Satisfaction in Birth Experience among Women with Doula Delivery Support: A Correlational-Comparative Study

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Abstract: *Objective:* This study aimed to evaluate the effectiveness and benefits of doula services by comparing satisfaction with the childbirth experience between women who received doula support and those who did not. *Methods:* A correlational comparative research design with a quantitative approach was utilized. Purposive sampling was used to gather participants. The collected data were analyzed using MS Excel and the Statistical Package for Social Sciences (SPSS). Statistical methods included the Mean, Pearson correlation, and Wilcoxon test. In this study, an online survey questionnaire was disseminated in Shijiazhuang City, Hebei Province. *Results:* Findings showed that expectant mothers who received doula support reported high satisfaction across various domains, whereas those without doula support had lower satisfaction during childbirth. *Conclusion:* The results suggest that doula support is important for expectant mothers, as it helps to reduce stress and anxiety during labor and delivery. Integrating doula support into maternity care can enhance the childbirth experience, leading to higher satisfaction and improved outcomes.

Keywords: Doula support; Non-doula; Emotional support; Physical comfort; Satisfaction; Positive effects

1. Introduction

The World Health Organization (WHO) emphasizes the importance of supportive and respectful care during childbirth, advocating for access to high-quality care for all women [1]. Despite this, maternal mortality rates remain high globally, with around 295,000 maternal deaths reported in 2017 [2]. The leading causes of maternal mortality include severe postpartum bleeding, post-delivery infections, delivery complications, and hypertensive disorders in pregnancy, such as preeclampsia and eclampsia. Many of these fatalities could be prevented with appropriate support and care during childbirth.

Research by Bohren *et al.* [3] suggests that continuous support during labor can lead to more satisfying birth experiences and better outcomes for both mother and child. A 2017 Cochrane review of 26 studies involving

15,858 women found that continuous labor support increased the likelihood of spontaneous vaginal birth, reduced the need for pain relief, and decreased the risk of adverse outcomes.

Providing comprehensive maternal care during childbirth is crucial. The full-process doula-accompanied midwifery model, where professional doulas assist women throughout the entire delivery process, is a humane approach that meets the need for comprehensive care [4]. This model offers comfort and reassurance by providing continuous companionship, updates on delivery progress, and encouragement, thereby helping mothers maintain the confidence and motivation needed for childbirth. This study aims to demonstrate that full-time doula support can shorten labor duration and improve obstetric care quality.

Childbirth is a natural process, but as medical practices evolve and the concept of humanized services becomes integral to obstetrics, modern obstetric research increasingly focuses on how to enhance maternal outcomes and minimize delivery-related discomfort and complications [5]. Doula support offers a compassionate delivery approach, providing physical and psychological assistance to mothers. Research on guided delivery analgesia for first-time mothers has shown positive effects on labor duration, postpartum hemorrhage, and neonatal asphyxia, helping to reduce pain, increase pain tolerance, and lower cesarean delivery rates [6].

Guided labor support relies on experienced individuals who provide emotional, spiritual, and physical assistance to mothers, supporting them through successful deliveries. With the increasing trend of later-age childbirth in China, cesarean delivery rates have risen, posing added physical risks for mothers [7]. Guided labor analgesia can help alleviate maternal fears and reduce pain during natural childbirth. Partnering with a doula can maximize maternal relaxation, fostering a cooperative dynamic that enhances the birthing experience.

Thus, this study aims to explore the correlation between maternal profiles, satisfaction levels, and the delivery experience among mothers receiving doula-supported care. Additionally, this research seeks to contribute to quality improvement in obstetric care, promoting strategic childbirth experiences that empower mothers during labor and facilitate shared decision-making in the delivery process.

2. Methods

The research design used in this study is a correlational comparative approach with a quantitative methodology. Purposive sampling was employed to gather participants, including 60 postpartum women: 30 who chose doula support and 30 who did not. The data collected from these participants were then analyzed separately to assess the level of support.

2.1. Doula provider

Doulas can provide women with practical and emotional support during the pre-partum, mid-partum, and postpartum periods. They help mothers build confidence in childbirth, reduce childbirth-related fears and anxiety, relieve pain during labor, and guide and facilitate the delivery process. To be qualified, doulas must meet the following standards: (1) complete relevant training and assessment from the China Maternal and Child Health Association and obtain a professional qualification certificate, and (2) possess relevant experience in fields like gynecology and pediatrics, along with familiarity with gynecological, obstetric, and pediatric knowledge. Doulas should also demonstrate dedication and substantial experience in midwifery.

2.2. Non-doula provider

Childbirth is a critical life event for women, requiring substantial physical and emotional support. While doulas are known to provide continuous, personalized support, many women experience childbirth without the assistance of a doula. These non-doula-supported women may face various challenges that negatively impact their childbirth experience. Understanding the specific challenges faced by non-doula-supported women is essential for improving maternal care and ensuring positive childbirth experiences for all.

2.3. Population and sampling

Purposive sampling was used to gather participants. This non-probability technique does not require a theoretical basis or a specific number of participants. By using this sampling method, the researcher was able to identify specific knowledge gaps and select individuals who were both able and willing to provide information based on their experiences [8]. Hospital staff were informed of the criteria for qualified respondents, and the hospital assisted in identifying eligible participants through patient records. The final list of respondents was chosen by the researcher.

Participants included those admitted to the hospital during the interview period. Selection criteria were: (1) expectant mothers aged 18–40 years, (2) Chinese citizens, and (3) gestational age between 36–42 weeks.

2.4. Research instruments

A self-designed questionnaire was used to collect data. This questionnaire covered demographic details such as the respondent's age, parity (number of previous pregnancies), marital status, delivery setting, gestational age, and previous experience with doulas. It aimed to determine correlations between doula support and the childbirth experience among expectant mothers. The questionnaire consisted of four sections: Expectant Mothers' Satisfaction with Doula Delivery Support; Impact of Doula Presence on Labor Duration; Specific Aspects of Doula Support in Reducing Maternal Anxiety and Fear during Childbirth; and Influence of Doula Support on Expectant Mothers' Perception of Pain during Labor and Delivery. Four experts and a psychometrician validated the questions.

2.5. Statistical treatment

Upon obtaining all necessary data, the researcher organized and statistically processed the information. MS Excel and the Statistical Package for Social Sciences (SPSS) were used to analyze the data. Statistical tools were applied for tabulation and further data analysis.

The participants were given questionnaires and asked to provide consent for participation in the study. The study was conducted during the 2023–2024 academic year and disseminated via online platforms. The participants were selected based on data saturation.

This study included 30 expectant mothers who chose doula support from a sample of 32, and 30 expectant mothers who did not choose doula support (**Table 1**). The sample size of 30 was determined from a population size of 1,000, with a margin of error of 5%, a confidence level of 95%, and a response distribution of 50%, using the Raosoft online sample size calculator.

Table 1. Participants of the study

Sample size	Expectant mother	Total
With doula support	32	30
Non-doula support	32	30

3. Level of satisfaction with doula delivery support during childbirth

3.1. Emotional support

Table 2 shows the satisfaction of doula delivery support in terms of emotional support.

Table 2. Satisfaction on doula delivery support: emotional support

Emotional support	Mean	SD	Qualitative description
The doula provided emotional comfort and reassurance during labor and delivery.	3.73	0.45	High level
I felt emotionally supported and cared for by the doula throughout the childbirth process.	3.70	0.47	High level
The doula's presence helped me feel more at ease and less anxious during labor.	3.67	0.48	High level
I believe that the emotional support provided by the doula positively influenced my childbirth experience.	3.70	0.47	High level
Category mean	3.70	0.47	High level

Table 2 provides an assessment of satisfaction with doula delivery support specifically in the domain of emotional support, measured through various indicators. The highest-ranked indicator is "The doula provided emotional comfort and reassurance during labor and delivery," with a mean score of 3.73 and a standard deviation of 0.45, interpreted as a high level of satisfaction. Two indicators share the second rank: "I felt emotionally supported and cared for by the doula throughout the childbirth process" and "I believe that the emotional support provided by the doula positively influenced my childbirth experience," both with a mean score of 3.70 and a standard deviation of 0.47, also interpreted as a high level of satisfaction. The fourth-ranked indicator is "The doula's presence helped me feel more at ease and less anxious during labor," which has a mean score of 3.67 and a standard deviation of 0.48, maintaining a high level of satisfaction.

Overall, the composite score for emotional support is 3.70 with a standard deviation of 0.47, indicating a high level of satisfaction with the emotional support provided by doulas during delivery. This consistently high level of satisfaction across all indicators underscores the significant positive impact of doula support on the emotional well-being of mothers during childbirth.

This finding supports Sobczak *et al.* [9], who stated that support during birth promotes positive outcomes for both the mother and baby. The doula program is essential throughout pregnancy. Continuous support also increases positive feelings about the labor experience, and several studies have found a correlation between continuous support and a positive maternal outlook [10].

3.2. Physical support

Table 3 shows the satisfaction of doula delivery support in terms of physical support.

Table 3. Satisfaction on doula delivery support: physical support

Physical support	Mean	SD	Qualitative interpretation
The doula provided helpful physical comfort measures and pain relief techniques during labor.	3.44	0.51	High level
I felt more comfortable and supported physically with the doula's assistance during childbirth.	3.48	0.50	High level
The doula's physical support contributed to a more positive birthing experience for me.	3.45	0.50	High level
I believe that the doula's physical support helped me cope better with the challenges of labor.	3.46	0.51	High level
Category mean	3.47	0.51	High level

Table 3 assesses satisfaction with doula delivery support in the area of physical support, based on various indicators. The highest-ranked indicator is "I felt more comfortable and supported physically with the doula's assistance during childbirth," with a mean score of 3.48 and a standard deviation of 0.50, interpreted as a high level of satisfaction. The indicator with the lowest mean is "The doula provided helpful physical comfort measures and pain relief techniques during labor," with a mean score of 3.44, still indicating a high level of satisfaction.

Overall, the composite score for physical support is 3.47 with a standard deviation of 0.51, denoting a high level of satisfaction with the physical support provided by doulas during labor and delivery. This consistently high satisfaction across all indicators highlights the significant positive impact of doula physical support on the birthing experience.

This supports the study by Rousseau *et al.* [11], which stated that physical support is a crucial part of a holistic definition of health and a consistent predictor of positive outcomes. Physical support from doulas reduces anxiety and morbidities and establishes a support system, enabling mothers to have a safety net. This suggests that doulas play an important role before and during delivery [12].

3.3. Communication

Table 4 shows the satisfaction of doula delivery support in terms of communication.

Table 4. Satisfaction on doula delivery support: communication

Communication	Mean	SD	Qualitative interpretation
The doula effectively communicated with me and understood my preferences and needs during labor.	3.40	0.50	High level
I felt heard and respected in my decision-making process with the doula's guidance.	3.50	0.51	High level
The doula helped facilitate communication with healthcare providers and advocated for my preferences.	3.43	0.50	High level
I believe that the communication between the doula and the healthcare team positively impacted my birth experience.	3.40	0.50	High level
Category mean	3.43	0.50	High level

Table 4 evaluates satisfaction with doula delivery support in terms of communication, using various indicators. The highest-ranked indicator is "I felt heard and respected in my decision-making process with the doula's guidance," with a mean score of 3.50 and a standard deviation of 0.51, interpreted as a high level of satisfaction. Two indicators are ranked last: "The doula effectively communicated with me and understood my preferences and needs during labor" and "I believe that the communication between the doula and healthcare team positively impacted my birth experience," both with a mean score of 3.40 and a standard deviation of 0.50, reflecting a high level of satisfaction.

Overall, the composite score for communication is 3.43 with a standard deviation of 0.50, denoting a high level of satisfaction with the communication support provided by doulas during labor and delivery. This consistently high satisfaction across all indicators underscores the significant positive impact of effective communication by doulas on the childbirth experience.

This is supported by Roth *et al.* [13], who found that communication between healthcare teams and doulas impacts outcomes. Nurses who have worked with doulas and value labor support report more positive outcomes. Lucas and Wright [14] identified studies showing that healthcare teams can lead to greater openness, creating approaches that contribute to positive outcomes, and enhancing the communication system.

3.4. Empowerment

Table 5 shows the satisfaction of doula delivery support in terms of empowerment.

Table 5. Satisfaction on doula delivery support: empowerment

Empowerment	Mean	SD	Qualitative interpretation
The doula's presence and support empowered me to make informed decisions during childbirth.	3.43	0.50	High level
I felt more confident and in control with the doula's assistance during labor and delivery.	3.47	0.51	High level
The doula's advocacy for my choices and preferences made me feel empowered during childbirth.	3.47	0.51	High level
I believe that the doula's support played a significant role in enhancing my sense of empowerment during childbirth.	3.43	0.50	High level
Category mean	3.43	0.50	High level

Table 5 assesses satisfaction with doula delivery support in terms of empowerment, based on various indicators. The highest-ranked indicator is "I felt more confident and in control with the doula's assistance during labor and delivery," with a mean score of 3.47 and a standard deviation of 0.51, interpreted as a high level of satisfaction. Closely following is "The doula's advocacy for my choices and preferences made me feel empowered during childbirth," also with a mean score of 3.47 and a standard deviation of 0.51, reflecting a high level of satisfaction.

Two indicators share the lowest mean: "The doula's presence and support empowered me to make informed decisions during childbirth" and "I believe that the doula's support played a significant role in enhancing my sense of empowerment during childbirth," both with a mean score of 3.43 and a standard deviation of 0.50, indicating a high level of satisfaction.

Overall, the composite score for empowerment is 3.43 with a standard deviation of 0.50, denoting a high

level of satisfaction with the empowerment provided by doulas during labor and delivery. This consistently high satisfaction across all indicators highlights the significant positive impact of doula support on enhancing mothers' sense of empowerment during childbirth.

This finding aligns with Gomez *et al.* [15], who emphasize the importance of creating opportunities that empower mothers and healthcare teams. This empowerment fosters hope, dismantles barriers, and strengthens partnerships. Additionally, promoting empowerment helps advance quality in maternal care, ensuring fair and equitable treatment for mothers throughout pregnancy and childbirth.

4. Conclusion

Based on the findings, doula support is essential for expectant mothers. It helps reduce stress and anxiety during labor and delivery. Furthermore, integrating doula support into maternity care can greatly enhance the childbirth experience, leading to higher satisfaction and improved outcomes for mothers.

Disclosure statement

The authors declare no conflict of interest.

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