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ORIGINAL ARTICLE

Attitudes of Obstetricians toward Cesarean Delivery in Challenging Cases

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Abstract

Objective To assess the behavior and preferred delivery method among Iranian obstetricians in challenging cases.

Method Using the revised Jackson personality inventory questionnaire, the attitudes of obstetricians toward cesarean delivery were assessed in challenging childbirth cases. The study was conducted at the Mashhad University of Medical Sciences in Mashhad, Iran.

Result Seventy-five obstetricians answered each item reflecting varying levels of preference and risk attitudes. However, a significant number of respondents avoided the risk of requesting a cesarean because of legislation and legal issues.

Conclusion Iranian obstetricians prefer low-risk behavior for managing ambiguous delivery cases. Fear of legislation and medicolegal issues appear to be of great importance in this cohort primarily comprising female physicians.

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Introduction

The rates of deliveries via cesarean section in both developed and economically developing countries have been increasing [1–4]; therefore, arguments have emerged to clarify the reasons underlying this phenomenon [5]. Although there are common indications for performing cesarean delivery, including fetal stress, failure to progress, previous cesarean, and breech [6], maternal request appears to be the strongest factor [7–9]. However, how obstetricians are influenced by maternal request has not yet been robustly explained. Despite advances in medical and surgical care and increased indications for cesarean in obstetrics, cesarean delivery is still associated with maternal morbidity [10]. Furthermore, during the past few decades, the fear of legislation and medical liability insurance has led to the performance of defensive medicine among obstetricians and affected the trend toward cesarean delivery [11–19].

Although the attitudes of obstetricians toward the method of delivery in ambiguous cases have recently been evaluated [5], such investigations are absent in developing countries where the incidence of cesarean delivery on request is increasing.

We therefore aimed to study the attitudes of obstetricians in Iran toward the methods of delivery in challenging

cases of pregnancy, and we also measured their risk attitudes along with the most effective causes of this behavior.

Materials and Methods

Between 2009 and 2011, all specialists in obstetrics and gynecology working under the affiliation of the Mashhad University of Medical Sciences (MUMS) were asked to participate in this cross-sectional study. A 3-part questionnaire was mailed to each participant; they were asked to read it thoroughly and then answer each of the case scenarios and associated questions. The questionnaire was adopted from the revised Jackson personality inventory [20] and translated into Persian. The Jackson personality inventory aims to measure the personality traits of professional workers/parties. While the questionnaire is generally used as a measure of the specified personality constructs, the risk-taking sub-scale is additionally used as a measure of risk preferences like in this study. The contents were validated by a pilot study held among 10 general physicians after expert revision by 1 psychologist and 4 other obstetricians. Of the 3 parts of the questionnaire, demographics and information regarding professional background were gathered in the first section.

In the second part, 5 case scenarios of maternal request for cesarean were included, in which the obstetricians' decision-making ability was challenged and their preference for cesarean or vaginal delivery in each circumstance was measured. Participants ranked the degree of preference to either method of delivery on the basis of a 7-point Likert scale[1] (1 is the strongest preference for cesarean delivery and 7 is the strongest preference for vaginal delivery). These cases briefly described previous unpleasant vaginal deliveries in the pregnant women and then challenged the indication for cesarean after the maternal request was made. Each scenario also had a medicolegal aspect that, in turn, would affect the net trends of obstetrics toward either of these methods (Appendix).

In the next part, participants were asked to agree or disagree to 5 questions on the basis of a 6-point Likert scale to measure risk-seeking behavior and risk attitudes. Similarly, in the last part of the questionnaire, participants were required to define the most important factors—those considered most often—underlying the decision to take action rather than act according to the patient expectation.

[1] Likert scale is a scoring system devoting a number to each degree of measurement. A number's interval is considered equal. The largest number corresponds to the severest condition compared with the smallest number which corresponds to the least severe status. This specifies the level of agreement that each respondent deems for each questionnaire item.

The study was approved by the research and ethics committee of MUMS, and the participants were reassured of the confidentiality of their information and responses. The obtained data were then entered into the data registry and analyzed using the Statistical Package for Social Sciences version 16 (SPSS Inc., Chicago). The prevalence of responses to each item of the questionnaire has been presented. The risk score was also measured for each participant and presented as a 3-categorical value as negative (risk averse), zero (neutral), or positive (risk seeking).

Results

Of the 75 obstetricians who participated in this study, 10 were male (13.33 %) and 65 were female (86.66 %), with a mean ± SD age of 47.04 ± 9.23 years. The physicians also reported the mean ± SD duration of 15.51 ± 8.49 years in their careers.

With respect to the 5 clinical scenarios, the proportion of positive responses to cesarean varied between 18.67 and 86.66 % (Table 1). Furthermore, the rate of consent to the method of delivery varied in each case. For scenario 1, the number of physicians who strongly preferred cesarean was 51, while only 2 obstetricians firmly selected vaginal delivery. In case 2 (in which the husband was mentioned to be a lawyer), 40 % preferred cesarean delivery, of which 17 strongly preferred this method. Also, for scenario 5—in which a breech presentation had occurred for a woman who was herself a physician—52 obstetricians strongly recommended cesarean, of a total of 78.67 % who agreed to use this method. On the other hand, in scenario 3, in which the patient had a history of a complicated delivery, 48 % preferred cesarean in contrast to 17 physicians who strongly rejected this method of delivery. For scenario 4, in which the patient had previously sued her former obstetrician for a sustained painful delivery, only 2 physicians strongly agreed to the cesarean for this patient, compared with 36 obstetricians who strongly preferred vaginal delivery. The physicians' choice of delivery, in association with the level of preference, is presented in Table 1.

Of the obstetricians who responded to the risk attitude statement, 1 absolutely agreed to take risk, 40 agreed to avoid risk in unclear situations, 12 expressed the outcome as a determinant in their choice, 53 perceived security as an important aspect, 2 were considered risk seekers by others, and 42 preferred an alternative in the situations they faced (Table 2). For risk attitudes, only 9 physicians obtained a positive value (12 %), followed by 3 risk-neutral (4 %) and 63 risk-averse (84 %) individuals (Table 3).

In the third part of the questionnaire, physicians were asked about the most important factors they bear in mind when they attempt to choose a method of delivery for their

Table 1 Responses to the case scenarios

Clinical scenario	Preference score							Proportion of cesarean preference (%)	Mean ± SD
	1[a]	2[a]	3[a]	4[b]	5[b]	6[b]	7[b]		
Case 1	51	10	4	2	5	1	2	86.66	1.81 ± 1.52
Case 2	17	7	6	13	9	13	9	40	3.87 ± 2.11
Case 3	19	10	7	9	6	11	13	48	3.77 ± 2.26
Case 4	2	6	4	4	4	17	36	18.67	5.69 ± 1.79
Case 5	52	1	6	1	9	3	3	78.67	1.87 ± 1.60

[a] Strongly prefer cesarean delivery

[b] Strongly prefer vaginal delivery

Table 2 Responses to statements of risk attitude

Statement of risk attitude	Risk score						Mean ± SD
	1[a]	2[a]	3[a]	4[b]	5[b]	6[b]	
Risk	48	10	8	4	2	1	1.69 ± 1.17
Avoidance	7	7	8	4	7	40	4.60 ± 1.82
Worried	10	7	16	12	12	12	3.65 ± 1. 65
Security	2	2	4	5	8	53	5.35 ± 1.25
Others	44	8	10	5	3	2	1.90 ± 1.36
Alternatives	2	6	3	9	11	42	5.01 ± 1.43

[a] Absolutely disagreed

[b] Absolutely agreed

Table 3 Physicians' risk score distribution

Risk score	Frequency (*n*)	Percentage (%)
−15.00	3	4.0
−14.00	3	4.0
−13.00	4	5.3
−12.00	6	8.0
−11.00	11	14.7
−10.00	11	14.7
−9.00	1	1.3
−8.00	1	1.3
−7.00	1	1.3
−6.00	2	2.7
−5.00	5	6.7
−4.00	1	1.3
−3.00	3	4.0
−2.00	3	4.0
0.00	3	4.0
1.00	5	6.7
3.00	3	4.0
5.00	1	1.3

Negative values express the degree of risk aversion; zero equals a neutral status; positive values show how seriously physicians are seeking risk

patients (Table 4). With respect to this, 33 subjects considered their supervisor's preference as an effective factor, followed by medical legislation (33 subjects), lawsuits (28 subjects), courts (28 subjects), colleagues (22 subjects), and media (20 subjects).

Discussion

Obstetrics have experienced heavy demand in the past few years with respect to a preference for cesarean to vaginal delivery. This has been explained by several studies. Nerum et al. [21] have raised concerns of a fear of vaginal delivery among mothers who request a cesarean delivery; previous unsatisfactory experience with vaginal delivery could result in maternal fear and the subsequent request for a cesarean approach. However, a reduction in the subject's worry could be established by an efficient explanation of the physical process to resolve the cause of their fear. Furthermore, Zwecker et al. [22] recently measured the effect of the fear of litigation in obstetric practice and concluded that this concept would significantly affect the risk attitudes of physicians when suggesting a method of delivery to their patients.

Cultural variables, medicolegal issues, and rules of domestic practice have been highlighted as determinants of the response that an obstetrician provides a mother on a request for a cesarean [23]. In their investigation of 8 European countries, Habiba and colleagues emphasized that a woman's request for elective cesarean delivery should be assessed on the basis of the underlying motivation, values, and fears. Her intention is thus more likely to be reversed, and the suggestion of vaginal delivery accepted.

As already mentioned, many factors may influence a physician's acceptance of a maternal request for cesarean. Female physicians may be less likely to accept the request for cesarean without clinical necessity [23], though previous studies reported varying gender distributions [24, 25]. Having a baby oneself could influence this attitude. This factor could not be assessed in our study because the number of female physicians was much greater than that of male physicians, imposing a selection bias in this regard.

In our population, most of the participants appeared to be risk averse with respect to legal issues and other supervising parties. Furthermore, obstetricians in our study declared that they preferred security and alternatives when faced with ambiguous obstetrics cases. However, this should be interpreted very cautiously; aside from cultural and regional differences, individual variation may affect risk-acceptance behavior in practicing physicians. In

Table 4 Effective causes in physicians' decision making for delivery method

Status	Never (0)	Rarely (1)	Sometimes (2)	Often (3)	Doing cesarean on demand
Supervisors	7	15	17	33	54
Medical legislation	5	15	19	33	46
Sue	9	18	16	28	49
Court	9	20	14	28	38
Colleagues	13	25	11	22	25
Media	27	23	1	20	23

The table demonstrates how physicians have been affected by each cause in their career; numbers indicate prevalence of each status in relation to the effective cause

addition, because the number of women obstetricians has increased in Iran because of domestic specialty rules, there may be an observable trend toward risk-averse behavior.

In the United States, financial claims are the most common concern that obstetricians may face with respect to responding to cesarean requests [26–28]. On the other hand, Europeans are more afraid of legislation and medical jurisdiction [23]. In a study by Fuglenes et al. [5], it was demonstrated that the perception of obstetricians toward ambiguous clinical cases with a request for cesarean should be based on the risk of complaints and litigation. We extended this study in our regional population to reveal the effects of cultural and governmental determinants. In contrast to their study, our subjects preferred to avoid taking risks and relied most on alternatives that provide them with more security and protect them from medical legislation and supervisory rules.

When interpreting the results of this study, the limitations of the cross-sectional methodology—with selection bias resulting from the higher frequency of females in our population—should be noted. The latter was unavoidable because of the higher number of female obstetricians practicing in the country.

Conclusion

Iranian obstetricians prefer low-risk behavior when attempting to manage an ambiguous case of delivery. Fear of legislation and medicolegal issues appear to be of greater importance among this population.

Appendix

Adopted from cases in the study by Fuglenes et al. [5].

Case 1

A 36-year-old pregnant women (gravida 5, para 4) is referred to you at an antenatal checkup clinic. Her previous infants all had birth weights between 4,200 and 4,600 g. Her first infant was born vaginally with shoulder dystocia and brachial plexus injury. Her second pregnancy was delivered by elective cesarean due to breech presentation. Other deliveries were also complicated births with shoulder dystocia and brachial plexus injury, with remission after 6 months. The woman is requesting a cesarean because of her previous delivery experiences. What do you do?

Case 2

On an on-call night, you are asked to visit a 28-year-old nulliparous woman (40 weeks pregnant) with spontaneous labor. The labor has lasted over 19 h. Examining the patient, the cervix is fully dilated and the fetal head is below the ischial spine, but not on the pelvic floor. Sagittal suture is in the right occiput anterior or left occiput anterior position; you think you can feel the posterior fontanel at 2 o'clock. CTG shows uncomplicated variable decelerations. The woman asks for a cesarean as she is worried about her infant sustaining a brain injury. Her husband is a lawyer saying he will complain against you if a cesarean is not carried out immediately. How do you deal with the situation?

Case 3

A 31-year-old woman, gravida 2, para 1, 37 weeks pregnant, wishes to have an elective cesarean in this delivery as the previous 2 ones has led to perineal rupture needing repair under general anesthesia, although not subsequent incontinence. What do you do?

Case 4

A 29-year-old woman, gravida 2, para 1, gestational age 38 weeks, no complications, thought she was badly treated during her last labor and has made a complaint about your colleague at her last place of birth. The case is being dealt with by the Iranian Health and Medicolegal Board. The patient is determined to have cesarean this time. What do you do?

Case 5

A 28-year-old woman, gravida 1, 39 weeks pregnant, with the fetus in breech presentation but with satisfactory condition for a vaginal breech birth is very unsure of the delivery method and asks for your opinion. What do you recommend?

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