Original Article

Knowledge, Attitude and Preferences of Pregnant Women towards Modes of Delivery

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ABSTRACT

OBJECTIVE: To determine the knowledge, attitude and preferences of pregnant women towards vaginal and caesarean delivery

STUDY DESIGN: KAP (Knowledge, attitude and preferences) study

PLACE AND DURATION OF STUDY: Antenatal clinic of Obstetrics and Gynecology Department at Isra University Hyderabad Sindh, from August 2007 to February 2008.

SUBJECTS AND METHODS: Four hundred and forty-six women who have attended the antenatal clinic during the study period were interviewed after taking informed consent. The information regarding sociodemographics, obstetric history, knowledge and attitude statements towards vaginal and caesarean delivery, the source of their knowledge, information regarding willingness to accept caesarean delivery as a primary mode of delivery for current pregnancy and the reasons for chosen preferences were recorded on questionnaire. All data were analyzed by using SPSS v.12. Overall scores for knowledge and attitude statements, mean±SD were calculated.

RESULTS: The mean±SD age was 26.54±5.08 years. Majority (39.7%) of women interviewed have received no formal education. Overall rating for knowledge about modes of delivery was weak in 392 (87.9%) women, while medium and good was rated by 47 (10.5%) and 7 (1.6%) respectively. Mean attitude score was 21.99±3.12 for vaginal delivery and 8.78±4.47 for caesarean delivery. It shows that 304 (68.1%) women regarded vaginal delivery as a natural and accepted mode of delivery. Majority of women reported that they obtained the knowledge regarding modes of delivery from their relatives. Three hundred and fifty-seven (80%) women refused to accept caesarean delivery as primary mode of delivery in current pregnancy, common reason given was fear of operation. Only 89 (20%) accepted it and the main reason for acceptance was doctor's advise.

CONCLUSION: Women in our setup have low level of knowledge regarding modes of delivery and positive attitude towards vaginal delivery. There is need for a program to increase women's understanding about different modes of delivery.

KEY WORDS: Knowledge, Attitude, Preferences, Modes of Delivery, Pregnant Women.

INTRODUCTION

The increasing rates of birth by cesarean section (CS) are an issue of concern among many countries. Despite the recommendations by WHO that no region in the world is justified in having cesarean section rate greater than 10-15%[1], the cesarean section is the most common obstetric operation performed worldwide.[2]

In 1990 cesarean rate reported to be 21% in the United States of America[3], 16% in UK and France, [4-5] and 36% in Brazil.[6] In Hong Kong the rate roses from 16.6% to 27% from 1987 to 1999, a 65% increase in over 12 years.[7] In Canada it increased from 17.5% in 1994-1995 to 21.2% in 2000-2001.[8] In Pakistan proportion of cesarean section was reported from 21%[9] to 31%.[10]

The cause of increased cesarean section rate is multifactorial and the decision to deliver by cesarean section depends on a variety of clinical conditions including previous cesarean section, multiple gestations, malpresentation, fetal distress, lack of progress and maternal medical conditions.[11-16]

Another important reason proposed is the change in the staff and women's attitude towards cesarean section, [17] hospital whether private or public sector.[18]

Although in specific situations cesarean section can prevent serious morbidity and mortality of the fetus and mother, [18] but also it has been demonstrated that cesarean delivery is associated with high rates of maternal and perinatal morbidity.[19] This statement holds true especially for the developing countries where maternal and perinatal morbidity and mortality rates are unacceptably high.[20]

In developed countries women often accept caesar-

ean delivery because of their improved understanding of its role and safety, and the increasing importance of the right to self decision making regarding mode of delivery.[21] By contrast in developing countries women are reluctant to accept cesarean delivery,[22] because of their traditional beliefs and sociocultural norms they try to avoid hospital delivery and engage the services of untrained and unskilled care providers .These women usually report to hospital with life threatening complications and in such situations most of operations are performed in emergency under suboptimal circumstances. [23]

To date though limited number of studies have been conducted to report the rate of cesarean delivery in Pakistan, but no study was conducted to know about the women's knowledge, attitude and preference towards vaginal versus cesarean delivery.

It is postulated that survey on knowledge, attitude and preference of women about vaginal delivery (VD) and cesarean section (CS) may help to define strategy for reducing cesarean birth rate performed as an emergency under suboptimal circumstances.

SUBJECTS AND METHODS

This cross-sectional survey for knowledge, attitude and preferences (KAP) about modes of delivery was carried out among 446 women who have attended the antenatal clinic at Isra University Hospital from August 2007 to February 2008. Isra University hospital is the private sector tertiary care hospital with an average of 1100 deliveries per year.

All the women who attended the antenatal clinic during study period were approached and only those who agreed to participate were interviewed. Written informed consent was obtained and information was gathered on predesigned questionnaire, consisting of demographic data, obstetrical history, knowledge and attitude towards different modes of delivery, the source of information and the questions to explore the willingness of women to accept cesarean section in current pregnancies and the reasons for their chosen preferences.

For scoring knowledge statements grade 1 was assigned for each correct response and 0 for each incorrect answer. The score 7-9 was regarded as good; 4-6 as medium and 0-3 was regarded as week. Attitude statements were rated on a 6-point Likert-Scale (5-0) from "strongly agree" to "don't know" responses. For attitude statements score of 0-12 was considered as negative, 13-20 as neutral and 21-50 as positive attitude. All the data were analyzed using SPSS V.12.

RESULTS

A total of 446 pregnant women were interviewed. The mean±SD age of women was 26.54±5.084 years. Majority, i.e 177 (39.7%), had received no formal education, while 124 (27.8%), 73 (16.4%), 38 (8.5%) and 34 (7.6%) had primary, secondary, college and university level education respectively.

Four hundred twenty eight (96%) women were housewives, Majority 276 (61.9%) have monthly household income less than 5000 rupees.

Mean gravidity was 3.56±2.57, 184 (41.2%) women had previous experience of vaginal delivery, 127 (28.4%) had previous cesarean delivery while 17 (3.8%) women had experience of both vaginal and cesarean delivery **(Table I)**.

Regarding the source of information 267 (59.8%) reported that they obtained information from their relatives, 166(37.2%) women obtained it from doctors and thirty six (8%) were told by their friends, while 7 (1.5%) and 50 (11.2%) obtained it from nurses and other sources respectively.

Among study population 33 (7.4%) said that they would accept cesarean delivery in current pregnancy because of doctor's advise, while 22 (4.9%) and 21 (4.7%) accepted it because of fear of pain of vaginal delivery and for safety of baby respectively, as detailed in **Table II**.

Results of knowledge responses are given in **Table III**. The statement about post cesarean pain and morbidity received the highest percentage of correct answers while those regarding the indications of cesarean sections received highest number of incorrect answers.

Table IV shows the responses to attitude statement on mode of delivery. The overall mean±SD attitude score was 21.99±3.126 for vaginal delivery and 8.78±4.47 for cesarean delivery.

It shows that 304 (68.1%) regarded vaginal delivery as a natural and accepted mode of delivery and 306 (68.6%) agreed that it is pleasure to see the baby immediately after vaginal delivery.

Three hundred seventy-three (83.6%) women attained positive ratings on attitude statements towards vaginal delivery and only 10 (2.2%) towards cesarean delivery. Six (1.3%) respondents had negative attitude towards vaginal delivery while 372 (83.4%) had negative attitudes towards cesarean delivery. Sixty-seven (15%) and 64 (14.3%) women had neutral attitude towards vaginal and cesarean delivery respectively. The overall ratings for knowledge were 392 (87.9%), 47 (10.5%) and 7 (1.6%) as weak, medium and good respectively.

TABLE I:
BASELINE CHARACTERISTICS OF 446 PREGNANT WOMEN

Characteristics	n(%)
Age (years):	
15 – 25	226 (50.7)
26 – 36	202 (45.3)
>36	18 (4.0)
Educational status:	
No formal Education	177 (39.7)
Primary	124 ((27.8)
Secondary	73 (16.4)
College	38 (8.5)
University	34 (7.6)
Occupation:	
House wife	428 (96.0)
Employee in health/other organization	18 (4.0)
Monthly House hold income: (PKR)	
<5000	276 (61.9)
5000-10,000	161 (36.1)
>10,000	9 (2.0)
Gravidity:	
Primigravida	118 (26.5)
Multigravida	277 (62)
Grand multi gravida	51 (11.4)
Previous mode of delivery:	
Vaginal Delivery	184 (41.2)
Cesarean section	127 (28.4)
Vaginal delivery and cesarean section	17 (3.8)

DISCUSSION

The results of this study on knowledge, attitude and preference of women towards modes of delivery reflect that women maintained strong commitment with vaginal delivery as 373 (83.6%) women interviewed had positive attitude towards vaginal delivery. This is similar to studies reported in the literature.[24, 25]

Our study also reveals that a minority of women had positive attitude for cesarean section and very few of the study subjects agreed to accept cesarean section

TABLE II:
REASONS FOR PREFERENCE OF MODE OF DELIVERY

Reasons for acceptance of cesarean section	n(%)
Doctor advice	33 (7.4)
Previous scissor	13 (2.9)
Fear / Pain of vaginal delivery	22 (4.9)
For baby sake	21 (4.7)
Reasons for refusal of cesarean section:	
Expensive	65 (14.6)
Delay recovery	28 (6.3)
Prolonged bed rest	34 (7.6)
Fear of operation	230 (51.6)

TABLE III:
RESPONSES TO KNOWLEDGE STATEMENTS ABOUT VD/CS (n= 446)

Statements	Correct n(%)	Incorrect n(%)
Pain is less severe after CS than VD	349 (78.3)	97 (21.7)
Maternal morbidity is more frequent in CS than VD	263 (59.0)	183 (41)
Infections are more frequent after CS than VD	314 (70.4)	132 (29.6)
CS is mandatory for tubal ligation	58 (13.0)	388 (87.0)
Babies born by CS are more intelligent than by VD	66 (14.8)	380 (85.2)
CS mandatory after one CS	64 (14.4)	382 (85.6)
Neonatal respiratory disorders are less frequent after CS than VD	12 (2.7)	434 (97.3)
Bleeding in CS is less sever than VD	136 (30.5)	310 (69.5)
CS is mandatory for breech presentation	39 (8.7)	407 (91.3)

VD= Vaginal Delivery, CS= Caesarean Section

TABLE IV:
RESPONSES TO ATTITUDE STATEMENTS ABOUT VAGINAL DELIVERY/CAESAREAN SECTION (n=446)

Statements	Strong positive n (%)	Positive n (%)	Neutral n (%)	Negative n (%)	Strong negative n (%)	Don't Know n (%)
Vaginal Delivery:						
A natural and acceptable mode of deliver	304 (68.1)	123 (27.6)	18 (4.0)	0	0	1 (0.2)
Seeing baby immediately after delivery is a pleasure for the mother	306 (68.6)	90 (20.2)	40 (9.0)	0	0	10 (2.2)
Mother regains her health status sooner	325 (72.9)	112 (25.1)	08 (1.8)	0	0	1 (0.2)
Creates a more affectionate mother-baby relationship	183 (14.0)	91 (20.4)	127 (28.5)	1 (0.2)	0	44 (9.9)
In terms of outcome, it is more pleasant	262 (58.7)	142 (31.8)	37 (8.3)	4 (0.9)	0	1 (0.2)
Caesarean section:						
C/S is preferable in the absence of economic problem	07 (1.6)	43 (9.6)	43 (9.6)	257(57.6)	46(10.3)	50(11.2)
Preferable as mother's position on the delivery table is unpleasant	07 (1.6)	16 (3.6)	27 (6.1)	216(48.4)	34(7.6)	146 (32.7)
Preferable as pain of V/D is unpleasant	9 (2.0)	90 (20.2)	78(17.5)	240(53.8)	10(2.2)	19 (4.3)
Babies born by C/S are healthier than those delivered by V/D	5 (1.1)	63 (14.1)	22 (4.9)	68 (15.2)	5(1.1)	283 (63.5)
Concurrent C/S is a suitable option for tubal ligation	3 (0.7)	46 (10.3)	20 (4.5)	242(54.3)	15(3.4)	120 (26.9)

as a primary mode of delivery. Similar findings were reported by Hildingson and colleagues,[26] who reported that only 8.2% women accepted caesarean delivery as a primary method of delivery. A survey from Singapore also found a low rate (3.7%) of women who preferred cesarean section.[27] A study from Nigeria [28] reported that only 6.1% of pregnant women were willing to accept cesarean section. In Italy, where cesarean section rate reached to 33.2% in 2000, most women preferred or satisfied with vaginal delivery.[29]

Overall knowledge about modes of delivery was low in our study subjects. Only 7 (1.6%) obtained scores of good knowledge and 47 (10.5%) obtained medium scores, while 392 (87.9%) women obtained weak scores for knowledge statements, however at every level of knowledge women showed positive attitude towards vaginal delivery. This may reflect traditional views about the process of child bearing in our community. These findings are almost similar to study from Iran.[25]

The source of the information obtained by women regarding the modes of delivery was also tested. The most frequently mentioned source was family and friends followed by doctors. It seems that publications, television and public health centers have not performed adequate role on this topic.

The majority of women strongly agreed to attitude statement that vaginal delivery is a natural mode of delivery while women reported positive attitude rating for cesarean section were mostly agreed to the statement that pain of vaginal delivery is unpleasant which is similar to other studies [30-31]. Adapting policies to make vaginal delivery a less painful experience could diminish cesarean section rate.

We found that almost half of women agreed to attitude statement that vaginal delivery creates more affectionate mother and baby relationship; this is similar to the study from South Africa.[32] Majority of women agreed to post cesarean pain and morbidity statements similar to the study results from Iran and South Africa.[25,32] The reason may be the most of the cesarean sections performed as emergency procedures in suboptimal conditions resulting in high frequency of morbidity, this can be prevented by improving knowledge of women regarding modes of delivery during antenatal period.

The response to the attitude statement about the

safety of the baby does not get favourable scores. It is similar to the study from Nigeria, [23] where women reject the cesarean section even at the risk of their lives or that of their babies.

We found that women in our study did not actively seek the cesarean section as a mode of delivery for current pregnancy. "Doctor's advise" was the main reason given by women who accepted cesarean section as mode of delivery for current pregnancy, similar to the study results from Nigeria where women accept cesarean delivery because of doctor's advise.[23]

CONCLUSION

We conclude that women have positive attitude towards vaginal delivery and have very low level of knowledge about mode of deliveries. A challenge to health care personnel would be to provide better information for pregnant women during antenatal period about mode of delivery, their indications, advantages and adverse consequences. We also conclude that patients in our setup were not asking for cesarean delivery. If patients are not demanding cesarean delivery, physician must shoulder some of responsibility for high cesarean delivery rate.

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