Original Research Article

CAESAREAN DELIVERY ON MATERNAL REQUEST: KNOWLEDGE AND PERCEPTION OF PREGNANT WOMEN FROM SOUTHERN NIGERIA

ABSTRACT

Background: Caesarean section (CS) rates are rising globally. There are numerous reasons for this increasing CS rate, one of which is the increased requests by women for caesarean section in the absence of medical or obstetric indications. Women in developed countries now believe that elective caesarean section is safer than vaginal delivery.

Aim and Objectives: To determine the knowledge and perception of pregnant women towards caesarean delivery, as well as to ascertain the reasons for caesarean delivery on maternal request (CDMR).

Methodology: This was a descriptive, cross-sectional study carried out among 400 pregnant women who attended the antenatal clinics of the University of Port Harcourt Teaching Hospital (UPTH), Rivers State University Teaching Hospital (RSUTH), and Primary Health Centre, Rumukrushi from January 1, 2022, to March 31, 2022. Pre-tested semi-structured questionnaires were used to obtain socio-demographic and obstetric variables, knowledge, and perception of CDMR, and the willingness to request CS without the obstetrician's recommendation. Data was analyzed with SPSS version 25. Results are presented in frequency tables and figures.

Results: The response rate was 95.3%. Majority 232 (58%) of the women were aged 20-35 years and most 183 (45.8%) have had one previous delivery. A large proportion 343 (85.8%) of the women had tertiary education. The knowledge for CDMR was 26%. About 35% of the respondents have had a caesarean delivery in the past. Most 315 (78.8%) of them believed that

caesarean delivery is not safer than vaginal delivery, with severe post-operative pain accounting for 75.8% of their reasons. Cephalopelvic disproportion was the commonest 72 (51.4%) indication for caesarean delivery amongst the respondents, 0.8% claimed they were not informed of the indication for their caesarean delivery, while 121 (43.8%) have had both methods of delivery in the past. Only 41(10.3%) would request a caesarean delivery in the index pregnancy, 299 (74%) declined approval for caesarean section on maternal request, with socio-cultural beliefs and fear of damage to the pelvic floor as their main reasons.

Conclusion: The knowledge and acceptability of CDMR is rather low. Women's reproductive indices, including maternal and perinatal morbidity and mortality, have been shown to be influenced by socio-cultural beliefs. As a result, advocacy and policies aimed at empowering women and addressing male partner involvement in decision-making should be put in place.

Keywords: *Caesarean delivery, Maternal request, Knowledge, Perception, Nigeria*

1. INTRODUCTION

Cesarean delivery is defined as the birth of a fetus through an incision on the anterior abdominal wall and an intact uterus after 28 weeks of gestation [1]. For optimal maternal and neonatal outcomes, the WHO recommends a caesarean section rate of 15% [2]. However, the global caesarean section rate is increasing. The rate of caesarean section has risen from 12% in 2000 to around 21% in 2015, reaching epidemic proportions in many countries [3,4]. There are numerous reasons for this rising caesarean section rate, one of which is an increase in caesarean section requests by women in the absence of medical or obstetric indications [5].

In recent years, caesarean sections have become safer as anaesthetic technique has improved, resulting in more caesarean sections being performed under regional anaesthesia. The routine use of antibiotics and improved surgical techniques has contributed to improving the perceived safety of caesarean section. The advantages of elective lower segment caesarean section include reduced labour pain, increased baby safety, and less pelvic floor trauma for the mother [6].

Caesarean delivery on maternal request (CDMR) refers to a planned elective caesarean section of a singleton pregnancy at the request of a mother who has no identifiable obstetric or medical contraindications to attempting vaginal delivery before the onset of labour at term [6].

The reasons for such phenomenon are complex, involving social and cultural factors. Fear of labour pain, uncertainty of outcome, fear of emergency intervention such as forceps, foetal distress in labour, future sexual dysfunction, stress incontinence or pelvic organ prolapse, and convenience for the mother and health professional are all commonly cited reasons [7].

A caesarean section, like any other major surgery, carries an increased risk of morbidity and mortality. When compared to vaginal delivery, Caesarean section doubled the risk of maternal complications. Haemorrhage, urinary tract and bowel injuries, wound infection, endometritis, post-operative adhesions, and scarring are among the complications. The risk of placenta praevia and morbidly adherent placenta rises with the number of caesarean sections performed [8,9]. Some obstetricians, however, believe that the risks of caesarean section in healthy women are now so low that it is reasonable to accept pregnant women's request for a caesarean section without any medical or obstetric indication.

Nonetheless, significant psychological factors such as previous traumatic birth (such as foetal loss or birth trauma) or significant life trauma may influence a woman's informed choice for caesarean birth (such as interpersonal or sexual violence). Recognizing this, sensitivity should be used around the term CDMR, since these caesarean births may legitimately be also considered "medically indicated". The preference for CDMR varies greatly depending on a variety of factors such as geography, parity, previous birth experience, and stage of reproductive life. Estimates of caesarean delivery on maternal request range from 4 to 18%, but there is little confidence in their accuracy because CDMR is not a well-recognized clinical entity and there are currently no accurate methods of reporting it [10,11].

Caesarean sections without any medical indications raise a slew of medical and ethical concerns.

If a vaginal birth offer is not acceptable to the woman, the 2011 National Institute for Health, and Clinical Excellence (NICE) guideline recommends performing CDMR after a detailed discussion between the patient and the obstetric team [12]. Furthermore, the American College of Obstetrics and Gynaecology (ACOG) recommends that in the absence of other indications for early delivery, CDMR should be performed from 39 weeks gestation, and patients should be informed that the risks of placenta praevia, placenta accreta spectrum, and obstetric hysterectomy increase with each subsequent caesarean delivery [1].

However, there are no CDMR guidelines from professional organizations in Africa. Furthermore, Nigeria does not currently have a guideline on caesarean section on maternal request; thus, the study sought to determine the perceptions, attitudes, and reasons for CDMR among pregnant women attending antenatal clinics in Nigeria's South-South region, using two public tertiary healthcare facilities and one primary healthcare facility in Rivers State.

2. MATERIAL AND METHODS

This is a descriptive, cross-sectional study to determine the knowledge, perception, and reasons for caesarean delivery on request by pregnant women. The participants were antenatal attendees recruited from three health facilities in Port Harcourt: The University of Port Harcourt Teaching Hospital (UPTH), Rivers state University Teaching Hospital (RSUTH), and Primary Health Centre, Rumukrushi. This study was carried out between January 1, 2022, to March 31, 2022.

A well-structured questionnaire was either self or interviewer administered, depending on the respondent's educational status. The required sample size was computed using the formular $N= z^2pq / e^{2,}$ where N= minimum required sample size, Z=standard variate (1.96), P= estimated prevalence was 0.503, using a caesarean section rate of 50.3% [7], e= estimated error at 0.05, q= 1-p. This gave a sample size of 384.14 which, when computed to the nearest hundred, gave a sample size of 400 for this study.

Data collected included information on socio-demographic variables, knowledge and perception towards caesarean delivery, history of previous caesarean delivery, preferred mode of delivery in index pregnancy and the reasons for their choices.

Data was analyzed using SPSS 25. The results were expressed in descriptive statistics of frequency and percentages.

3. RESULTS

A total of 420 questionnaires were distributed and 400 were retrieved from the respondents, giving a response rate of 95.3%. Two hundred and thirty-two (58%) of the respondents were within the age range of 20-35years. Ninety-seven (24.3%) of the respondents were primigravidas while 20 (5%) were grand multiparous. About 343 (85.8%) of the respondents had tertiary education, making the study population a literate one. Other aspects of the socio-demographic variables are as shown in Table 1.

Majority 315 (78.8%) of them believed that caesarean delivery is not safer than vaginal delivery, with severe post-operative pain accounting for 75.8% of their reasons (fig 1), while 85 (21.2%) of the respondents opined that caesarean delivery is safer. Of these, 48 (56.5%) attributed their choices to less trauma of labour pains when compared to vaginal delivery (fig 2). One hundred and forty (35%) of the respondents have had a caesarean delivery in the past. Cephalopelvic disproportion was the commonest 72 (51.4%) indication for caesarean delivery amongst the respondents who have had caesarean delivery in the past (Fig 3).

One hundred and twenty-one (43.8%) of the respondents have had both methods of delivery in the past. Only 41 (10.3%) will prefer caesarean delivery in index pregnancy (Fig 4), and 299 (74%) of the respondents declined approval for caesarean delivery on maternal request. Socio-cultural beliefs accounted for 35% of those that disapproved CDMR amongst other reasons. Only 104 (26%) gave approval for CDMR with fear of damage to the pelvic floor as their main reason (fig 5). Concerning their planned family size, 303 (75.8%) of the respondents advocated for a maximum of four children for socio-economic reasons (fig 6).

Table 1: Socio-demographic Characteristics of the respondents (N=400)

Variables	Number of Respondents (%)
Age (years)	
< 20	8 (2.0)
20-34	232 (58.0)
≥ 35	160 (40.0)
Parity	
Primigravida	97(24.3)
Para 1	183 (45.8)
Para 2-4	100 (25.0)
≥ Para 5	20 (5.0)
Educational Status	
Primary	14 (3.5)
Secondary	43(10.8)
Tertiary	343 (85.8)
Occupation	
Housewife	35 (8.8)
Trading	60(15.0)
Professionals	112 (28.0)
Civil Servants	193 (48.3)
Medical Coverage	
Private Company	161 (40.2)
HMO'S	239 (59.8)

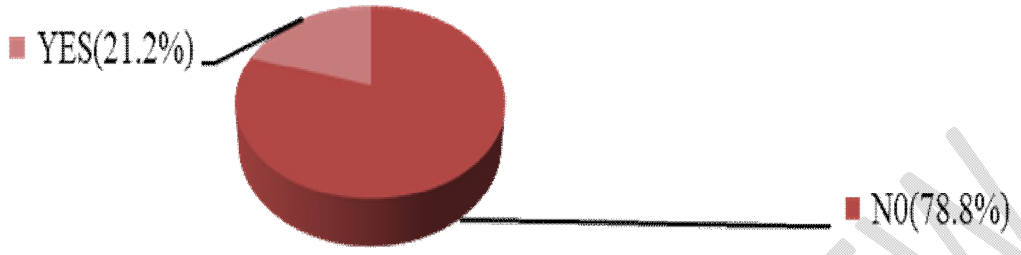

Fig 1: Respondents response to safety of caesarean section over vaginal delivery

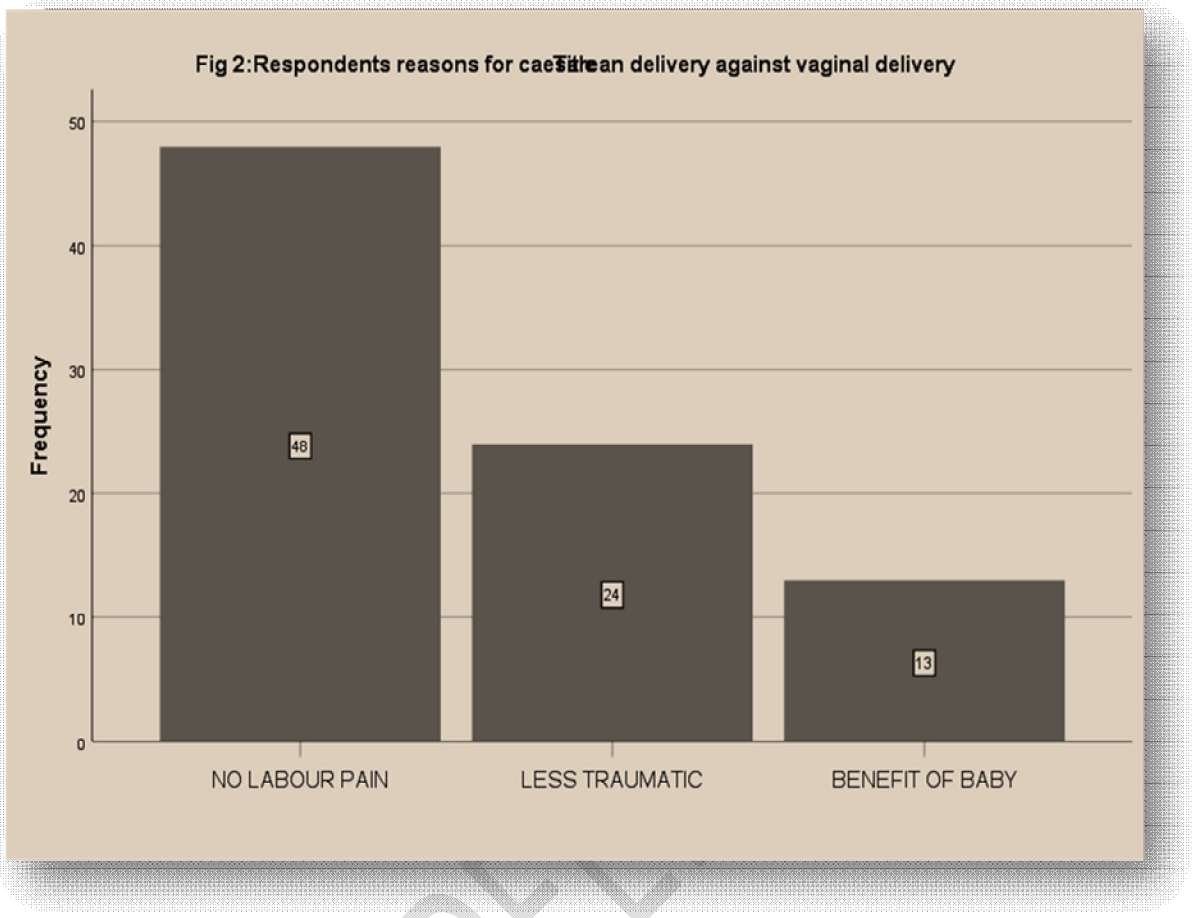
Fig 2:Respondents reasons for caesarean delivery against vaginal delivery
Frequency
50
40
30
20
10
0
48
24
13
NO LABOUR PAIN
LESS TRAUMATIC
BENEFIT OF BABY

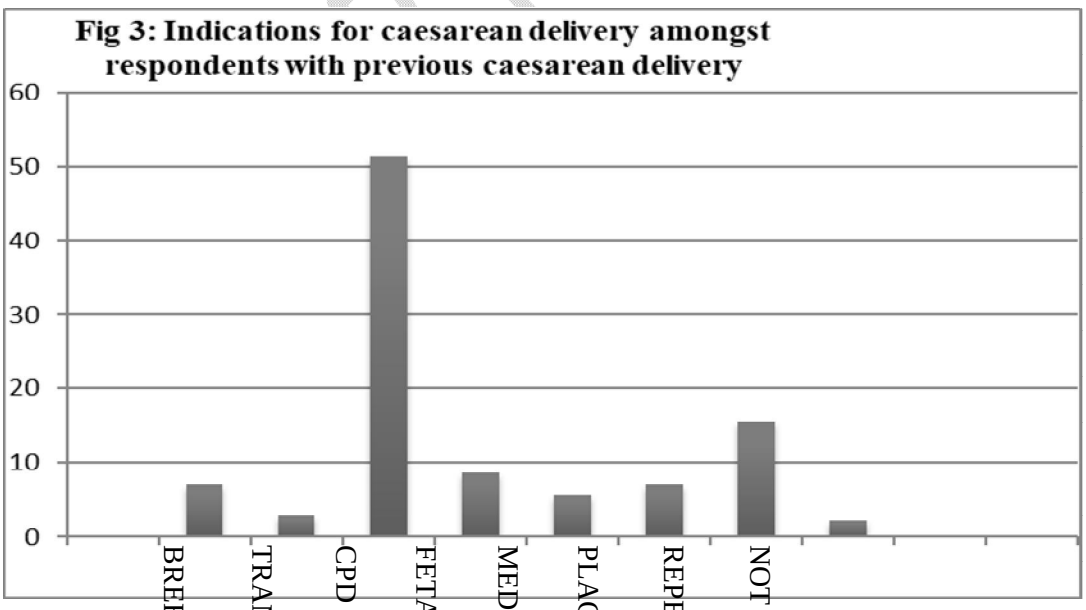
Fig 3: Indications for caesarean delivery amongst respondents with previous caesarean delivery
PERCENTAGES (%)
60
50
40
30
20
10
0
BREECH PRESENTATION
TRANSVERSE LIE
CPD
FETAL DISTRESS
MEDICAL CONDITIONS
PLACENTA PRAEVIA
REPEAT CS
NOT INFORMED

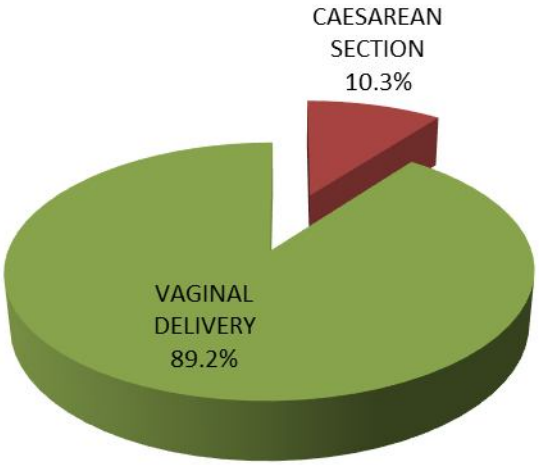

Fig 4: Response of women on their choice of mode of delivery in index pregnancy

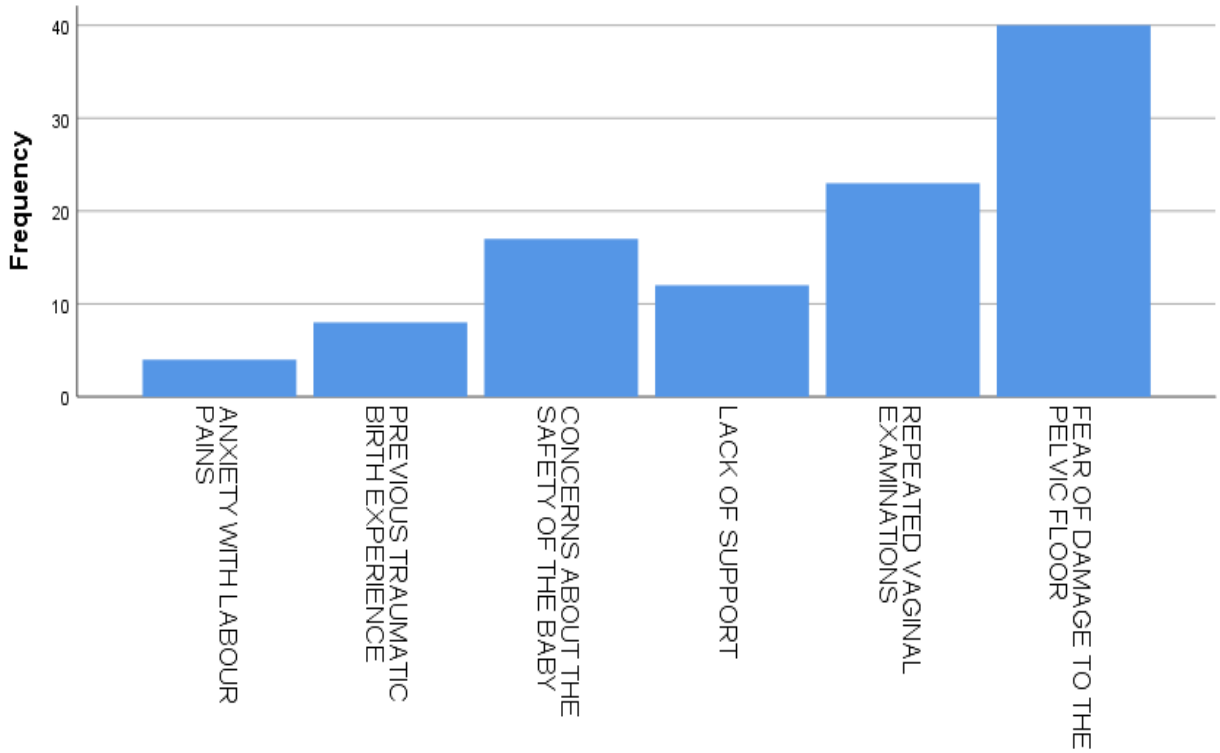

Fig 5: Reasons for CDMR

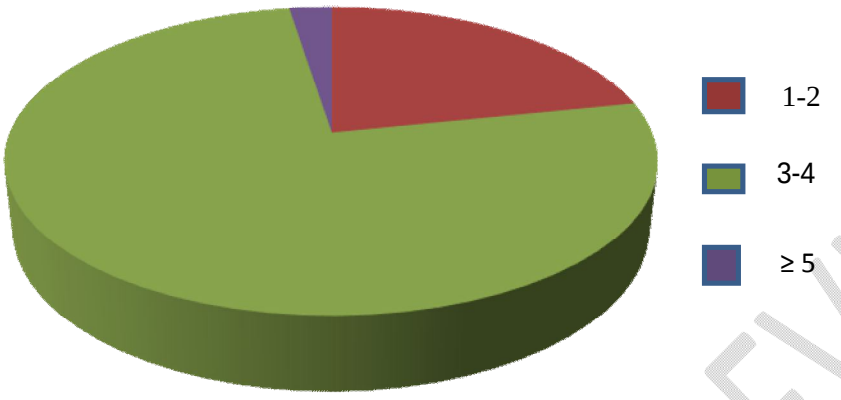

Fig 6: Planned family size amongst the respondents

4. DISCUSSION

The right of the patient to refuse or limit treatment is well established and widely accepted, but the opposite right to request specific interventions, while perfectly acceptable in many situations, appears to have caused significant controversy in the context of CS [14]. In order to improve reproductive outcomes, caesarean delivery is a common alternative to vaginal birth, particularly when there are clear contraindications to the latter. In our environment, vaginal birth is the acceptable mode of delivery. As a result, most women are opposed to caesarean delivery [15]. This finding is consistent with the findings of our study and other studies conducted in different parts of the country [16-18].

Furthermore, 35% of respondents had a previous caesarean delivery, according to our research. Many of them (78%) still believed vaginal delivery is preferable, with severe postoperative pain accounting for 75% of the reasons. This is consistent with the findings of a study conducted on 317 pregnant women in Ghana [19]. Among the reasons given for preferring

vaginal birth were socio-cultural factors and the risk of anaesthesia. Another important factor in avoiding caesarean delivery, particularly in our traditional Nigerian culture, is the desire for a male child. In the absence of a male child in the family, it is believed that the presence of a uterine scar limits a woman's reproductive career [20].

According to the study, 21.2% of respondents opined that caesarean delivery is safer than vaginal birth, while 56.5% attributed their decision to less trauma and concerns for the baby's safety when compared to vaginal birth. This is consistent with research conducted in Nepal and other parts of the world [21,22].

CDMR awareness was relatively low in this study, with only 26% of respondents reporting knowledge of it. This is comparable to previous studies conducted in Ibadan, Enugu, and Ado-Ekiti [23-25]. This finding could be related to the respondents' educational status, as almost all of them were literate. This demonstrates the growing awareness of caesarean section on maternal request among antenatal clinic attendees in Nigeria. The level of awareness appeared to be influenced by educational status, lending credence to the idea that education is a moderator of cultural perception of caesarean section [26]. However, this finding contradicts an earlier study from South-Western Nigeria, which found no relationship between CMDR acceptability and educational status [27].

Fear of pelvic floor damage, repeated vaginal examinations, concerns about the baby's safety, and a lack of support were the main reasons given by respondents for requesting a caesarean delivery. Similar findings were also reported at Ibadan [23]. This contradicts reports from Enugu, Ado-Ekiti, and Yola, where fear of baby loss during labour, a history of delayed conception, and fear of labour pains were the motivating factors for requesting a caesarean delivery [24,25,28].

Geographical differences in socio-cultural factors may account for the disparity in motivational factors. The finding that some patients would request caesarean section due to fear of labour pains is not surprising in south-west Nigeria, where pain perception is reported to be higher than in other regions [29]. However, it calls for a reconsideration of the analgesic options in labour in

our current environment. Obstetricians, in collaboration with anaesthetists, should therefore strive to provide optimal pain management during labour.

According to the findings of this study, 89.2% of respondents would not request a caesarean section on their own. This is consistent with findings in Yola and Akure, where rates of 89% and 90%, respectively, were reported [28,30]. As a result, it is unlikely that CDMR contributes significantly to CS rates in developing countries such as ours when compared to developed countries. Those who preferred vaginal delivery were not opposed to the operation if it was medically indicated. On the contrary, it was reported in Akure that 43% of respondents would refuse to have a caesarean section even if it was medically beneficial [30].

5. CONCLUSION

In developing countries like ours, CDMR is a relatively new concept in obstetrics practice. As a result, its awareness and acceptability from this study is low. The rate of demand is expected to increase rapidly, especially given the growing preference for smaller family sizes by the urban educated elites. However, large scale education and enlightenment about caesarean section are required to improve its acceptance in the general population.

The limitation of our study is that we only used urban women in the study. As a result, larger population-based studies involving both urban and rural residents are needed to improve on the findings of this study.

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