. Although mother's demand is considered as the major reason for cesarean operation to be so prevalent, actually, mother's demand is an effect. Socio-cultural, religious and economical norms in the Iranian society play main roles in the selection of the birth method by Iranian women. Health care policy-makers are expected to attend to the factors influencing women's decision-making on the childbirth method to reduce the number of unnecessary caesarean sections [24]. In a survey conducted by the Moradi et al. in Iran, it was concluded that despite improvements in pregnancy care in Iran, the situation of safe delivery has not been significantly changed in the different social classes [25]. The risk approach to maternity services is supported by the WHO as an efficient means to reduce mortality during baby delivery [26].

Risk approach is a method for detecting low-risk pregnancy from high-risk pregnancy. By screening for risk factors, pregnant women who experience the delivery complications are detected at the beginning of pregnancy. After identifying, these mothers early care in health centers are or are referred to the hospital on time. Not all mothers need to be cared in a hospital. The importance is the caring high-risk mothers in a hospital. In Iran, the separation of high-risk mothers from low-risk mothers at health centers is performed better than at hospitals. This is an ongoing and vital component for midwifery and maternity care with the aim of facilitating the assessment, prediction and prevention of side effects. Risk assessment and risk management on midwifery history has been more considered in the 21<sup>st</sup> century due to the intensification of risks and disputing nature of the maternal care and legal prosecutions. Although the risk cannot be eliminated, but it can be evaluated to minimize risk for staff and patients [27].

There are many reasons for tending to medical approach: modernity and urbanization of mothers and fear of pain caused mothers select analgesic delivery using drug rather than physiologic delivery and it increases medical intervention. Low confidence of mothers has caused they do not have control over their bodies and accept more interventions about themselves [28]. The current study showed that midwives had more attention to social approaches besides the medical

approach and doctors focuses on the medical approach of delivery. An article by Van Teijlingen in 2004 stated that not all midwives had social and community-based approaches and not all doctors had medical approach [29]. According to the theory of the risk, human life is along with many risks that people should avoid them. Much attention to any of these approaches will lead to an imbalance in risk management in safe delivery [22]. The best solution is paying attention to both approaches. Doctors and midwives should have the skills and flexibility required to use two approaches at the same time and always attention to the environmental and personal background of women and their families. In this way, the low-risk mothers will get more benefits during delivery and the high-risk mothers will use special care.

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