



Research Paper

## Birth preparedness among antenatal women attending Nurse Led Antenatal clinic at a tertiary care hospital at Vellore, Tamil Nadu

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### ABSTRACT

*Birth preparedness is a critical component of safe motherhood, ensuring timely decision-making and access to skilled care during childbirth. This descriptive cross-sectional study assessed the level of birth preparedness among antenatal women attending the Nurse Led antenatal clinic at Obstetric outpatient department of a tertiary care hospital in Vellore, Tamil Nadu. Using purposive sampling, 156 low-risk antenatal women beyond 38 weeks of gestation with a minimum of four visits to the Nurse-Led Antenatal Clinic were recruited. Data were collected over two months using a researcher-developed questionnaire with a high content validity index (0.90). The tool measured preparedness across 15 items on a five-point Likert scale, categorized as high ( $\geq 4.0$ ), moderate (3.0–3.9), or low ( $< 3.0$ ) preparedness. Data analysis was performed using SPSS.*

*The mean age of participants was  $24.59 \pm 3.59$  years, with most being graduates (56.5%), housewives (85.7%), and belonging to rural areas (65.6%). A majority were primigravida (51.3%), and 74% had no prior exposure to the nurse-led clinic. Findings revealed high preparedness levels across most domains, with the highest mean score for knowledge of expected date of delivery ( $4.79 \pm 0.41$ ). However, resource-dependent aspects showed lower preparedness, notably possession of medical insurance ( $3.36 \pm 1.30$ ), arranging emergency transport ( $3.88 \pm 1.13$ ), and identifying blood donors ( $3.54 \pm 1.09$ ).*

*The study highlights a strong knowledge base but identifies gaps in practical preparedness requiring financial and logistical support. Strengthening nurse-led antenatal services, facilitating access to insurance, and enhancing community-based emergency planning are essential to improving comprehensive birth preparedness.*

**Key Words:** Birth Preparedness, Nurse Led Antenatal Clinic

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### I. INTRODUCTION

Pregnancy is a remarkable journey filled with anticipation, growth and profound change. It is a unique phase in a woman's life during which her body undergoes significant physical, hormonal and emotional adjustments to support the developing baby. Beyond the biological changes, pregnancy also brings new responsibilities, expectations and concerns for the expectant family. Proper guidance, regular antenatal care and emotional support are essential to help women navigate this period with confidence and good health.

As pregnancy progresses, planning for labour and delivery becomes increasingly important. This concept, known as birth preparedness, is a proactive approach that enables pregnant women and their families to make informed decisions well before the onset of labour. Birth preparedness involves several key components: choosing a suitable healthcare facility for delivery, identifying a skilled birth attendant, arranging reliable transportation, saving money for expected and unexpected expenses, preparing essential supplies for the mother and newborn, and recognizing danger signs that may require immediate medical attention. The information about birth preparedness and complication readiness should be the primary focus of teaching for antenatal women nearing term.

Being well-prepared for birth not only helps reduce the stress and uncertainty associated with labour but also contributes significantly to preventing delays in seeking, reaching, and receiving appropriate care. These preventive measures are essential for reducing maternal and neonatal complications. By prioritizing birth

preparedness, families are empowered to face childbirth with greater readiness, confidence and a sense of security. Ultimately, pregnancy and birth preparedness work hand in hand to promote safe motherhood and positive birth outcomes.

## II. BACKGROUND

Birth preparedness demonstrates the expectant mothers on how to recognise labour symptoms and warning indications of complications related to pregnancy. It aids lowering other obstacles to receiving care such as transportation expenses, beliefs about the quality of care and cultural differences<sup>1,2</sup>

Birth preparedness is a strategy to promote the timely use of skilled maternal and neonatal care, especially during childbirth, based on the theory that preparing for childbirth and being ready for complications reduces delays in obtaining this care. Birth preparedness is measured by various key elements including arrangement for transportation, saving money for delivery, identifying skilled birth attendant, identifying place of delivery and identifying blood donor in the case of emergency, knowledge regarding danger signs during pregnancy, labour, postpartum.<sup>3,4</sup>

Birth preparedness is an essential aspect of promoting safe and positive outcomes for both mothers and newborns. It includes a range of planned actions taken during pregnancy to ensure readiness for childbirth—such as accessing skilled maternal health services, being aware of possible complications, and establishing a supportive environment for the mother and baby.<sup>5</sup>

Antenatal women who attend nurse-led antenatal clinics (NLC) tend to gain more comprehensive knowledge about pregnancy, childbirth, and newborn care, leading to improved birth preparedness. Research evidence shows that nurse-led interventions are effective in increasing pregnant women's understanding of key aspects such as danger signs, birth planning, and emergency preparedness. For instance, a study by Hall et al. (2022) demonstrated that women who participated in nurse-led educational sessions demonstrated significantly higher knowledge scores and were better prepared for childbirth compared to those who received standard antenatal care. The personalized counselling, interactive educational formats, and supportive environment provided by nurses foster deeper engagement and empowerment among expectant mothers. This highlights the importance of strengthening nurse-led models in antenatal clinics for improved maternal outcomes.<sup>6</sup> Despite being a cost-effective strategy, birth preparedness is a neglected area of maternal healthcare especially in India, this study aims to find the birth preparedness of antenatal women attending Nurse led antenatal clinic of a tertiary hospital

## III. METHODS

A descriptive cross-sectional study was carried out with purposive sampling method over 2 months period. The study was conducted in the Obstetric outpatient department of a tertiary care hospital at Vellore, Tamil Nadu. A sample size of 156 antenatal women was taken for the study who fulfilled the inclusion criteria, the sample size was calculated based on a similar study done by Patel BB in 2016.<sup>7</sup> Low risk antenatal women were recruited for the study beyond 38 weeks of pregnancy who had a minimum of 4 visits with the Nurse Led antenatal clinic. An informed consent was obtained and a researcher made questionnaire, with a content validity index of 0.90 was administered on birth preparedness to the antenatal women in the outpatient department. Content validity was obtained by 5 experts in the field. The scores on scale ranges from 1–5 (Strongly disagree to Strongly agree). Mean was calculated and interpreted as mean  $\geq 4.0$  = High preparedness, mean 3.0–3.9 = Moderate preparedness, mean  $< 3.0$  = Low preparedness. A pilot study was done for a period of one week with 20 samples to check the feasibility of the study. The data was analysed using SPSS

## IV. RESULTS

**Table 1: Distribution of Samples According to Demographic and Clinical Variables (N=154)**

S. No	Variable	Category	Frequency (n)	Percentage (%)
1	Age (years)	Mean $\pm$ SD	24.59 $\pm$ 3.59	—
2	Education	Secondary	12	7.8
		Higher Secondary	28	18.2
		Graduate	87	56.5
		Postgraduate	27	17.5
3	Religion	Hindu	124	80.5
		Christian	1	0.6
		Muslim	29	18.8
4	Locality	Urban	53	34.4
		Rural	101	65.6
5	Occupation	Housewife	132	85.7
		Labourer	7	4.5
		Professional	15	9.7
6	Type of Family	Joint	127	82.5

		Nuclear	27	17.5
7	Gravida & Parity	Primigravida	79	51.3
		Para 1	57	37.0
		Para 2	17	11.0
		Para 3	1	0.6
8	Previous Experience with NLC	Yes	40	26.0
		No	114	74.0

**Inference:** The mean age of the participants was  $24.59 \pm 3.59$  years. Most of them were graduates (56.5%). Most participants belonged to the Hindu religion (80.5%) and resided in rural areas (65.6%). A large proportion were housewives (85.7%). About 82.5% lived in joint families, more than half were primigravida (51.3%). Notably, 74% of participants reported no previous experience with NLC

**Table 2: Descriptive Statistics of Birth Preparedness and Readiness Items (N = 154)**

S.No	Birth Preparedness Item	Mean	SD
1	I know my expected date of delivery	4.79	0.41
2	I have identified the place of my delivery	4.69	0.53
3	I know the signs of onset of labor	4.53	0.79
4	I know when to report to the labor room	4.62	0.66
5	I have made all physical arrangements to receive my new baby	4.60	0.65
6	I have arranged money for delivery	4.43	0.72
7	I have medical insurance	3.36	1.30
8	I have arranged for emergency transport	3.88	1.13
9	I am aware of complications that could arise during labor and delivery	4.43	0.72
10	I have arranged for blood donors if needed	3.54	1.09
11	I know about pain management in labor	4.34	0.84
12	I know about breathing exercises in labor	4.55	0.77
13	I know about the diet to be followed during labor	4.56	0.68
14	I have arranged a social support for me in labor	4.12	0.98
15	I have arranged extra money in case of emergency	4.60	0.62

**Inference:** Most items show high birth preparedness (Mean above 4.0). The highest mean score is for the item *Knowing expected date of delivery* (Mean = 4.79). The lowest mean score was for the item *Having medical insurance* (Mean = 3.36). Emergency transport arrangement (Mean = 3.88), Arranging blood donors (Mean = 3.54)

## V. DISCUSSION

The mean age of the participants was  $24.59 \pm 3.59$  years, indicating that most respondents were young mothers in their early reproductive years. A majority of them were graduates (56.5%), suggesting that the sample had comparatively higher educational attainment. Most participants belonged to the Hindu religion (80.5%) and resided in rural areas (65.6%). A large proportion were housewives (85.7%), reflecting the socioeconomic pattern seen in many Indian maternal populations.

The present study revealed that the majority of respondents demonstrated a strong knowledge base regarding birth preparedness, as evidenced by high mean scores for knowledge-related items, such as the expected date of delivery (Mean = 4.79, SD = 0.41).<sup>8</sup> This trend is consistent with other research, which highlights high knowledge levels and awareness about essential preparations among pregnant women in diverse settings.<sup>9,10</sup>

Despite robust knowledge, lower scores and higher variability were noted for practical and resource-dependent aspects, such as having medical insurance, arranging blood donors, and organizing emergency transport.<sup>8</sup> Such findings align with international and regional studies, which frequently report a discrepancy between awareness and the actual implementation of preparedness measures that require financial or logistical support.<sup>9,11,12</sup>

Existing literature attributes these gaps to factors such as financial constraints, limited insurance access, and insufficient community or family support, which serve as barriers to comprehensive practical preparedness.<sup>9,11</sup> High standard deviations in items like medical insurance and emergency resources underscore the heterogeneous access and ability to effectively plan among participants, a theme echoed in multicentric and cross-sectional research.<sup>8,11,12</sup>

Recommendations from the literature call for interventions that extend beyond information dissemination and address systemic barriers—such as financial support programs, improved health insurance uptake, and community-based emergency planning—to support practical preparedness (9,10). Health care providers and antenatal services are especially well-positioned to bridge these gaps by facilitating both knowledge and resource access during routine maternal care.<sup>9,11</sup>

## VI. CONCLUSION

A nurse led antenatal clinic plays a crucial role in enhancing birth preparedness among pregnant women. Through regular check-ups, individualized counselling, and structured health education sessions, nurses help women understand the importance of planning for a safe delivery. They guide expectant mothers in recognizing danger signs, choosing an appropriate birth facility, arranging transport, identifying a birth companion, and preparing essential items needed during labour and postpartum. Nurses also empower women by addressing their fears, clarifying doubts, and involving spouses or family members in the planning process. By providing continuous support and timely information, the nurse-facilitated antenatal clinic ensures that women feel confident, well-informed, and ready to face childbirth with adequate preparation and support.

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