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Assess the Preference Toward Mode of Delivery and Its Associating Factors with a View to Arrange Nurses-Led Intervention Among Antenatal Mothers Attending GOPD: A Hospital-Based Descriptive Study

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Abstract

Background: *The delivery mechanism is a spontaneous process with implemented advances in medical technology now has drastically reduced maternal and infant mortality. For a healthy women population, the choice is between spontaneous vaginal delivery and cesarean section. Vaginal delivery can be spontaneous i.e. unassisted or assisted and cesarean section is most performed major obstetrics throughout the world.* ***Objective:*** *To assess the preference toward a mode of delivery among antenatal mothers in GOPD, PGIMS Rohtak. To assess the associating factors of the mode of delivery among antenatal mothers in GOPD, PGIMS, Rohtak.* ***Methodology:*** *For this study, a descriptive research design employing a quantitative approach was utilized among 100 expectant mothers attending the Gynecology Outpatient Department at PGIMS, Rohtak. Convenient sampling technique was employed for participant selection, and data collection was conducted through a self-structured interview schedule questionnaire. Analysis of the data was performed using both descriptive and inferential statistical methods.* ***Results:*** *Majority 63% of antenatal mothers give the preference toward the vaginal delivery remaining 37% give preference cesarean section. Associating factors of preference toward cesarean section. Majority factors are fear of labor pain or vaginal examination (73%), less risky and less chances of perineal rupture (76%), factors of vaginal delivery, less suffering and better recovery (82%), and fear of surgical operation and anesthesia (78%). The association of associating factors of vaginal delivery or cesarean section with demographic variables are nonsignificant. The association of associating factors (fear of associated vaginal delivery and longer duration) is statistically significant. (p > 0/05) with family monthly income χ^2/p-value (8.391/.039).*

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INTRODUCTION

"All births should be assisted by skilled health professionals, as timely management and treatment can make the difference between life and death for both the mother and the baby."

– UNICEF

Maternal health encompasses the well-being of women throughout pregnancy, childbirth, and the postnatal phase, with each stage ideally fostering positive experiences to optimize the health and

prosperity of both mothers and their infants [1]. Pregnancy, while a natural occurrence, is often accompanied by sensations of pain, fear, and anxiety, with concerns regarding maternal mortality adding to these apprehensions. Childbirth marks the culmination of pregnancy, encompassing a complex process with physical, emotional, social, cultural, and psychological dimensions. For many women, childbirth represents a significant and sometimes distressing event. There are two primary methods of delivery: vaginal birth and cesarean section [2]. Childbirth is a pivotal moment in a woman's life, symbolizing her transition into motherhood. While this experience is profoundly unique and special, it also exposes women to various risks throughout pregnancy, delivery, and the postpartum period [3]. The delivery process, once predominantly a natural occurrence, has seen significant advancements in medical technology, resulting in a considerable reduction in maternal and infant mortality rates. For a healthy women population, the choice is between spontaneous vaginal delivery and cesarean section. Vaginal delivery can be spontaneous, i.e., unassisted or assisted and cesarean section is most performed major obstetrics throughout the world [4].

MODE OF DELIVERY

- Vaginal delivery.
- Cesarean section.

Vaginal Delivery

Natural childbirth entails the absence of medication or obstetric interference, while vaginal birth may incorporate various medical interventions. These interventions may comprise medical induction, augmentation with oxytocics, electronic cardiotocographic monitoring, analgesics for pain management, episiotomy, and delivery, which can be either spontaneous or assisted through forceps or vacuum extraction [5–9].

Cesarean Section

A cesarean section, defined as the surgical termination of pregnancy, serves as a critical procedure to save the life of either the mother or her baby [10–14].

MATERIAL AND METHODOLOGY

A hospital-based descriptive study was conducted among 100 antenatal mothers attending gynae outpatient department basis at a tertiary care hospital in North India between March 2023 and April 2023. Individuals who can understand and communicate in Hindi and English without any impairment were included in the study. The conducted among 100 antenatal mothers who were attending Gynae OPD in PGIMS, Rohtak. The sample was selected through a convenient sampling method, and data collection was conducted using a self-designed interview questionnaire. The gathered data were then analyzed using both descriptive and inferential statistical methods [15–17]. Data collection tool and procedure.

Preference toward a mode of delivery among antenatal mothers and its associated factors were evaluated by using a self-structured questionnaire**.** Written consent from antenatal mothers prior to the data collection is taken by explaining the purpose of the study and consent is taken from them. They were also assured about their confidentiality. According to selection criteria of the study [18–21]:

- The main study is conducted from 13. 3. 2023 to 16. 4. 2023 at PGIMS, Rohtak.
- Using a convenient sampling method, 100 expectant mothers were chosen for the study.
- Researchers collected data including demographic data and preference toward a mode of delivery and its associated factors with nurse-led intervention (Pamphlet).

The study location was conveniently chosen, and the principal investigator oversaw the data collection process. Participants were informed that their involvement was voluntary, and they were given a participant information sheet before completing the questionnaires. After obtaining ethical approval and permission from the concerned authorities, the participants who were able to read and

write the Hindi/English language were contacted for inclusion in the study. All participants received a participant information sheet containing study details, informed consent forms, and screening questionnaire forms. They were encouraged to independently complete the forms, and any challenges or questions were addressed by the principal investigator for clarification [22–24].

Statistical Analysis

The data were scrutinized, and conclusions were drawn in alignment with the study objectives, employing both descriptive and inferential statistical analyses.

Descriptive statistics involved the calculation of the mean and standard deviation, while inferential statistics were utilized for analysis. Chi-square was used for analyzing the association of associated factors with selected sociodemographic variables (Table 1). Different diagrams are used to depict the findings [25].

Table 1. Frequency and percentage distribution of antenatal mothers according to demographic variables.

S.N.	Socio-Demographic Variables	Frequency(f)	Percentage (%)
1.	*Age in years*		
	18–22.	24	24%
	23–27.	43	43%
	28–32.	20	20%
	33 and above.	13	13%
2.	*Educational status of mother*		
	Illiterate.	9	9%
	Higher secondary.	13	13%
	Primary.	27	27%
	Graduate and above.	51	51%
3.	*Educational status of husband*		
	Illiterate.	7	7%
	Higher secondary.	12	12%
	Primary.	25	25%
	Graduate and above.	56	56%
4.	*Occupation of mother*		
	Home maker.	63	63%
	Government employee.	17	17%
	Private employee.	20	20%
	My own business.	0	0%
5.	*Occupation of husband*		
	Government employee.	35	35%
	Private business.	49	49%
	My own business.	16	16%
	Unemployed.	0	0%
6.	*Type of family*		
	Nuclear family.	52	52%
	Joint family.	48	48%
7.	*Religion*		
	Hindu.	100	100%
	Christian.	0	0%
	Sikh.	0	0%
	Muslim.	0	0%

8.	*Family monthly income*		
	Up to Rs. 10000	13	13%
	Rs. 20,000–30,000	24	24%
	Rs. 10,000–20,000	25	25%
	31,000 and above.	38	38%
9.	*Source of information*		
	Family members.	55	55%
	Mass media.	20	20%
	Magazines.	0	0%
	Health visitors.	25	25%
10.	*Trimester*		
	2nd Trimester.	58	58%
	3rd Trimester.	42	42%

Note: N = 100.

Table 2. Frequency & percentage for preference toward mode of delivery among antenatal women.

S.N.	Mode of Preference	Frequency	Percentage
1.	Cesarean section.	37	37%
2.	Vaginal delivery.	63	63%

In the present study, majority 63% of antenatal mothers give the preference toward the vaginal delivery remaining 37% give preference cesarean section (Table 2).

Factors Associated with Preference Toward Mode of Delivery

With reference to preference toward cesarean section, majority of factors are fear of labor pain or vaginal examination (73%), Fear of assisted vaginal delivery and linger duration (57%). It prevent pelvic relaxation and chances of sexual dysfunction (57%), baby born with cesarean section are more healthier than vaginal delivery (57%), and less risky and less chances of perineal rupture (76%) (Figure 1).

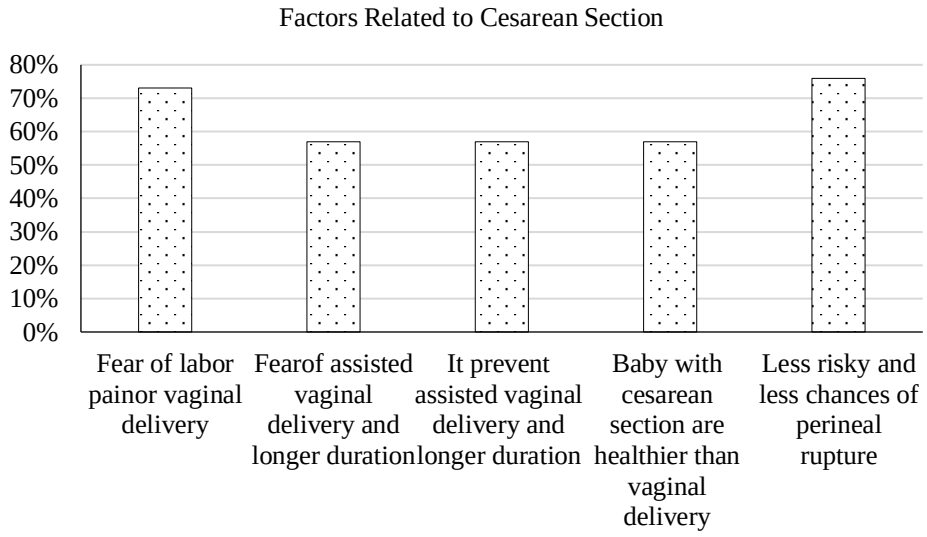

Figure 1. Percentage of factors associated with preference toward mode of delivery (Cesarean Section).

PREFERENCE ON VAGINAL DELIVERY

A total of 63 samples prefers vaginal delivery as mode of delivery.

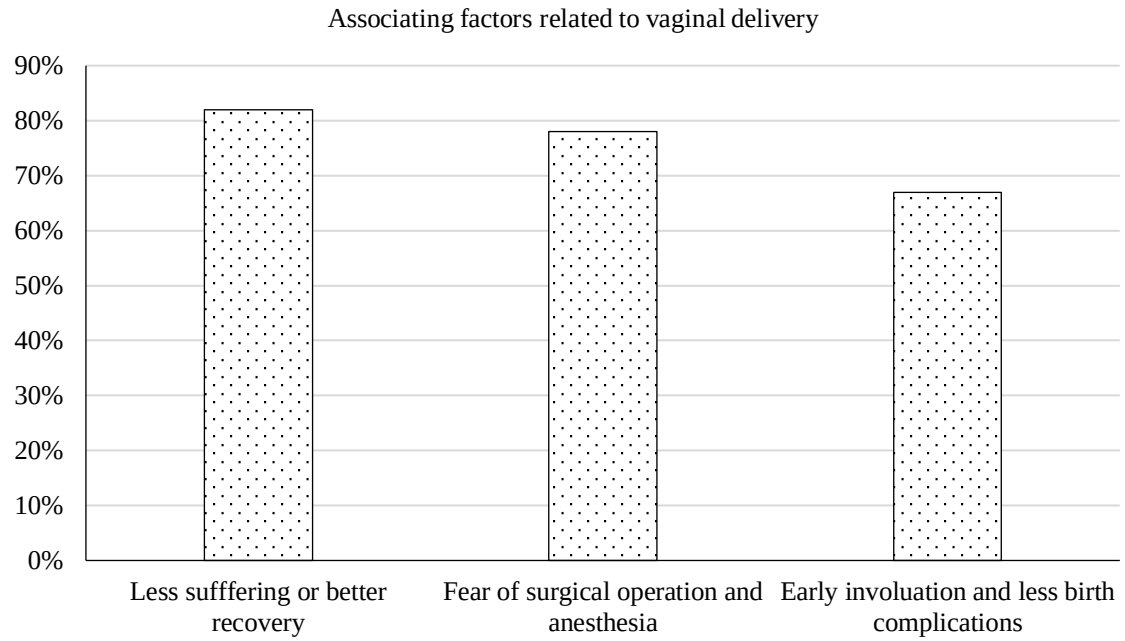

Figure 2. Percentage of factors associated with preference toward mode of delivery of vaginal delivery.

Figure 2 depicts the associated factors related to vaginal delivery. With reference to preference toward vaginal delivery majority factors were less suffering and better recovery (82%), fear of surgical operation and anesthesia (78%), and early involution and less birth complications (67%).

Table 3. Association between demographic variables with associated factors preference toward cesarean section (fear of assisted vaginal delivery or longer duration).

S.N.	Socio-Demographic Variables	Antenatal Mothers	Fear of Assisted Vaginal Delivery or Longer Duration			
			χ^2	P Value	Df	Result
1.	*Age in years*		2.347	.504	3	NS
	18–22 years.	10				
	23–27 years.	11				
	28–32 years.	6				
	33 years above.	10				
2.	*Educational status of mothers*		4.240	.237	3	NS
	Illiterate.	3				
	Primary education.	5				
	Higher + secondary education.	8				
	Graduate & above.	21				
3.	*Educational status of father*		3.499	.321	3	NS
	Illiterate.	4				
	Primary education.	2				
	Secondary education.	13				
	Graduate and above.	18				
4.	*Occupation of mother*		1.450	.484	2	NS
	Home maker	26				
	Government employee.	8				
	Private employee.	50				
	My own business.	0				

5.	*Occupation of husband*		1.235	.539	2	NS
	Government employee.	11				
	Private employee.	21				
	My own business.	5				
	Others.	0				
6.	*Type of family*		.075	.784	1	NS
	Nuclear family.	15				
	Joint family.	17				
7.	*Family monthly income*		8.391	.039	3	S
	Up to Rs 10,000.	7				
	Rs. 10.001–20,000.	14				
	Rs. 20,001–30,000.	4				
	Above Rs. 30,000.	12				
8.	*Source of information*		4.687	.096	2	NS
	Family member/Friends.	22				
	Mass media.	8				
	Magazines.	0				
	Health visitors.	7				
9.	*Trimester*		.103	.749	1	NS
	2nd trimester.	23				
	3rd trimester.	14				

*Note: N = 100. NS: *Non-significant, S: *Significant.*

Chi-square analysis was employed to assess the relationship between sociodemographic variables and associated factors. The association of associating factors (fear of associated vaginal delivery and longer duration) is statistically significant. (p > 0/05) with family monthly income χ^2/p value (8.391/.039). But it is not statistically significant with other variables (Table 3).

RESULTS

In the present study, majority 63% of antenatal mothers give the preference toward the vaginal delivery remaining 37% give preference cesarean section. Associating factors of preference toward cesarean section. With reference to preference toward cesarean section, majority of factors are fear of labor pain or vaginal examination (73%), Factors of vaginal delivery less suffering and better recovery (82%), fear of surgical operation and anesthesia (78%), and early involution and less birth complications (67%). The association of associating factors of vaginal delivery or cesarean section with demographic variables are nonsignificant. The association of associating factors (fear of associated vaginal delivery and longer duration) is statistically significant. (p > 0/05) with family monthly income χ^2/p value (8.391/0.039).

DISCUSSION

A hospital-based descriptive study was conducted among 100 antenatal mothers attending gynae outpatient department basis at a tertiary care hospital in North India between March 2023 and April 2023.

Majority 63% of antenatal mothers give preference toward the vaginal delivery, remaining 37% give preference cesarean section.

The respondents have to choose an option which they felt was the most appropriate. The respondent was score for yes 1 score, score 0 for no. It was assumed that analysis of associating factors of mode of preference. Also details regarding the content of associating factor of mode of preference are presented as follows.

The Associated Factors Related to Cesarean Section

With reference to preference toward cesarean section, majority factors are fear of labor pain or vaginal examination (73%), fear of assisted vaginal delivery, and linger duration (57%). It prevent pelvic relaxation and chances of sexual dysfunction (57%), baby born with cesarean section are more healthier than vaginal delivery (57%), less risky and less chances of perineal rupture (76%) [26].

The Associated Factors Related to Vaginal Delivery

With reference to preference toward vaginal delivery, majority of factors were less suffering and better recovery (82%), fear of surgical operation and anesthesia (78%), and early involution and less birth complications (67%).

Chi-square analysis was utilized to examine the correlation between sociodemographic variables and their associated factors [27].

- The association of associating factors (fear of labor pain or vaginal delivery) with sociodemographic variables is not statistically significant ($p > 0/05$).
- The association of associating factors (fear of associated vaginal delivery and longer duration) is statistically significant. ($p > 0/05$) with family monthly income χ^2/p value (8.391/.039). But it is not statistically significant with other variables.
- The association of associating factor (less risky and less chances of perineal rupture) is statistically significant with trimester χ^2/p value (4.317/0.038). And other sociodemographic variables are not statistically significant compared with other socio-demographic variables.
- The association of associating factors (less suffering and better recovery and fear of surgical operation or anesthesia) with sociodemographic variables is not statistically significant ($p > 0/05$) [28–30].

LIMITATION OF THE STUDY

The sample size was limited to 100. The study is restricted to primiparous expectant mothers only. The data collection duration was confined to a span of 4 weeks. Study is limited to the antenatal mothers in her 2nd or 3rd trimester. Study is limited to the mothers attending GOPD at PGIMS, Rohtak.

CONCLUSIONS

In this study, the majority of 63% of antenatal mothers choose vaginal delivery as a mode of delivery and 37% of antenatal mothers choose the cesarean section as a mode of delivery. Preference toward cesarean section majority factors are fear of labor pain or vaginal examination (73%), fear of assisted vaginal delivery and linger duration (57%). It prevents pelvic relaxation and chances of sexual dysfunction (57%), baby born with cesarean section are more healthier than vaginal delivery (57%), less risky and less chances of perineal rupture (76). With reference to preference toward vaginal delivery majority factors were less suffering and better recovery (82%), fear of surgical operation and anesthesia (78%), and early involution and less birth complications (67%). The association of associating factors (fear of labor pain or vaginal delivery) with sociodemographic variables is not statistically significant ($p > 0/05$). The association of associating factors (fear of associated vaginal delivery and longer duration) is statistically significant. ($p > 0/05$) with family monthly income χ^2/p value (8.391/0.039). But it is not statistically significant with other variables. The association of associating factor (less risky and less chances of perineal rupture) is statistically significant with trimester χ^2/p value (4.317/0.038). And other sociodemographic variables are not statistically significant with other sociodemographic variables. The association of associating factors (less suffering and better recovery and fear of surgical operation or anesthesia) with sociodemographic variables is not statistically significant ($p > 0/05$).

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