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Original Article

WOMEN'S KNOWLEDGE, PERCEPTIONS, AND POTENTIAL DEMAND TOWARDS CAESAREAN SECTION

Saoji Ajeet[1], Nayse Jaydeep[2], Kasturwar Nandkishore[3], Relwani Nisha[4]

[1]Associate Professor [2]Assistant Professor [3]Professor & Head [4]Post Graduate Student, Department of Community Medicine, NKP Salve Institute of Medical Sciences and Research Center, Nagpur.

Correspondence to:-
Dr. Saoji Ajeet
Associate Professor
Department of Community Medicine,
NKP Salve Institute of Medical Sciences and Research Center, Nagpur, Maharashtra
Email: ajeet.saoji@rediffmail.com Mobil: 9822715183

ABSTRACT

In today's situation when the access to obstetric care is growing day by day there has been a concern over the rising caesarean rates over the world. A cross-sectional study was undertaken with an objective to determine the level of knowledge, attitudes, and perceptions about CS among pregnant women. All pregnant women, attending antenatal clinic, were interviewed with a structured questionnaire. Data analysis was done by using Epi info software. Of the total 247 women, participated in this study, the potential demand for CS was low and majority of women preferred vaginal delivery (91.5%). The majority of women (65.1%) were found to have very little knowledge. Overall, women preferring caesarean birth were multiparous ($P<0.05$), and were more likely to have had previous caesarean delivery ($P<0.001$), but there were otherwise no differences in age, parity, income, or education. However, most are still in favor of CS if it is necessary to protect their health or that of their infant. Study also revealed that there is need to provide better information for pregnant women during the antenatal period about modes of delivery, their indications, advantages and adverse consequences which will enable them to make an informed decision.

Keywords: Caesarean section, awareness, perceptions, attitudes, mode of delivery

INTRODUCTION

Caesarean sections are one of the most frequently performed operations in women. [1] One of the most dramatic features of modern obstetrics is the relentless increase in the CS rate. This escalating CS rate is a major public health problem because caesarean section increases the health risk for mothers and babies as well as the cost of health care compared with normal deliveries. [2]

It is difficult to pinpoint an exact cause for the rising rates of Caesarean sections. Medical, Institutional, legal, psychological and socio-demographic factors play a contributing role. India is also not excluded from this trend. At the all-India level, the rate has increased from 2.9 per cent of the childbirth in 1992-93 to 7.1 in 1998-99 and further to 10.2 per cent in 2005-06. But there is vast variation across states and rural and urban areas ranging from 2-30%. Again there is large difference between births in public and private health facilities averaging almost 30%. [3] Similarly two population based cross-sectional studies showed, a C-Section rate of 32.6% from Madras city in south India [4] and 34.4% from east Delhi. [5] Clearly these rates are unacceptably high all over the globe.

Evidence shows that patients who are knowledgeable about their conditions are able to actively participate in shared decision-making. [6] Due to their ignorance about childbirth, they just submissively do what their provider tells them to. Therefore, they can't effectively talk about birth interventions with their providers, and

agreeing for caesarean delivery for medical and even for non medical reason without knowing true risk and benefits of the procedure. Since many providers prefer doing cesarean sections, the ignorance of pregnant women is probably what is raising the cesarean section rate." In an editorial in the Lancet, Yap-Seng Chong of the National University of Singapore, and Kenneth Kwek of Department of Maternal Fetal Medicine, KK Women's and Children's Hospital, Singapore wrote: "There is little wrong with medical interventions when indicated, but for those who are still inclined to consider caesarean delivery a harmless option, they need to take a cold hard look at the evidence against unnecessary caesarean section." [7]

The perceptions surrounding CS may have a significant role in the decision making process which influenced by multiple complex factors like the reason for which the caesarean was performed, her cultural values, her beliefs and anticipations of the birth, possible traumatic events in her life, available social support, and her personal sense of control, are only a few. [8] The finding that women with only one child were more likely to undergo a caesarean section may reflect women's perceptions regarding the efficacy of the procedure as a means to ensure newborn survival and to avert the risks of birth complications or stillbirth. [9] A cohort study showed that women are increasingly inclined to opt for delivery by caesarean for non-medical reasons such as fear of labour pain, concerns about date or time of birth that are traditionally believed to be auspicious and the belief that delivery by caesarean ensures protection of the baby's brain.[10]

In a country like India where still only 65% of women are educated, this study can provide data on the level of existing knowledge of CS, which can be used as a platform to raise knowledge among pregnant women about the different methods of delivery and thereby empowering women to make informed choices. The study therefore investigated the level of knowledge, attitudes, and perceptions about CS among pregnant women attending the antenatal clinic of urban health training centre, field practice area of a tertiary care hospital at Nagpur, India.

DESIGN AND METHODS

A cross-sectional study was undertaken in an urban health training centre field practice area of a tertiary care hospital at Nagpur from December 2009 to June 2010. Data was collected from women's who attended the antenatal clinic of the centre. All 247 pregnant women, attending antenatal clinic, were interviewed with a structured questionnaire that solicited information on their socio-demographic characteristics, their previous pregnancy and delivery history, and their knowledge and attitudes towards CS. Additional focus group discussions and in-depth interviews were held with women who underwent CS in the hospital, to gain further insights into attitudes and perception about CS in the women.

Table 1: Structure of questionnaire listing the various themes constituting the various items

Structure of questionnaire by themes
Socio-demographic characteristics: Name, age, and address
Socioeconomic status: Level of education and income
Characteristics of previous pregnancy and delivery history: parity,
Birth history, previous normal birth, and previous CS
How would you rate your previous CS experience?
Is attempting vaginal delivery easier or more difficult?
Knowledge: Indications, risk, benefits, and pain
Ability to discuss care with physician and role of the physician
Choice of mode of delivery
Source of information: How and where did you get information?

Abbreviation: CS-Caesarean Section

Statistical Analysis: Data analysis was done by using Epi info software. Chi square test was used to determine the association of various risk factors with the type of delivery. Univariate analysis for risk calculation was done by odds ratio and their 95% Confidence Intervals.

RESULTS

Total 247 women, participated in this study. The majority of them (42.5%) were younger than 25 years. Most of the women were aware about CS, but their knowledge level was low (47.7%) and

(17.4%) had no knowledge. When association between educational status and level of knowledge on CS among women was seen it was found that women's who had the highest level of knowledge also had the highest level of education (p<0.001) Likewise women's who were categorized as no knowledge of CS, had the lowest level of education. An association was also seen between women's who had a previous CS and level of knowledge. Those having a previous CS had adequate or high levels of knowledge of CS (OR, 2.1; p<0.001). The commonest sources of information about CS were from friends or relatives (54.7%), media (24.5%) and health workers (20.8%).

Table 2: Distribution of women's according to various Socio-demographic characteristics

Characteristics	No (%)
Age group (years)	
15-19	16 (6.5)
20-24	89 (36)
25-29	67 (27.1)
30-34	48 (19.4)
>35	27 (10.9)
Educational status	
Illiterate	26 (10.5)
Primary school	36 (14.6)
Middle school	69 (27.9)
High school	96 (38.9)
Graduate &above	20 (8.1)
Socioeconomic status	
I	13 (5.3)
II	56 (22.7)
III	102 (41.3)
IV	53 (21.4)
V	23 (9.3)
Parity	
0	84 (34)
1	101 (40.9)
2	46 (18.6)
>3	16 (6.5)
Previous CS	
Yes	41 (16.5)
no	206 (83.5)

CS-Caesarean Section

Two hundred and twenty six women (91.5%) preferred vaginal delivery against caesarean section, when asked for their preferred mode of delivery. The reasons given for preferring vaginal delivery to caesarean section were natural way to deliver, safer way to deliver, less expensive and early discharge from hospital. Of those who preferred caesarean delivery, the avoidance of labour pains was the main reason given and one woman also gave importance to astrological calendar, and the demand for a baby to be born in an auspicious time. We then compared women who preferred caesarean delivery to those who preferred vaginal delivery. Women who preferred caesarean section were multiparous (OR, 1.9; P<0.05), and were more likely to have had previous caesarean delivery (OR, 2.9; P<0.001). There were no differences in age, education level, or income category between women who desired caesarean versus women who desired vaginal delivery.

Of the (16.5%) of the women who had a previous CS, 85% had one CS, (13.3%) had two CS, and (1.7%) had three CS. Of all reported CS, (63.8%) were performed in private hospitals / nursing homes. All the deliveries were institutional deliveries and in (71%) of the deliveries, decision regarding CS was taken by doctor. However, women who had a previous CS were more likely to prefer CS than a vaginal delivery. More than half (53%) women have actually felt that CS on them was not justified and that they should have been delivered by normal vaginal method.

Table 3: Distribution of the level of knowledge on CS among women

Knowledge	No of women %
High	21 (8.7)
Adequate	65 (26.2)
Low	118 (47.7)
No	43 (17.4)
Total	247 (100)

When questioned about their perceptions regarding mode of delivery, women's favoring vaginal delivery (77.2%) perceived caesarean section as being dangerous, when asked to indicate on what basis they would favor a CS or a vaginal delivery, whereas women favoring CS (47.3) believed that caesarean section as being safer than vaginal delivery. When asked about pain associated with the procedure most women (68.5%) who favored a CS believed it was less painful, and (44%) of women who favored a vaginal delivery believed CS was more painful. When asked which mode of delivery they will prefer if cost for both the modes is similar, there was no change in women's favoring CS, whereas nine women (3.9%) favoring vaginal delivery changed their opinion towards CS.

Although the majority of women (91.5%) indicated a preference for a vaginal delivery, (91.5%) indicated that they would agree to a CS if it was necessary to protect their baby's health. When asked about CS as an option to protect their own health, (85.7%) agreed to the procedure. However, (76.2%) indicated they would be offended if they received an unnecessary CS. Almost (90%) of the women felt that the expenditure charge for C-sections is not reasonable and they could not afford the expenditure. (73.4%) believed that following a CS, vaginal delivery for the next birth was possible. Finally, a large percentage of women believed that doctors/hospitals were deliberately opting for caesarean deliveries instead of normal vaginal deliveries.

DISCUSSION

An overwhelming majority of women in this study preferred vaginal delivery (91.5%) and potential demand for CS was mere (8.5%). Most preferred vaginal delivery as it is natural way to deliver (64.7%) and safer way to deliver (29.2%).These findings concur with those of a Ghanaian teaching hospital study done among women attending the hospital's antenatal clinic in which approximately 93% of women preferred vaginal deliveries.[11] Such findings provide strong evidence that patient preference is unlikely to be the most significant factor driving the increasing CS rate.

Women who preferred vaginal delivery generally felt that CSs were more dangerous, and painful, while the women who preferred caesarean delivery felt that CSs were safer and less painful. Similar findings were reported in a study by Adageba et al.[11] These findings emphasize the need for health professionals to educate patients as to the actual risks that are associated with either mode of delivery. A number of researchers have found that women with higher income status are more likely to accept CS than women with lower income, preference for vaginal delivery might be due to the inability of women to afford a caesarean section,[2,12] which differs with the finding of this study where cost is not the factor preventing women for not going for CS, as most (87.6%) of women in the study still favored vaginal delivery if cost for both the modes of delivery is assumed similar, supporting the hypothesis that preference of the woman is unlikely to be the most significant factor driving the high CS rates.

Among women who preferred a vaginal delivery, (91.5%) would accept having a CS to protect their baby's health while (87.7%) would also accept a CS in order to protect their own health. This demonstrates that women would not rigidly adhere to a preferred method of delivery. It is evident that once women are well informed as to any risks arising during pregnancy or labor, they would be willing to set aside their preferences and make an informed decision to have a CS. These findings underscore the need for effective doctor– patient communication. This finding are similar to the findings of Aziken M, et al, where (81%) women would accept CS if needed to save their lives and that of their babies.[13] These findings also concur with those of a Chilean study where, both women desiring a vaginal birth and those desiring caesarean delivery felt strongly that their health and the health of their baby were important contributors to their decision. [14]

Previous experiences of childbirth seemed to influence women's preferences about types of delivery. The CS rate was (16.5%), which was marginally lower than that previously reported. History of previous CS correlated with higher preferences for caesarean delivery (OR-2.9). A factor contributing to their decision to have another CS may be attributed to their experience being satisfactory. We found that a large proportion (71%) of women having previous CS did not participate in the decision-making process and accepted the decision for a CS by the attending physician. This finding parallels the findings of klein et al in Canada, who found that out of 1,318 pregnant women surveyed, many seemingly unprepared to make their own decisions regarding childbirth options, such as whether to have natural childbirth or a Cesarean section.[15]

This is also consistent with the findings of Deber et al who found that the majority of patients wished physicians to do the "problem-solving tasks", [16] this is worrisome because a lack of knowledge affects their ability to engage in informed discussions with their caregivers.

A large proportion of women in this study described themselves as having no or very little information (65.1%) about CS. The information that they did receive was mainly from family and friends (54.7%), which is not a reliable source and can be biased. In a country like India, where overall educational status of women is low, health professionals need to ensure that the

information given to women is accurate and imparted at a level that is appropriate to the women concerned and interventions should be evidence-based, and the intervention should strictly be applied to women with complications.

In a developing country, like India, increasing use of medical technologies during childbirth is a matter of concern. It is evident that the development and application of reproductive technologies is creating contradictory possibilities for women. With the increasing numbers of institutionalised births in India, the trend of CS delivery is also sharply rising, especially in private sector where the cost for caesarean delivery is much more compared with normal delivery.[3] To further ascertain these aspects we enquired mothers about their perceptions regarding some more aspects of CS. More than half of the respondents, i.e., (63.6%) replied in affirmative that doctors/ hospitals were deliberately opting for caesarean deliveries instead of normal vaginal deliveries and (90%) women felt that the expenditure charged for caesarean section were not reasonable. Lastly, almost all women wanted CS to be part of antenatal clinic educational topics.

CONCLUSION

Most of the women are not well informed about CS. The potential demand for CS was low and majority of women preferred vaginal delivery. Thus, women's preferences are unlikely to be the most significant factor driving the high caesarean rates. However, most are still in favor of CS if it is necessary to protect their health or that of their infant. Study also revealed that there is need to provide better information for pregnant women and during the antenatal period about modes of delivery, their indications, advantages and adverse consequences which will enable them to make an informed decision. Obstetricians should abide by ethics in clinical practice and carefully evaluate the indication in every CS and take an unbiased decision before performing CS.

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