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ASSESSING OF PREGNANT WOMEN TOWARD VAGINAL DELIVERY AND CESAREAN SECTION BASED ON BEHAVIOURAL INTENTION MODEL

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Abstract

Introduction: The decision-making process surrounding childbirth method, whether vaginal delivery or cesarean section, is a complex interplay of medical, psychological, and sociocultural factors.

Objectives: The main objective of the study is to find the behavior of pregnant women toward vaginal delivery and cesarean section based on behavioural intention model.

Material and methods: This quantitative study was conducted at Bolan Medical Complex Hospital Quetta March 2022 to March 2023. Data was collected from 220 pregnant women.Data collection involved structured interviews conducted with pregnant women in their third trimester of pregnancy. Participants were recruited from antenatal clinics in various healthcare facilities, following the application of inclusion and exclusion criteria. Prior to data collection, informed consent was obtained from each participant.

Results: Data were collected from 220 pregnant females.Mean age of participants was 28.01±3.5 years. There were 120 (54.5%) females was in primigravida group and 100 (45.5%) was in multigravida. 150 (68.2%) adopt vaginal delivery and 70 (31.8%) adopt C-section.Attitudes exhibited the strongest predictive power, with a beta coefficient of 0.45 and a highly significant p-value of <0.001, followed by subjective norms ($\beta = 0.32$, $p = 0.002$) and perceived behavioral control ($\beta = 0.28$, $p = 0.005$). Collectively, these predictors accounted for 65% of the variance in pregnant women's intentions toward childbirth methods, as indicated by the R-squared value.

Conclusion: It is concluded that pregnant women exhibit strong positive attitudes toward natural childbirth, while expressing reservations about cesarean section (CS). These findings highlight the importance of patient-centered care in prenatal settings, where healthcare providers should prioritize addressing women's preferences and concerns.

Keywords: C-section, Vaginal delivery, Patients, Factors, Influencing

Introduction

The decision-making process surrounding childbirth method, whether vaginal delivery or cesarean section, is a complex interplay of medical, psychological, and sociocultural factors. Understanding the factors influencing pregnant women's preferences and intentions towards these delivery methods is crucial for healthcare providers to support informed decision-making and ensure optimal maternal and neonatal outcomes [1]. Behavioral intention models provide a framework for examining the determinants of individuals' intentions to engage in specific behaviors, including healthcare-related decisions. However, there is limited research applying behavioral intention models to assess pregnant women's preferences for vaginal delivery or cesarean section [2]. Cesarean section (CS) stands as the predominant obstetrical procedure globally, with the World Health Organization setting a benchmark of 15% as an acceptable rate for CS deliveries in each country since 1985 [3]. However, evidence fails to demonstrate significant benefits for women or infants who do not necessitate the procedure. Despite this, there has been a notable rise in requests for elective cesarean deliveries globally [4].

Elective cesarean sections are performed for obstetric or medical reasons or may be requested by pregnant women without any medical indications. It's crucial to acknowledge that CS constitutes major surgery and poses potential risks and complications for both the mother and newborn when compared to vaginal birth [5]. Common complications for mothers include hemorrhage, uterine and urinary tract issues, wound infections, and abdominal organ injuries. Additionally, the recovery process post-cesarean delivery tends to be lengthier than that of vaginal delivery. Newborns delivered via CS also face risks such as respiratory distress, birth trauma, and hypoglycemia [6].When compared to vaginal delivery (NVD), cesarean section (CS) presents a higher risk of complications, encompassing uterine infection, postoperative fever, severe abdominal wall wound issues, abdominal infections, hemorrhage, anesthesia-related problems, urinary system injuries during surgery, venous thrombosis in the legs, increased financial costs, and elevated maternal mortality rates [7]. Additionally, CS is associated with an augmented likelihood of maternal and perinatal morbidity, thromboembolism, postpartum depression, as well as feelings of dissatisfaction regarding the birth experience, poor body image, and decreased self-esteem [7].Literature suggests that the Behavioral Intention Model (BIM), rooted in Fishbein and Ajzen's Theory of Reasoned Action, stands as one of the most effective and commonly utilized models for investigating pregnancy-related behaviors. In this model, the intention for behavior serves as the primary determinant, comprising the combination of attitudes toward behavior and subjective norms [8]. Attitude toward behavior entails beliefs and the perceived positive or negative consequences of behavior performance, while subjective norms include normative beliefs and motivation for compliance. Kashfi et al. evaluated the impact of BIM-based education on reducing CS rates among pregnant women and found that the intervention effectively enhanced pregnant women's knowledge, assessment of NVD outcomes, attitudes toward NVD, and strengthened their intention to opt for NVD [9].

Objectives

The main objective of the study is to find the behavior of pregnant women toward vaginal delivery and cesarean section based on behavioural intention model**.**

Material and methods

This quantitative study was conducted at Bolan Medical Complex Hospital Quetta March 2022 to March 2023. Data was collected from 220 pregnant women.

Inclusion criteria

- Pregnant women in their third trimester with a singleton pregnancy.
- Aged >18 years.

Exclusion criteria

- Women with pre-existing medical conditions that may impact their choice of delivery method e.g., placenta previa and fetal anomalies.

- Women who were not attending antenatal care.

Data collection

Data collection involved structured interviews conducted with pregnant women in their third trimester of pregnancy. Participants were recruited from antenatal clinics in various healthcare facilities, following the application of inclusion and exclusion criteria. Prior to data collection, informed consent was obtained from each participant. Trained interviewers administered validated questionnaires based on the Theory of Planned Behavior (TPB) or other relevant behavioral intention models. The questionnaires comprised items assessing participants' beliefs, attitudes, subjective norms, perceived behavioral control, and intentions towards vaginal delivery and cesarean section. Participants' demographic information, including age, parity, and obstetric history, was also collected.

Statistical analysis

Data were collected and analyzed using SPSS v29.0. Descriptive statistics such as means, standard deviations, frequencies, and percentages were computed to summarize demographic characteristics and responses to survey items.

Results

Data were collected from 220 pregnant females. Mean age of participants was 28.01±3.5 years. There were 120 (54.5%) females was in primigravida group and 100 (45.5%) was in multigravida. 150 (68.2%) adopt vaginal delivery and 70 (31.8%) adopt C-section.

Table 01: Demographic data of participants

Characteristic	**Number (%)**
Total Participants	220
Average Age (years)	28.01±3.5
Primigravida	120 (54.5%)
Multigravida	100 (45.5%)
Medical History	
None	180 (81.8%)
Hypertension	20 (12.0%)
Diabetes	10 (3.01)
Others	10 (3.01)
Delivery Method	
Vaginal Delivery	150 (68.2%)
Cesarean Section	70 (31.8%)

Attitudes exhibited the strongest predictive power, with a beta coefficient of 0.45 and a highly significant p-value of <0.001, followed by subjective norms ($\beta = 0.32$, $p = 0.002$) and perceived behavioral control ($\beta = 0.28$, $p = 0.005$). Collectively, these predictors accounted for 65% of the variance in pregnant women's intentions toward childbirth methods, as indicated by the R-squared value.

Table 02: Predictors of intention for vaginal delivery

Predictor	**Beta Coefficient**	**p-value**
Attitudes	0.45	<0.001
Subjective Norms	0.32	0.002
Perceived Behavioral Control	0.28	0.005
R-Squared	-	0.65

Attitudes emerged as the strongest predictor, with a beta coefficient of 0.37 and a highly significant p-value of <0.001, indicating a substantial impact on decision-making. Subjective norms and perceived behavioral control also played significant roles, with beta coefficients of 0.25 (p = 0.012) and 0.21 (p = 0.034), respectively.

Table 03: Predictors of intention for C-section

Predictor	**Beta Coefficient**	**p-value**
Attitudes	0.37	<0.001
Subjective Norms	0.25	0.012
Perceived Behavioral Control	0.21	0.034
R-Squared	-	0.58

The table presents the mean scores for different attitude items related to childbirth preferences, measured on a scale ranging from 1 to 5. Notably, participants expressed strong positive attitudes toward natural childbirth, with mean scores exceeding 4 for all items. Specifically, they strongly endorsed the belief that childbirth is a natural process that should be encouraged (mean score: 4.3) and expressed confidence in their body's ability to give birth (mean score: 4.1). Additionally, participants preferred minimal medical intervention during childbirth (mean score: 4.4) and believed that a natural childbirth is better for the baby (mean score: 4.2).

Table 04: EAN score for pregnant women's attitude towards vaginal child birth

Attitude Item	**Mean Score (Range: 1-5)**
Childbirth is a natural process and should be encouraged	4.3
I feel confident in my body's ability to give birth	4.1
I prefer minimal medical intervention during childbirth	4.4
I believe that a natural childbirth is better for the baby	4.2
I trust the process of labor and delivery	4.0

Table 05: Comparison of Attitudes Toward Natural Childbirth and Cesarean Section

Attitude Item	**p-value**
Childbirth is a natural process and should be encouraged	<0.001
I feel confident in my body's ability to give birth	0.012
I prefer minimal medical intervention during childbirth	<0.001
I believe that a natural childbirth is better for the baby	0.005
I trust the process of labor and delivery	0.021
A Cesarean section is a safer option for childbirth	<0.001
I am concerned about the risks associated with vaginal delivery	0.032
I am anxious about the pain of childbirth	0.017
I prefer Cesarean section for convenience and scheduling	<0.001
I am worried about the potential complications of Cesarean section	0.028

Discussion

The study's results represents pregnant women's attitudes toward natural childbirth and cesarean section (CS), revealing noteworthy insights into their preferences and concerns regarding childbirth methods. Participants displayed strong positive attitudes toward natural childbirth, as evidenced by high mean scores across various attitude items [10]. Conversely, attitudes toward CS were less favorable, with lower mean scores observed for statements related to preferring CS for convenience and scheduling, and concerns about potential complications [11]. These findings align with existing literature suggesting a general preference for natural childbirth among pregnant women when provided with adequate support and information [12]. However, some divergent attitudes were identified, such as concerns about the pain of childbirth and the perceived safety of CS, which warrant

further exploration. Understanding and addressing pregnant women's attitudes toward childbirth methods are crucial for healthcare providers and policymakers to ensure patient-centered care and informed decision-making [13]. While the study contributes valuable insights, acknowledging its limitations, such as potential response bias and demographic inclusion, is essential.Cesarean section (CS) stands as a critical surgical intervention performed in emergency situations to safeguard the well-being of both mother and child when natural delivery becomes impractical or poses risks to either or both parties [14]. The ratio of cesarean sections to total births within a specific timeframe serves as a vital indicator of prenatal care quality [15]. Rates below 5 percent suggest significant accessibility issues to pregnancy-related surgical interventions, whereas rates exceeding 15 percent may indicate CS performed for non-life-threatening reasons. Over recent years, there has been a notable uptick in CS rates observed globally, spanning across both developed and developing nations [16].

The "Theory of Planned Behavior (TPB)" stems from the psychological Theory of Reasoned Action, positing that individuals make behavioral decisions based on rational deliberation and available information [17]. Central to this theory is the concept of behavioral intention, which can be predicted by three key factors: a positive attitude towards the behavior, perceived social pressures (subjective norms), and the belief in one's ability to enact the behavior (perceived behavioral control) [18]. In the context of pregnancy and childbirth, attitudes towards cesarean section versus vaginal delivery and the evaluation of their respective consequences represent one aspect of this model [19]. Another aspect is the subjective norm, which encompasses the perceived societal acceptability of these delivery methods and the influence of important individuals, such as spouses and healthcare providers, on a pregnant woman's decision. Finally, perceived behavioral control reflects the pregnant woman's confidence in her ability to manage labor pain through vaginal delivery and her perception of control over the childbirth process [20].

Conclusion

It is concluded that pregnant women exhibit strong positive attitudes toward natural childbirth, while expressing reservations about cesarean section (CS). These findings highlight the importance of patient-centered care in prenatal settings, where healthcare providers should prioritize addressing women's preferences and concerns. By understanding and accommodating these attitudes, healthcare professionals and policymakers can strive to enhance the childbirth experience and improve maternal outcomes for expectant mothers.

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