

Awareness and Attitude regarding Modes of Delivery among Pregnant Women Visiting Antenatal Clinic of University Hospital of Nepal: Cross-sectional Study

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ABSTRACT



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BACKGROUND

The ultimate outcome of a nine-month pregnancy is considered delivery. There are two types of delivery: natural and artificial, also known as spontaneous vaginal delivery and cesarean section (CS), respectively. The purpose of this study was to determine pregnant women's awareness and attitudes toward modes of delivery when they visited the ANC clinic.

METHODS

The quantitative descriptive cross-sectional study was conducted among 369 pregnant women visiting the ANC clinic of a university hospital. Non-probability sampling was used for sample determination. An interview technique was used for data collection.

RESULTS

Among 369 participants' with an average age of 28.3 ± 4.9 years. The majority (90.2%) agreed with the statement that vaginal delivery is a natural procedure. Moreover, 22.6% agreed that CS is preferable to vaginal delivery, and 37.7% strongly agreed that the mother should have the freedom to perform a caesarean section in her choice. Only about one fifth of the respondent had moderate level of knowledge regarding modes of delivery. The level of knowledge is associated with the level of education ($p = 0.020$) and the decision-making role of the respondent ($p = 0.002$) but the attitude is found associated with type of the family ($p = 0.037$) and no. of ANC visits ($p = 0.001$)

CONCLUSION

The participants demonstrated moderate level of knowledge regarding modes of delivery and positive attitude towards normal delivery. Women having the right to make decisions regarding their preferred modes of delivery, including the freedom to choose CS.

KEYWORDS

Awareness, , Delivery, Pregnancy, Cesarean, Vaginal delivery

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INTRODUCTION

The mode of delivery chosen by a healthy pregnant woman is a critical decision. The delivery mechanism is a natural process (1). There is no basis for any location to have Cesarean Sections (CS) and spread across both wealthy and underdeveloped nations (2). The mode of delivery refers to the decision between a CS and vaginal birth. (3). The number is expected to increase even more, with CS predicted to account for nearly a third (29%) of all deliveries by 2030 (4). In the global context, South Asia has the second highest MMR among developing regions, with 280 maternal deaths per 100,000 live births. (5).

The safe motherhood program for enhancing maternal and child health is antenatal care and antenatal checkups (6). Nepal is a signatory to the Sustainable Development Goals (SDGs), which have set ambitious goals for the nation, which include achieving coverage of 90% for four ANC visits, institutional deliveries by 2030 and with the MMR to 70 per 100,000 live births and neonatal mortality to 12 per 1,000 live births and already 81.05 women made four or more ANC visits for their most recent live birth (7).

The opportunity to choose mode of birth is an essential element of modern obstetrics' compassionate and respectful treatment, but lack of proper knowledge as well as negative attitude towards modes of delivery shows that there is a huge need for research on these topics (2, 8,9, 10). Women's understanding of the risks and benefits of various modes of delivery by emphasizing the significance of educating families, partners, about the advantages and disadvantages of various modes of delivery is essential (2,11). As a result, we sought to assess pregnant women's knowledge and attitudes toward modes of delivery who visited the ANC clinic at Nepal's university hospital.

METHODS

The study was a quantitative descriptive cross-sectional. Participants in the study were pregnant women who came to the antenatal clinic at TUTH and provided both verbal and written consent. However, those who were unwilling to participate in the study were not included in it. With a prevalence of 67.9% (21), 5% allowable error, and 10% non-response rate, 369 participants were selected for the study with the convenience sampling technique. Removing the participants with high non-responses, only 337 were used for the analysis. All data were extracted from primary sources. Confidentiality and privacy were maintained. SPSS (Statistical Package for Social Sciences) version 16 was used to analyze the collected data. Frequency, percentage, mean, median, interquartile range, and standard deviation were calculated and the Chi-squared test was applied for the association between dependent and independent variables.

RESULT

This study included 369 moms in all, and only 337 were included in the final analysis due to incomplete responses. The average age was 28.3±4.9 years.

Table 1: Respondents' Socio-demographic Characteristics

| Characteristics | Frequency | Percentage |
|--------------------|------------|------------|
| Age (years) | | |
| Below 25 | 99 | 29.4 |
| 26 – 30 | 139 | 41.2 |
| 31 – 35 | 73 | 21.7 |
| Above 35 | 26 | 7.7 |
| Mean ± SD | 28.3 ± 4.9 | |
| Ethnicity | | |
| Bhramin / Chhetri | 208 | 61.7 |
| Janajati | 91 | 27.0 |

| | | |
|---|-----|------|
| Madhesi | 16 | 4.7 |
| Dalit | 14 | 4.2 |
| Others | 8 | 2.4 |
| Types of Family | | |
| Nuclear | 116 | 34.4 |
| Joint | 215 | 63.8 |
| Extended | 6 | 1.8 |
| Decision Making | | |
| Self | 305 | 90.5 |
| Other than self | 32 | 9.5 |
| Preferred modes of delivery | | |
| Natural | 306 | 90.8 |
| CS | 31 | 9.2 |
| Source of information regarding pregnancy and childbirth | | |
| Self-Study | 234 | 42.1 |
| Mass media | 142 | 41.2 |
| Family members and friends | 142 | 33.5 |
| Internet | 139 | 42.1 |
| Health personal | 142 | 33.5 |
| Social Media | 113 | 69.4 |

Table 1 depicts that 41.2% of the respondents were of the age group of 26-30 years. Regarding ethnicity, 61.7% were Brahmins /Chettri and followed by Janajati. Around 64% of participants were in a joint family and 90.5% of them were self-decision makers regarding their health.

Likewise, 55.8% received counseling during their ANC clinic visits. Social media was found as the major source of information as

Table 2: Respondents' Awareness Regarding Modes of Delivery

| Variables | Yes response | Percentage |
|--|--------------|------------|
| Normal Delivery Related | | |
| Normal delivery refers to childbirth through vagina without any medical interventions. | 170 | 50.4 |
| It is the process of vaginal birth | 96 | 28.5 |
| Normal delivery is the natural process of birth | 131 | 38.9 |
| It is the process of taking out fetus by making mother unconscious | 23 | 6.8 |
| Don't Know | 16 | 4.7 |
| CS Related | | |
| Surgical procedure to deliver a viable fetus | 118 | 35 |
| Surgical procedure performed when a vaginal delivery is not possible or unsafe | 119 | 59.1 |
| Surgical procedure done to remove uterus | 29 | 8.6 |
| Don't Know | 39 | 11.6 |

Table 2 shows the majority of participants had knowledge regarding normal delivery. About 50% of the respondents said yes to the statement "Normal delivery refers to childbirth through vagina without any medical interventions. Similarly, about CS related queries, 59.1% of the participants stated yes on the statement surgical procedure performed when a vaginal delivery is not possible or unsafe

Table 3: Respondents Knowledge regarding Modes of Delivery

| Variables | Yes (%) | No (%) | Don't Know (%) |
|--|------------|------------|----------------|
| Vaginal Delivery is natural process | 304 (90.2) | 11 (3.3) | 22 (6.5) |
| CS is done in necessary condition only | 300 (89.0) | 19 (5.6) | 18 (5.3) |
| Cost of vaginal delivery is less than CS | 235 (69.7) | 47 (13.9) | 55 (16.4) |
| Cs is mandatory when age is greater than 35yrs | 79 (23.4) | 148 (43.2) | 110 (32.6) |
| CS Prevents deformation of Genital tract | 109 (32.3) | 106 (31.5) | 122 (36.2) |
| Regains health sooner in natural delivery | 269 (79.8) | 27 (8.0) | 41 (12.2) |
| Infection risk in the baby is high born with CS than natural delivery | 186 (55.2) | 51 (15.1) | 100 (29.7) |
| Pain is less in CS than natural delivery | 123 (36.5) | 121 (35.9) | 93 (27.6) |
| There is sexual dysfunction due to natural delivery that's why CS is preferred | 49 (14.5) | 130 (38.6) | 158 (46.9) |

Table 3 depicts, 90.2% of the study participants said yes that vaginal delivery is a natural process and majority (89.0%) of them said CS is done in necessary conditions only. Nearly 70% of the participants said yes to the cost of vaginal delivery is less than CS. Also, nearly 80% of the participants said Yes that they regain health sooner in natural delivery and 55.2% said yes to the statement that infection risk on the baby is higher with CS than natural delivery. Pain is less in CS than natural delivery, 55.2% said yes to it.

Table 4: Respondents' Attitude regarding Modes of Delivery

| Characteristics | SD (%) | D (%) | N (%) | A (%) | SA %) |
|--|------------|------------|-----------|------------|------------|
| Emotional bonds between mom and child develops after the 24 hrs. of delivery | 54 (16.0) | 46 (13.6) | 42 (12.5) | 100 (29.7) | 95 (28.2) |
| Prefer natural delivery as there is less complications | 34 (10.1) | 30 (8.9) | 48 (14.2) | 129 (38.3) | 96(28.5) |
| Have fear of labor pain that's why prefer CS | 102 (30.3) | 137 (40.7) | 54 (16.0) | 28 (8.3) | 16 (4.7) |
| Cs is better than vaginal delivery | 70 (20.8) | 68 (20.2) | 70 (20.8) | 76 (22.6) | 53 (15.7) |
| Mother have freedom to do CS | 41 (12.2) | 19 (5.6) | 39 (11.6) | 111 (32.9) | 127 (37.7) |
| Mother has right to choose to modes of delivery | 44 (13.1) | 26 (7.7) | 41 (12.2) | 89 (26.4) | 137 (40.7) |

(SD = Strongly Disagree, D = Disagree, N = Neutral, A = Agree, SA = Strongly Agree) *

Table 4. revealed 29.7% of the study participants agreed that there will be an emotional bond between mother and child after 24 hours of delivery and 38.3% agreed that they prefer natural delivery. But, 40.7% of them disagreed that due to fear of labor pain, they prefer CS. More than 90% responding they prefer natural delivery.

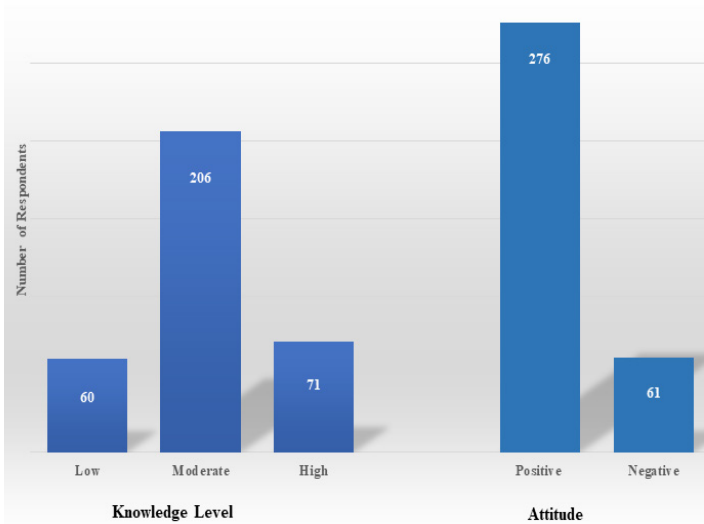


Figure 1: Respondents' Level of Knowledge and Attitude regarding Modes of Delivery

Figure 1 revealed that (61.1%) of the study participants had moderate level of knowledge regarding modes of delivery and majority of participants (81.9%) had positive attitude towards vaginal delivery.

Table 5: Association between Knowledge and Attitude with selected variables

| Characteristics | Knowledge | | | Attitude | |
|---------------------------|-----------|------------|-----------|-----------|------------|
| | Low | Moderate | High | Positive | Negative |
| Age Category | | | | | |
| 30 and below | 48 (20.2) | 143 (60.1) | 47 (19.7) | 44 (18.5) | 194 (81.5) |
| Above 30 | 12 (12.1) | 63 (63.3) | 24 (24.2) | 17 (17.2) | 82 (82.8) |
| P-value | 0.187 | | | 0.082 | |
| Types of Family | | | | | |
| Nuclear | 21 (18.1) | 68 (58.6) | 27 (23.2) | 14 (12.1) | 102 (87.9) |
| Joint and Extended | 39 (17.6) | 138 (62.4) | 44 (19.9) | 47 (21.3) | 174 (78.7) |
| P-value | 0.741 | | | 0.037* | |
| Ethnicity | | | | | |
| Bhramin/Chhetri | 30 (14.4) | 136 (65.4) | 42 (20.2) | 36 (17.3) | 172 (82.7) |
| Others | 30 (23.3) | 70 (54.3) | 29 (22.5) | 25 (19.4) | 104 (80.6) |
| P-value | 0.071 | | | 0.631 | |
| Level of Education | | | | | |
| Elementary and below | 14 (29.2) | 21 (43.8) | 13 (27.1) | 12 (25.0) | 36 (75.0) |
| Secondary and above | 46 (15.9) | 185 (64.0) | 58 (20.1) | 49 (17.0) | 240 (83.0) |
| P-value | 0.020* | | | 0.180 | |
| No. of ANC Visit | | | | | |
| Less than 4 | 39 (18.6) | 126 (60.0) | 45 (21.4) | 49 (23.3) | 161 (76.7) |
| 4 and more | 21 (16.5) | 80 (63.0) | 26 (20.5) | 12 (9.4) | 115 (90.6) |
| P-value | 0.846 | | | 0.001* | |
| Decision making | | | | | |
| Self | 47 (15.4) | 191 (62.6) | 67 (22.0) | 59 (19.3) | 246 (80.7) |
| Other than self | 13 (40.6) | 15 (46.9) | 4 (12.9) | 2 (6.3) | 30 (93.3) |
| P-value | 0.002* | | | 0.089 | |

*Indicates a p-value less than 0.05 and a significant association.

In Table 5, a few categories of independent variables were merged, and a Chi-square test was applied to assess their association with both knowledge and attitude levels. The analysis revealed that knowledge level on modes of delivery exhibited a significant association with the participants' education level (P-value=0.020) and their role in decision-making (P-value = 0.002). Similarly, attitude towards modes of delivery demonstrated an association with family types (P-value = 0.037) and the number of ANC visits (p-value = 0.001).

DISCUSSION

Our study's findings showing the majority of study participants were knowledgeable about delivery methods which is similar with the study revealed pregnant women accessing ANC clinics had adequate and good understanding of delivery methods, confirm our findings (12). In contrast, pregnant women have found that they are poorly informed on delivery methods (10,1,13). The conflicting results from the various trials may be due to the paucity of research on delivery methods. In our study, 69.4% of participants reported using social media as a source of information about pregnancy and childbirth, which is consistent with a study that found more women were looking for information online (13); this could be because there, more people have access to smartphones, which may give them more internet access. Contrarily, a study shown that of expectant mothers revealed that their source of knowledge was a healthcare provider as well as family and friends (3, 9, 2, 14). Nearly half of the participants disagreed that they favored CS owing to fear of labor pain; this finding contradicts previous research on pregnant women which found that mothers preferred CS as the route of delivery due to the dread and negative repercussions of labor pain (15,2,16). Our study's findings made it abundantly evident that most study participants were knowledgeable about the CS, in contrast to the studies done which state there was little knowledge of the CS (13). Our findings were matched with the study which revealed that participants had adequate level of knowledge about CS (17). Different settings could be to blame for this. Participants in our study preferred natural delivery since it has less difficulties, which was supported by a study conducted on Thai women, which found that natural birth is safe for both mother and baby (15). In contrast fear of labor pain was the most frequent reason of the women who preferred cesarean section (18). Participants agreed that CS is better than vaginal delivery. In contrast women with higher parity and more previous caesarean deliveries showed positive attitudes towards vaginal delivery (19). The study findings revealed that mother and child's emotional bond begins to form after 24 hours. According to a study among pregnant women in the UAE, emotional attachments between the mother and child start to form within 24 hours of delivery (9). In contrast, study shown that modes of delivery

do not affect emotional bonding (20). Mothers should have the freedom to perform CS and the right to select the mode of delivery, which is consistent with a study done among pregnant women that found that more than half of the participants should have the freedom to select the mode of delivery (21). Nearly all (90.8%) of the participants preferred vaginal birth over cesarean delivery which is supported by the studies done among pregnant mothers in Bagdad and Ghana and southern Ethiopia, where there was a clear preference for vaginal birth despite a sizable percentage of pregnant women favoring cesarean birth. It can be because medical professionals have influenced them or because of their prior delivery experiences (16,9,3). More than half (55.8%) of the participants received counseling about modes of delivery, which is supported by a study stated that the majority of the participants received counseling about modes of delivery, indicating a significant decrease in delivery via CS (22). Almost all (90.5%) prefer to make their own decisions about modalities of delivery which is congruent with the findings that the majority of women have the ability to choose their own birth technique. Health practitioners frequently performed a supportive role, regardless of the mode of delivery. Although many women were at ease with this method, several felt they would have wanted additional guidance (23).

The study findings shown that (61.1%) of the study participants had moderate level of knowledge regarding modes of delivery is supported by the study that depicts more than half (63.5%) of woman were weak on level of knowledge (24). Similarly, our findings revealed that majority (81.9%) of the participants had positive attitude towards vaginal delivery which is different with the studies which revealed that majority of the women had a positive attitude towards the uptake of CS if it becomes necessary (25,26,28). But our findings were concurrent with the study which stated that majority of the participants had positive attitude towards vaginal delivery (27,29). According to our study findings there were significant association between decision making rights with the knowledge and attitude of the modes of delivery which is supported by the similar study that stated there were significantly association between modes of delivery and decision-making rights of the client (30).

This study was limited to a single center, the findings cannot be generalized to the entire population. Even though the expectant mothers were aware of the various birth options, a fair discussion of the advantages and disadvantages of each method of delivery should be part of antenatal care consultations. Proper counseling, which should begin on the first day of pregnancy clinic visits, would improve awareness and attitude towards delivery techniques. However, the results might also be helpful for future community-based studies on the same subject.

CONCLUSIONS:

The level of knowledge was moderate regarding modes of delivery and though participants were aware of both normal and CS but we found positive attitude towards vaginal delivery. There were significant association between selected variables with knowledge and attitude. Most participants choose their own modalities of delivery on their own. They preferred natural childbirth to cesarean section. After 24 hours following delivery, a mother and child's emotional relationship will form. CS is preferable to vaginal birth, even though they support natural delivery because there will be fewer issues. Women have the freedom to choose CS as a form of delivery and the right to determine their modes of birth.

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