J Nepal Health Res Counc 2018 Apr-Jun;16(39): 209-14

Maternal Attitude and Knowledge towards Modes of Delivery

Anshumala Joshi,[1] Meeta Thapa,[1] Om Biju Panta [2]

[1]Nepal Medical College Teaching Hospital, Jorpati, Kathmandu, [2]Koshi Zonal Hospital, Biratnagar, Nepal.

ABSTRACT

Background: Whether a mother should be allowed to choose between the modes of delivery is a matter of concern among practicing obstetricians. This study aims to explore the knowledge of the Nepalese women attending a tertiary care center about the benefits and complications of vaginal and caesarean delivery and their attitude and preference for the method of delivery.

Methods: The study was a hospital based cross sectional questionnaire survey conducted in Nepal Medical College teaching Hospital, Jorpati from 1st Shrawan 2074 to 31st Ashoj 2074. All pregnant women who were 36 weeks or more in gestation attending the clinic during the study period were included in the study. A questionnaire was made of 10 questions for knowledge assessment regarding mode of delivery consisting of the indications, the possible complications and advantages of vaginal and caesarean delivery.

Results: A total of 256 pregnant women participated in the study. The knowledge of the mode of delivery, their benefit and complications was medium to good in approximately 90% of the mothers attending the antenatal OPD. Overall attitude for vaginal delivery was positive in 93% of women and negative or neutral in 6.6%. Overall attitude for caesarean delivery was positive in 24% and negative or neutral in 75.8%.

Conclusions: Women in our setup agree that vaginal delivery is a natural and acceptable method of delivery and would prefer to have a vaginal delivery.

Keywords: Attitude; knowledge; modes of delivery; women.

INTRODUCTION

Caesarean section (CS) represents the largest source of controversy and debate in modern obstetrics.[1] Caesarean section rates are increasing worldwide, albeit unequally. The cause of increased caesarean section rate is multifactorial and decision to deliver by caesarean section depends on a variety of factors including previous caesarean section, multiple gestation, malpresentation, fetal distress, failure of progress during labor and maternal medical conditions.[2] Also, advancing maternal age, socioeconomic factors, reduced parity and improvements in surgical techniques are among the other reasons.[3]

Nepal's fertility rate has fallen from 4.6 births per woman in 1996 to 2.3 births per woman in 2016,[4] which means women now prefer to have fewer children.

Many women are undergoing caesarean section for avoidable reasons. An important step in controlling the rising caesarean birth rate in developing countries is providing better information to pregnant women and their partners during the antenatal period about modes of delivery, their indications, advantages and adverse consequences.[2]

This survey aims at determining the maternal attitude and knowledge about the modes of delivery and at the same time educate them about the misconceptions that they might have regarding a particular mode of delivery.

METHODS

The study was a hospital based cross sectional questionnaire survey conducted in Nepal Medical College Teaching Hospital, Jorpati from 1st Shrawan 2074 to 31st Ashoj 2074. All pregnant women,who were 36 weeks or more in gestation, attending the clinic during the study period were included in the study and interviewed by the researcher. A verbal consent for the interview was taken prior. The study was approved by Institutional Review Board at Nepal Medical College Teaching Hospital.

DOI: http://dx.doi.org/10.3126/jnhrc.v16i2.20312

Correspondence: Dr Anshumala Joshi, Nepal Medical College Teaching Hospital, Jorpati, Kathmandu, Nepal. Email: janshumala@gmail.com, Phone: +9779841271828.

A questionnaire was made of 10 questions for knowledge assessment regarding mode of delivery consisting of the indications, the possible complications and advantages of vaginal and caesarean delivery. All knowledge related questions were in yes/ no pattern. Correct answer was scored one point and wrong answer was scored 0 point. Total points were calculated and knowledge level was classified as good (>70%), medium (50-69%) and poor (<50%).

For attitude assessment a questionnaire was served in Likert scale format with strongly agree (score 5), agree (score 4), neutral (score 3), disagree (score 2) and strongly disagree (score 1) format. Attitude to vaginal delivery and cesarean delivery was assessed separately using 8 statements for vaginal delivery and 10 statements for caesarean delivery. A median attitude score was computed for each respondent for all the statements to find the overall attitude of women towards that mode of delivery. A median attitude score of 3 or less was considered Neutral or negative attitude and a score of more than 3 was considered a positive attitude towards that particular mode of delivery.

Statistical analysis was done by using IBM SPSS 21.0 software. Mean and median score of knowledge was calculated and the association of the knowledge score with age, gravidity, education, and economic status was calculated using Fisher Exact test. Percent of various scored for each statement of attitude scale was calculated. Median attitude score was calculated for each respondent for all questions towards that particular mode of delivery and the association of the median attitude score to age, gravidity, education, and economic status was calculated by using Fisher Exact test.

RESULTS

A total of 256 pregnant women participated in the study. The mean age of the participants was 24.9 ± 3.98 with median age of 24 and interquartile range of 4. Ninety three percent of women were in the age group of 20 - 34 years. Only 3.9% of women were illiterate, whereas 62.9% had studied until high school. Hundred and fourty nine (58.2%) participants were primigravidas, the rest were multigravidas. Only a few (21.9%) of the women were employed(beauticians, teachers, shopkeepers and household helpers).

The knowledge of the mode of delivery, their benefit and complications was medium to good in approximately 90% of the mothers.

Table 1. Knowledge of antenatal mothers regarding mode of delivery, their advantages and complications.

Knowledge	
Mean	6.14+1.57
Median(IQ Range)	6.0(5 to 7)
Knowledge Level	
Good(≥ 70%)	117(45.7)
Medium(50 to 69 %)	115(44.9)
Poor (≤ 49%)	24(9.4)

Only 19(7.4%) patients chose caesarean delivery if they were allowed to make a choice between vaginal and caesarean delivery. Rest 92.6% would prefer vaginal delivery over caesarean delivery.

The level of knowledge had significant association with gravidity, educational status and the monthly family income and no significant association with age and employment. (Table 2)

Table 2. Association with level of Knowledge with socio-demographic factors.

	Poor Knowledge N=24	Medium Knowledge N=115	Good Knowledge N=117	p-value*
Age Group				
<20 years	1 (4.2)	9 (7.8)	4 (3.4)	
20-35 yrs	23 (95.8)	106(92.2)	109 (93.2)	0.16
>35 yrs	0	0	4(3.4)	
Education				
Literate	8(33.3)	8 (7.0)	16 (13.7)	
Highschool	16(66.6)	70(60.9)	63(58.3)	<0.001
Graduate	0	37(32.2)	38(32.5)	
Occupation				
Homemaker	19(79.2)	92(80.0)	89(76.1)	0.77
Employed	5(20.8)	23(20.0)	28(23.9)	
Obstetric History				
Primi	9(37.5)	59(51.3)	81(69.2)	
Multi	15(62.5)	56(48.7)	36(30.8)	0.02
Monthly Family Income (in thousands NRS)				
10-19,999	4(16.7)	33(28.7)	20(17.1)	
20-29,999	19(79.2)	30(26.1)	40(34.2)	
30-39,999	1(4.2)	11(9.6)	30(25.6)	<0.001
40-49,999	0	16(13.9)	8(6.8)	
>50	0	25(21.7)	19(16.2)	

*Calculated using fisher exact test.

The median score was calculated for the overall attitude. Seventeen women (6.6%) had a median score of 3, 179(69.9%) of them had a score of 4 and 60(23.4%) of them had a score of 5. Total 239(93.4%) had an overall positive attitude towards vaginal delivery (score of 4 or more) and 17(6.6%) had either neutral or negative attitude. Attitude towards vaginal delivery for each statements are given in Table 3.

Table 3. Scores for statements of attitude towards vaginal delivery.

Questions	SA (5)	A(4)	DK(3)	D(2)	SD(1)
Vaginal delivery is a natural and acceptable method	178(69.5.5)	78(30.5)	0	0	0
Pleasant for a mother to see her baby immediately after birth	179(69.9)	68(26.6)	8(3.1)	1(0.4)	0
Recovery sooner after vaginal delivery	109(42.6)	117(45.7)	4(1.6)	26(10.2)	0
Emotional relationship between mother and the infant is better	22(8.6)	65(25.4)	32(12.5)	115(44.9)	22(8.6)
Avoid high risk of Anaesthesia and operation	11(4.3)	91(35.5)	87(34.0)	67(26.2)	0
Better in long term	99(38.7)	129(50.4)	16(6.3)	12(4.7)	
Don't want scar on abdomen	21(8.2)	46(18.0)	31(12.1)	155(60.5)	3(1.2)
Less complication as compared to caesarean	21(8.2)	46(18.0)	31(12.1)	155(60.5)	3(1.2)

Attitude for vaginal delivery was associated significantly with age, education, employment and family income, however did not show association with gravidity or level of knowledge of the mode of delivery. (Table 4)

Table 4. Association of attitude of pregnant mothers to vaginal delivery with socio-demographic factors.

	Neutral or Negative attitude N=17	Positive attitude N=239	p-value*
Age Group			
<20 years	5 (29.4)	9 (3.8)	
20-35 yrs	12 (70.6)	226 (94.6)	0.002
>35 yrs	0	4(1.7)	
Education			
Literate	0	32 (13.4)	
High school	5(29.4)	144(60.3)	0.001
Graduate	12(70.6)	63(26.4)	
Occupation			
Homemaker	17(100)	183(76.6)	0.03
Employed	0	56(23.4)	
Obstetric History			
Primi	13(76.5)	136(56.9)	0.09
Multi	4(23.5)	103(43.1)	
Monthly Family Income (in thousands NRS)			
10-19,999	4(23.5)	53(22.2)	
20-29,999	5(29.4)	84(35.1)	0.007
30-39,999	8(47.1)	34(14.2)	
40-49,999	0	24(10.0)	
>50	0	44(18.4)	
Knowledge Level			
Poor	1(5.9)	23(9.6)	
Medium	8(47.1)	107(44.8)	0.88
Good	8(47.1)	109(45.6)	

Median score was calculated for the overall attitude. Fifty five women (21.5%) had a median score of 2, 139(54.3%) had a score of 3 and 62(24.2%) had a score of 4. Total 62(24.2%) had an overall positive attitude towards caesarean delivery (score of 4 or more) and 194(75.8%) had either neutral or negative attitude. The attitude towards caesarean delivery for each statement is given in Table 5.

Attitude for caesarean delivery correlated significantly with age, education, employment, family income and level of knowledge of the mode of delivery, however did not show association with parity. (Table 6)

Table 5. Attitude scores of antenatal mothers attitude towards caesarean delivery.

Questions	SA (5)	A(4)	DK(3)	D(2)	SD(1)
Caesarean section is better than vaginal delivery	1(60.4)	27(10.5)	24(9.4)	180(70.3)	24(9.4)
Would prefer caesarean section because I don't like to go through all the position and straining of vaginal delivery	0	35(13.7)	43 (16.8)	169(66.0)	9(3.5)
Would prefer caesarean section because I don't like to go through labour pain	0	38(14.8)	21(8.2)	156(60.9)	41(16)
Baby born by caesarean are more healthy	0	27(10.5)	106(41.45)	115(44.9)	27(10.5)
CS is better because we can undergo tubal ligation at same setting	16(6.3)	77(30.1)	101(39.5)	58(22.7)	4(1.6)
CS is better because prevents bladder and Uterine prolapse	2(0.8)	97(37.9)	126(49.2)	23(9.0)	8(3.1)
CS is better because it prevents deformation and tear in genital tract	26(10.2)	124(48.4)	65(25.4)	29(11.3)	12(4.7)
I would prefer caesarean section even with its inherent complications	6(2.3)	85(33.2)	37(14.5)	120(46.9)	8(3.1)
CS should be performed as a choice of the mother	49(19.1)	135(52.7)	25(9.8)	37(14.5)	10(3.9)
CS should be performed when vaginal delivery is risky	69(27.0)	167(65.2)	8(3.1)	12(4.7)	0

Table 6. Association of overall attitude of mothers towards caesarean delivery with socio-demographic factors.

	Neutral or Negative attitude N=194	Positive attitude N=62	p-value*
Age Group			
<20 years	10 (5.2)	4 (6.5)	
20-35 yrs	184 (94.8)	54 (87.1)	0.004
>35 yrs	0	4(6.5)	
Education			
Literate	27(13.9)	5 (8.1)	
Highschool	119(61.3)	30(48.4)	0.01
Graduate	48(24.7)	27(43.5)	
Occupation			
Homemaker	162(83.5)	38(61.3)	0.01
Employed	32 (16.5)	24(38.7)	
Obstetric History			
Primi	113(58.2)	36(58.1)	0.98
Multi	81(41.8)	26(41.9)	
Monthly Family Income (in thousands NRS)			
10-19,999	44(22.7)	13(21.0)	
20-29,999	76(39.2)	13(21.0)	0.007
30-39,999	24(12.4)	18(29.0)	
40-49,999	20(10.3)	4(6.5)	
>50	30(15.5)	14(22.6)	
Knowledge Level			
Poor	23(11.9)	1(1.6)	0.01
Medium	90(46.4)	25(40.3)	
Good	81(41.8)	36(58.1)	

DISCUSSION

The pain of labor is one of the most feared aspects of normal pregnancy. With the advent of increasing caesarean section, there is a debate as whether a mother should be allowed to choose between the modes of delivery. This study tries to explore the knowledge of the Nepalese women attending a tertiary care center about the benefits and complications of vaginal and caesarean delivery and their attitude and preference for the method of delivery.

Only 7% of the women would chose caesarean delivery if an option was available. The preference in our study is similar to the study conducted in Nepal and other low-income countries.[5-7]

Majority of the mothers participating in this study had good (45.7%) and medium (44.9%) overall knowledge regarding the mode of delivery, their advantages and complications. This was higher than that of the study done by Maharlouei et al, where only 18.2% of subjects had an acceptable level of knowledge.[8] Ghotbi et al in their study in Tehran showed that 55.6% mothers attained poor scores, 37.9% attained intermediate scores, and 6.5% attained good scores on knowledge.[9]

This study showed a significant difference in the knowledge of those who were better or highly educated as compared to those who were not (p <0.001). A comparative evaluation of mother's knowledge regarding the outcomes of C section and NVD done by Maharlouei et al showed that those who preferred NVD had significantly higher knowledge (p < 0.001).[8] However we did not evaluate the association of preference for method of delivery with the level of knowledge of the mode of delivery.

In our study, the attitude of mothers to vaginal delivery was seen to be affected by education status and age. Women with lesser education and younger age had an overall positive attitude towards vaginal delivery as compared to educated and elder women (more proportion of women had negative attitude). Also employment and family income, had significant association with overall attitude of the women to vaginal delivery.The result is conflicting with other studies where educated women preferred vaginal delivery; in our part patients with negative attitude to vaginal delivery were predominantly well educated with higher income. This might be because of the out of pocket spending capacity of the higher income group, which is the major source of health care expenditure in our country since there is a lack of health insurance or wide spread government subsidy. Even in clinical practice we have faced that younger, educated and working women are more apprehensive of pain during delivery as compared to the homemakers and less educated patients.

The attitude towards caesarean delivery was also affected by similar factors as with vaginal delivery i.e. age, education, occupation. However, in attitude towards caesarean delivery more proportion of younger patients, with lower educational status, homemakers and low income had negative attitude. The attitude reflects the vice versa of attitude to vaginal delivery.

Ghotbi et al in their study reported that a higher percentage of mothers in the intermediate and good knowledge score had a positive attitude towards NVD compared to the poor knowledge group.[9] However, the level of knowledge did not affect the attitude to vaginal delivery in our study.

The overall positive attitude towards vaginal delivery was 93.4% in this study, which was higher than that observed by Maharlouei et al (63.7%),[8] Varghese et al (89%),[2] Nusrat et al (83.6%)[10] or by Ghotbi et al (44%)[9] However this finding was only slightly lower than that obtained by Aali and Motamediin their study where 96.5% of women attained positive ratings on attitude statements towards vaginal delivery and 33% towards caesarean delivery.[3]

The overall negative attitude towards vaginal delivery was 6.6% and towards caesarean delivery was 75.8%. Nisar et al., reported 1.3% respondents had negative attitude towards vaginal delivery while 83.4% had negative attitude towards caesarean delivery.[10]

We had certain limitations in our study. Our study had a hospital based study and had small sample for generalization to the whole population.We calculated the median score for attitude to evaluate the overall positive or neutral attitude and negative attitude, which might not be true representation of the overall attitude. Different weightage of various attitude questions for overall attitude was not considered. Also we did not evaluate the various occupations of women and just evaluated whether they were employed or dependent financially.

CONCLUSIONS

The overall knowledge of mode of delivery in Nepalese urban population is good with most women having positive attitude towards vaginal delivery than to cesarean delivery. Though, the knowledge of mode of delivery and their complications was better known to young, educated, working and high socio-economic status family, the attitude towards vaginal and caesarean delivery did not correspond to this level of knowledge

REFERENCES

1. Baskett TF, Calder AA, Arulkumaran S, editor. In: Munro Kerr's operative Obstetrics: Caesarean Section. 11th ed. Edinburgh: Saunders Elsevier; 2009. p.151.
2. Varghese S, Singh S, Kour G, Dhar T. Knowledge, attitude and preferences of pregnant women towards mode of delivery in a tertiary care center. Int J Research Med Sci. 2016; 4: 4394-8.[DOI] [Full Text]
3. Aali BS and Motamedi B. Women's knowledge and attitude towards modes of delivery in Kerman, Islamic Republic of Iran. Eastern Mediterr Health J. 2005; 11: 663-72. [Link]
4. Ministry of Health, Nepal; New ERA; and ICF. 2017. Nepal Demographic and Health Survey 2016. Kathmandu, Nepal: Ministry of Health, Nepal.
5. Shrestha NS, Pradhan S. On demand caesarean section: What's women's attitude? Nepal J Obstet Gynaecol. 2007;2(2):12-5.[Full Text][DOI]
6. Faremi AF, Ibitoye OF, Olatubi MI, Koledoye PN, Ogbeye GB. Attitude of pregnant women in south western Nigeria

towards caesarean section as a method of birth. Int J Reprod Contracept Obstet Gynecol. 2017;3(3):709-14. [Full Text]

7. Ajeet S, Jaydeep N, Nandkishore K, Nisha R. Women's knowledge, perceptions, and potential demand towards caesarean section. Natl J Community Med. 2011;2(2):244-8. [Full Text]

8. Maharlouei N, Rezaianzadeh A, Hesami E, Moradi F, Mazloomi E, Joulaei H et al. The Preference of Iranian women to have normal vaginal or caesarean deliveries. J Res Med Sci. 2013Nov; 18(11)): 943-50. Web: [PMCID] [PubMed]

9. Ghotbi. F, Sene AA, Azargashb E, Shiva F, Mohtadi M, Zadehmodares S, Farzaneh F and Yasai F-a-m. Women's knowledge and attitude towards mode of delivery and frequency of caesarean section on mother's request in six public and private hospitals in Tehran, Iran, 2012. J Obstet Gynaecol Res. 2014; 40(5): 1257-66.[Full Text] [DOI]

10. Nisar N, Sohoo NA and Memon A. Knowledge, attitude and preferences of pregnant women towards modes of delivery. JLUMHS. 2009; 8(3): 228-33. [Full Text]