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RESEARCH ARTICLE

The Reasons and Strategies of High Cesarean Section Rate from Chinese Obstetricians and Midwives Perspective in the Public Hospitals: An Interpretative Phenomenologic Analysis

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Abstract

Background: Despite the ever-increasing rate of Cesarean Section (CS) in China, little is known about both the reasons and strategies of high Cesarean Section Rate (CSR) from the perceptions of obstetricians and midwives, who have great influence on deciding the delivery mode. The study aims to describe obstetricians and midwives' perceptions of the essence of the increasing CSR in the tertiary (city) and secondary (county) hospitals in China.

Methods: A descriptive qualitative study design with individual interviews was used. A purposive sampling of obstetricians and midwives from the tertiary and secondary hospitals were recruited. Open-ended questions on their perceptions of high CSR were asked. Braun and Clark's thematic analysis steps were followed for the data analysis.

Results: Twelve obstetricians and fifteen midwives were interviewed. Two themes on perceptions of increasing rate of CS emerged from the in-depth interviews: The causes of CS and proposals to decrease CSR. The reasons of increasing CSR included: High-risk pregnancy and perverse labor, fear of pain in Natural Vaginal Delivery (NVD), wrong cognitions to delivery mode, women's lack of knowledge and unmatched expectations to medical intervention, tense doctor-patient relationship, deficits of professional technique, incomplete health care system. The proposals to decrease CSR were: Strengthening prenatal education, improving professional level of health care professionals, managing labor process, strengthening hospital patient communication, managing personnel and material resources. The findings support the gap of perceptions of CS among health care professionals from different levels of hospitals.

Conclusion: The obstetricians and midwives identified various reasons for the high CSR and proposed different strategies to control the high CSR.

Keywords

Perception, Cesarean section, Obstetricians and midwives, Qualitative study

Abbreviations

CS: Cesarean Section; CSR: Cesarean Section Rate; NVD: Natural Vaginal Delivery

Introduction

Cesarean Section (CS) is needed to prevent or treat life-threatening maternal or fetal complications in an estimated 5%-15% of pregnancies [1]. The rate of CS (CSR) in Asia was around 27% [2], nearly three times higher than the WHO standard. Alarmingly, the CSR in China was 50%-55% [3] in secondary and tertiary hospitals respectively [4]. Apparently, CSR is affected directly by physician's decision due to possible over diagnosis of dystocia and fetal compromise [5]. Interestingly, decision-making for CS is largely influenced by social-cultural perceptions and beliefs [6].

As described by Arikan [7], obstetricians and midwives' play critical roles in the decision-making of the delivery mode. They also play significant roles in the education and caring of women who undergo pregnancy and delivery. What is more, studies that examined practitioners' perception towards CS focused to a large extent on practitioners working in the tertiary (city) and secondary (county) hospitals [8].

The strength of the study is exploring both reason

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Table 1: Characteristics of obstetricians and midwives.

	Tertiary hospital		Secondary hospital	
	obstetricians (n = 7)	midwives (n = 6)	obstetricians (n = 5)	midwives (n = 9)
Mean age (range)	40 (33-59)	32 (28-49)	36 (31-55)	29 (26-42)
Mean years in practice (range)	19 (12-29)	14 (8-27)	16 (5-29)	14 (6-22)

Table 2: Themes emerging from the interview data.

The causes of CS	The proposals to decrease CSR
(1) High-risk pregnancy and perverse labor	(1) Strengthening prenatal education
(2) Fear of pain in NVD	(2) Improving professional level of health care professionals
(3) Women's wrong cognitions to delivery mode,	(3) Managing labor process
(4) Women's lack of knowledge and unmatched expectations of medical intervention	(4) Strengthening hospital patient communication
(5) The tense doctor-patient relationship	(5) Managing personnel and material resources
(6) Deficits of professional technique	
(7) Incomplete health care system	

and strategy from obstetricians and midwives' perspective, differing from some other studies that usually make a quantitative test of reasons to CS and qualitative studies emphasized on women's perception. Women registered in a primary hospital usually referred to secondary and tertiary hospitals since obstetric complications happened increasingly in recent years [9]. In this case, the study aims to describe obstetricians and midwives' perceptions of the essence of the increasing CSR at the tertiary and secondary levels of hospitals in China.

Methods

Design

A qualitative design was used to investigate the experience of obstetricians and midwives in the tertiary and secondary hospitals.

Participants and study settings

Seven obstetricians and six midwives from the tertiary hospital and five obstetricians and nine midwives from the secondary hospital were recruited through purposive sampling in 2016. The anonymity was guaranteed to the all participants. Inclusion criteria included at least 5 years working experience, and consent to have the interview. The first affiliated hospital of Xi'an Jiao tong University is chosen as the tertiary hospital. The Gaoling County Maternal and Child Care Service Centre is chosen as the secondary hospital.

Data collection and analysis

Data were collected by semi-structured interviews from October to December in 2016. Appointments for the interviews were made with the participants. Individual interviews were conducted either in the doctor's office (44%) or the midwife's duty room (56%) respectively during their rest time. Individual interview was conducted in Chinese by the first author and then tape-recorded upon interviewees' approval. Each of the interviews began with a broad open-ended question "Please describe the situation of CSR in Chinese public hospital". Appropriate probes, specific to elicit participants' perceptions, were used, such as "What is it like for you as a professional to be working in the public general (or special) hospital with high CSR? What do you think is the most challenging aspect of CS? As an obstetrician (or midwife) practitioner, what can you do to change the high CSR?". Each interview lasted about 65 minutes.

Approvals were obtained from the Clinical Ethics Committee of the university and study hospitals. Confidentiality was achieved by the allocation of code numbers to each transcript (e.g. M1.2- NO.1 midwives from the secondary hospital, and O1.3 - NO.1 obstetricians from the tertiary hospital). The following measures were taken to maximize the trustworthiness of the data: Tape recordings were transcribed by the first author, and translations were checked by the member of the research team. Braun and Clarke's six-phase thematic analysis was used [10]:

Stage 1: Getting acquainted with the data

Stage 2: Constructing primary codes

Stage 3: Searching themes

Stage 4: Reviewing themes

Stage 5: Defining and naming themes

Stage 6: Preparing reports.

Results

Twelve obstetricians and fifteen midwives were interviewed, including seven obstetricians and six midwives from the tertiary hospital and five obstetricians and nine midwives from the secondary hospital (Table 1).

Two themes or components of participants' perceptions of CS were extracted from the study: analyzing the causes of CS, offering proposals to decrease CSR. The reasons for increasing CSR include seven aspects as while as the proposals to decrease CSR were five aspects (Table 2). Both themes are described in detail by a rich narrative of the health care professionals to illustrate the clinical current situation.

Analyzing the causes of CS

The most fundamental reasons are high-risk pregnancy and perverse labor. As one obstetrician stated: *"Pregnant women are usually overnutrition, which causes more complications. Gestational diabetes will make baby heavy and increase labor difficulty. Breech delivery and big babies likely lead to premature rupture of membrane. Along with other complications, CSR is rising" (O2.2.).*

Fear of pain in Natural Vaginal Delivery (NVD) is one of the most common reasons for unnecessary CS cited by participants. In describing the process of labor, one obstetrician quoted one of her clients: *"Women surf the internet for information, some said 'I find that if people have NVD but not make it will be converted to CS. I don't want to suffer from two-times pain'. So, they choose CS at the very start" (O3.3.).*

Wrong cognitions to delivery mode are important in forming inappropriate decision among pregnant women. The health care professionals described a few examples of cognitions which they perceived as laboring. *"A lot of women think that CS is convenient, simple, time-saving, painless, safe and they can decide the birth time through CS, also they believe they can recover from CS faster and it has no influence on birth canal" (O7.3). "They also worried about that NVD will lead to vaginal relaxation and affect future sexual life" (M5.2).*

The tense doctor-patient relationship is one of the common reasons for high CSR specifically in China. Obstetricians will change their decision on delivery mode according to patients' views and requests because it can help them to evade disputes. Once physicians don't comply with women's request and insist on trial-production, women will doubt their decision and motivation and have trouble with them. *"Safeguard rights awareness of patients is too strong to understand and accept common complications in NVD, so doctors don't want to take more and unnecessary responsibility. They will tacitly consent to women's decision on CS" (O5.2, M7.2).*

The deficit of technical level among midwives and obstetricians may restrain their choice in some delivery conditions. As one midwife surmised, *"Less-experienced health care professionals are not very good in skill, courage, and ability to judge. For some false positive circumstances, they don't know whether to go on or stop observation and start to intervene" (M6.3, M9.2).*

Obstetricians and midwives think the input of funds to some public hospitals is inadequate and strict price regulations of medical service limit doctors' decisions. As one obstetrician stated, *"Inadequate input of funds to some public hospitals is a reason. Public hospitals must stand on their feet to make compensation. The cost of CS is higher than NVD, which is in line with the interests of hospitals and health care professionals" (O7.3).*

Offering proposals to decrease CSR

Strengthening prenatal education to women and their family is an effective way to spread knowledge about pregnancy and delivery. Several obstetricians and midwives suggested that they need to provide more information and education on weight control during pregnancy. As one midwife stated: *"Women should correct her wrong cognition on the weight of a baby, not the heavier the better. And let them know the entire process of birth and know the benefits of NVD, as well as knowledge about the whole birth process and importance of prenatal examination"(O1.2, M1.3).*

Enhancing the continuous education and training among health care professionals, especially the training on knowledge and skills in the treatment of dystocia, can help them make a reasonable decision of delivery mode. Obstetricians' professional skills and midwives' competency were of eminent importance. As one midwife stated, *"Improving skills of prenatal care and midwifery enables health care professionals to handle dystocia, repregnant with scar uterus and other problems on the premise of safety" (M3.2, M5.2).*

Managing labor process through psychological nursing and pain management is essential to increase women's confidence for NVD. Midwives should provide a positive psychological hint, encourage and educate them in proper time. Knowing about the process of giving birth and instructing them how to cooperate with obstetricians and midwives will be helpful. Midwives should also inspect the stages of labor rigorously and deal with problems timely. *"Giving her fine hint can lead her to a good imagination. Then she will be relaxed. Positive psychological hints can promote NVD" (M7.2).*

Strengthening the communication between health care professionals and delivery women is one of the most effective strategies to reduce health care professional-patient conflicts. Health care professionals should explain in plain language to ensure the women can understand and build a trustful relationship with them. *"In process of clinical reception, doctors should be patient and let women know about their health condition and avoid some CS without indication" (O1.3). "Since pregnant women come here to see the doctor, she believes us. We should be attentively and stand on their feet when communicating with them. If women understand that doctors are for their good, most of them can be persuaded and get along well with health care professionals" (O2.3).*

Lastly, the medical institution should manage personnel and material resources. Raising the salary of health care professionals to arouse their initiative, improving the infrastructure construction and mastering CS indications strictly in an obstetrical department may be effective. As several participants said, *"Our country should ensure personnel resources and reinforce the*

infrastructure construction. If health care professionals are adequate, we have enough time to observe each delivery women. Hospitals also can purchase some advanced equipment to stimulate women's initiative and work with midwives better" (O7.3, O5.3, M2.3). One midwife mentioned the following exemplar: *"We hope to raise wages because midwifery is painstaking and different from nurses and we face higher risks in work" (M6.3).*

Discussion

Two themes of perceptions of increasing rate of CS in China emerged from the in-depth interviews with the obstetricians and midwives from different grade public hospitals. The study tried to describe the themes cogently and all participants agreed with the two themes as essential for controlling the rate of CS in Chinese counties and cities. The findings reported here are significant, as to our knowledge, it will be the first comprehensive description of both reasons and measures among obstetricians and midwives toward CS reported in the literature.

In several related studies, reasons for such high CSR are complex, involving in physiologic [4], psychological [6], social and medical factors [11] which is in line with this study. Participants suggested that some changeable factors can be regulated by strengthening prenatal education, improving professional level of healthcare professionals, managing labor process and strengthening hospital patient communication. These results both broaden and deepen our understanding of perceptions of reasons and strategies on CS as presented by clinical staff.

Although undeveloped midwifery skills restrain the possibility of some NVD, tense doctor-patients' relationship is a social issue which has an effect on obstetricians' decision on NVD in China. The doctor-patient and nurse-patient dispute is a big social issue in China and is a direct factor for high CSR. Some studies have shown that obstetricians may choose women-requested CS to avoid disputes [12]. Improving women's knowledge about the risks and benefits of different modes of delivery can lead to a positive maternal attitude towards vaginal delivery and help them to make a reasonable decision [13]. Health care professionals should communicate with patients by literally and in a simple, easy-to-understand language without any medical jargons [14]. Meanwhile, such education is a form of doctor-patient communication. A study showed that a good provider-patient relationship will help patients have higher satisfaction, better adherence and improved health [15]. Doctors can establish a good relationship with women in prenatal education process and women will trust them, which may decrease conflicts in subsequent stages.

In China, midwives mainly execute medical advice of obstetricians, and they don't make decisions on delivery mode of women. Obstetricians have a heavier burden and more risks than midwives, so they ask for more legal protection. The government has enacted a law to repress and punish violence in hospital [16], but the medical practice situation is still intensive. Effective complaint and mediation systems are necessary to avoid physical conflicts [17].

In 2016, China has launched General Two-Child Policy and a lot of women begin to plan the next pregnancy. At the same time, health care professionals may face a heavier burden in the tide of a second child. To control CSR, hospitals should guarantee enough personnel resources in this process. Also, obstetricians are main decision-makers of delivery mode, who should act as a gatekeeper to supervise CS. Therefore, the obstetricians should master clinical indications strictly and spread knowledge of pregnancy, pregnancy with scar uterus and delivery. Also, with the carrying out of Two-child Policy, the state council dispatch appealing of salary raise in midwifery in 31st December 2015 to ignite their work enthusiasm [18].

Limitation

We acknowledge that the findings are limited as the study only recruit obstetricians and midwives in underdeveloped Shaanxi province. In a further study, we hope health care professionals from cities with different economic levels can be included and the difference of their perception of CS can be explored.

Conclusions

It is important to understand that obstetrician and midwives' perception of CS from different levels of hospitals. This study indicates that the health care professionals from both levels (districts) hospitals show similar perception on the trend, opinions, reasons for CS and strategies to decrease CSR. Meanwhile, obstetricians recommended more legal legislation to protect their rights and safety. The study provides implications for clinical practice in controlling CSR in hospitals and policy for legal protection.

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