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Original Article

Impact of Health Education on Birth Preparedness Among Pregnant Women in Low-Income Communities

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Abstract

Introduction: Complication readiness and birth readiness are essential elements of safe motherhood programs. Maternal health outcomes in low-income areas are frequently jeopardized by sociocultural obstacles, inadequate access to care, and ignorance.

Materials & Methods: The pre-test & post-test design was quasi-experimental. Purposive sampling was used to choose 100 pregnant women from two primary health facilities. A systematic questionnaire was used to gather data, and both descriptive and inferential statistics were used for analysis.

Results: Significant gains in knowledge and readiness ratings were noted in every domain following the intervention. Women who had found a birth attendant rose from 48% to 85%, and those who made transportation arrangements rose from 35% to 80%. The variance between the pre- post-intervention scores was statistically important ($p < 0.001$), as per to the paired t-test.

Conclusions: Pregnant women in low-income environments who receive health education are far more prepared for childbirth. In order to decrease difficulties for both mothers and newborns, community-based prenatal education should be improved.

Keywords: Health education; Birth preparedness; Maternal health; Pregnancy; Low-income communities; Safe motherhood

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Introduction

Especially in emerging nations, maternal mortality continues to be a significant public health concern. Around 295,000 women worldwide lost their lives to avoidable pregnancy and childbirth-related causes in 2017, according to the World Health Organization, with low-resource settings accounting for the majority of these

deaths[1]. Maternal deaths are largely caused by inadequate birth preparation and ignorance of warning signs[2]. Knowing the warning signals, finding a trained birth attendant, scheduling transportation, setting aside funds for emergencies, and selecting a delivery location are all parts of being prepared for childbirth[3]. Research indicates that health education can successfully raise awareness, encourage healthy habits, and enhance outcomes for mothers and newborns[4].

Low-income communities are often characterized by limited access to healthcare, high illiteracy rates, cultural taboos, and financial constraints. Pregnant women in these settings are at increased risk of delivery complications due to delays in decision-making, reaching care, and receiving adequate treatment[5].

Empowering women with knowledge through structured antenatal health education can promote safe delivery practices and reduce delays in seeking care[6]. Despite national and international efforts, many women in marginalized communities remain unaware of essential components of birth preparedness[7]. Study aims to evaluate the effectiveness of health educational programme in improving birth preparedness among pregnant women in low-income groups.

Objectives

1. To assess the level of knowledge related to birth preparedness among pregnant women before and after health education.
2. To evaluate the impact of health education on practices related to birth preparedness.
3. To identify specific areas of improvement in birth preparedness components post-intervention.
4. To recommend strategies for integrating community-based health education into routine antenatal care.

Hypothesis

H_0: There is no significant difference in birth preparedness knowledge and practices before and after health education.

H_1: There is a significant improvement in birth preparedness knowledge and practices after health education.

Materials and Methods

Research Approach: The study employed a quantitative research approach

Research Design: using a s

Sample: Pregnant women

Sample Size: 100 pregnant women

Sampling Technique: Purposive sampling

Population: The target population included all pregnant women attending antenatal clinics in the selected areas.

Setting: The study was conducted in two urban primary health centers located in low-income areas of Jaipur, Rajasthan, India.

- **Inclusion Criteria**:
  - Pregnant women between 16–36 weeks of gestation
  - Willing to participate and provide informed consent
- **Exclusion Criteria**:
  - Women with high-risk pregnancies or known complications

Tools and Techniques

Data was collected using a structured and validated questionnaire covering:

- Socio-demographic profile

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- Knowledge on birth preparedness
- Practices regarding birth planning and emergency readiness

The intervention consisted of three 60-minute sessions covering danger signs, delivery planning, transportation, and emergency funds.

Data Analysis

Data were analyzed using SPSS version 25. Descriptive statistics (frequency, percentage, mean) and inferential statistics (paired t-test, chi-square) were used to assess differences between pretest and posttest scores.

Results

Table 1: Socio-demographic Characteristics (N = 100)

Variable	Frequency	Frequency (%)
Age (years)		
18–24	42	42 (42%)
25–30	38	38 (38%)
>30	20	20 (20%)
Education		
Illiterate	30	30 (30%)
Primary	40	40 (40%)
Secondary or above	30	30 (30%)
Occupation		
Housewife	72	72 (72%)
Employed	28	28 (28%)
Gravida		
Primi	48	48 (48%)
Multi	52	52 (52%)

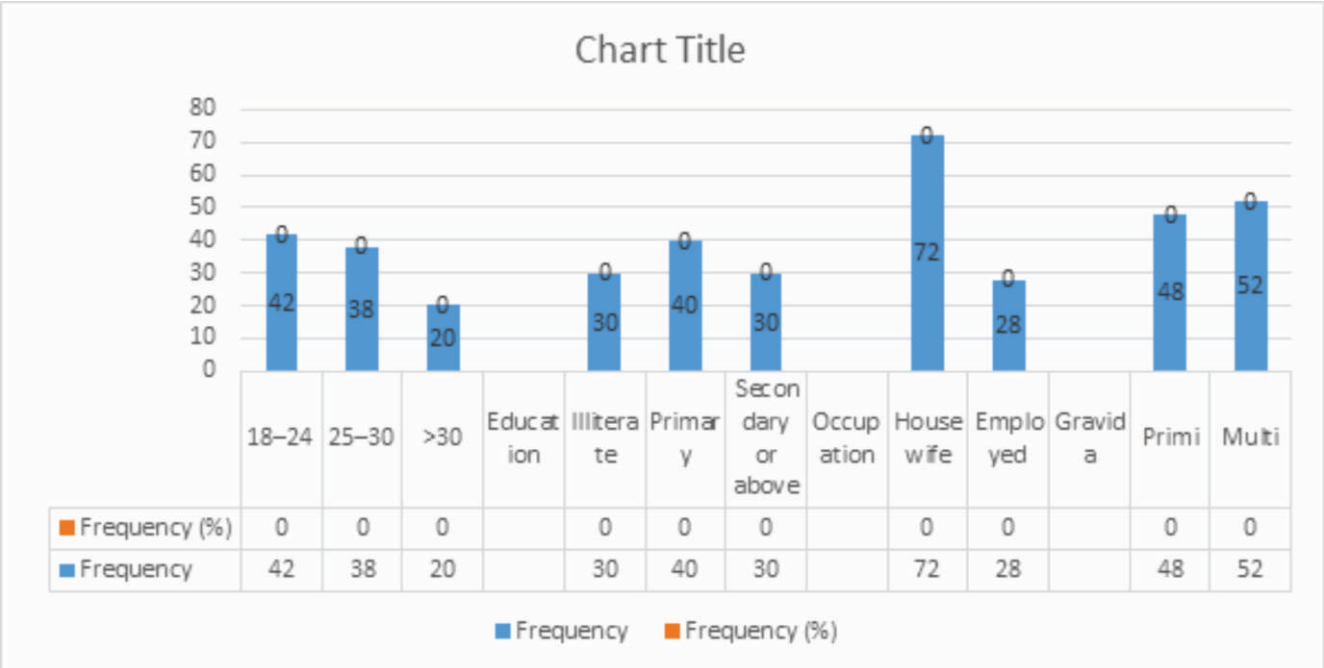

Figure 01: Socio-demographic Characteristics

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Table 2: Pre- and Post-Test Knowledge Scores

Variable	Pre-Test Mean ± SD	Post-Test Mean ± SD	t-value	p-value
Total Knowledge Score (Max=20)	8.4 ± 3.1	16.8 ± 2.5	12.67	<0.001

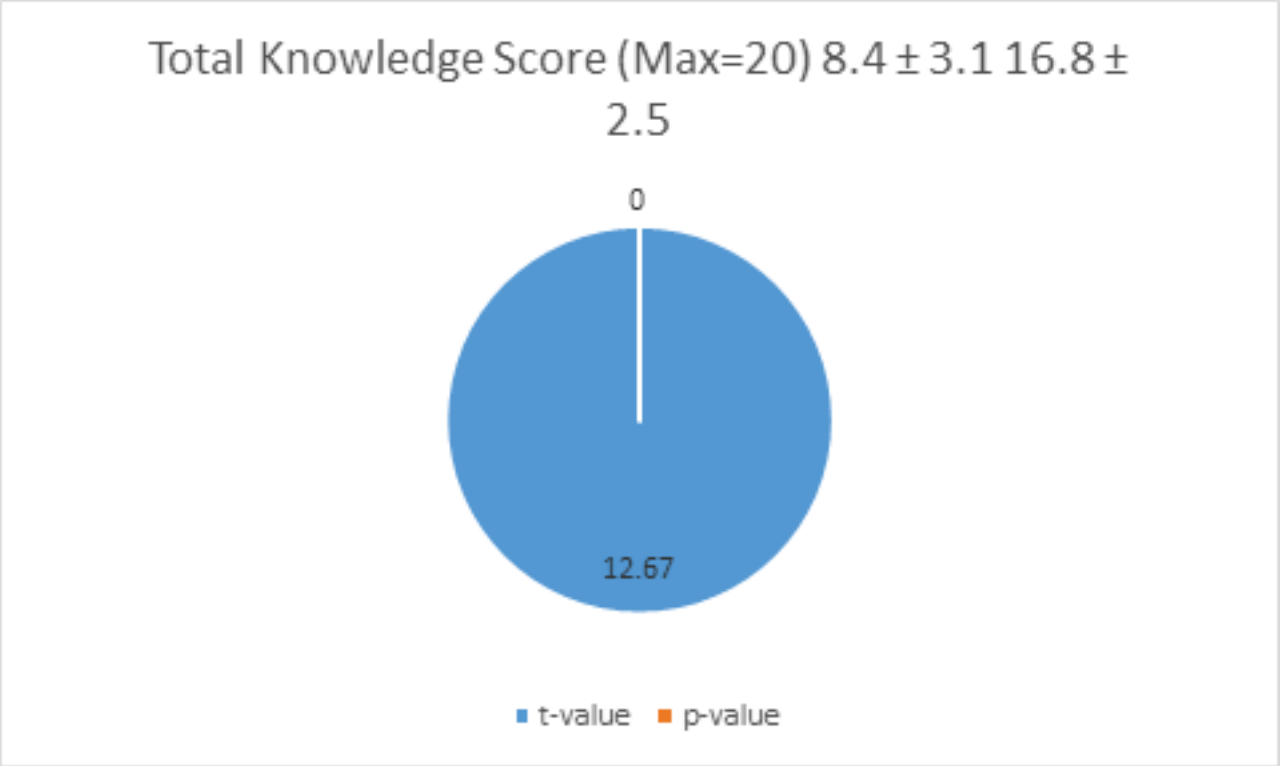

Figure 2: Comparison of Key Birth Preparedness Indicators Before and After Education

Preparedness Component	Pre (%)	Post (%)
Identified birth attendant	48%	85%
Arranged transport	35%	80%
Saved emergency funds	28%	76%
Identified delivery facility	50%	90%

Significant improvements were observed across all domains of birth preparedness following the health education intervention. The proportion of pregnant women who had identified a birth attendant increased from **48% in the pre-intervention phase to 85% post-intervention**. Similarly, the number of women who had arranged transportation to a health facility rose from **35% to 80%**. Other key components, such as saving money for emergencies and selecting a delivery site, also demonstrated substantial gains.

The **mean knowledge score increased from 8.4 ± 3.1 to 16.8 ± 2.5**, indicating a marked enhancement in awareness. This difference was found to be **statistically significant**, as evidenced by a **paired t-test ($p < 0.001$)**. These results confirm the effectiveness of the structured health education sessions in improving both knowledge and practical readiness for childbirth among pregnant women in low-income communities.

Significant improvement observed across all indicators ($p < 0.05$)

Discussion

The findings show that after receiving health education, knowledge and practices significantly improved. The rise in women choosing a delivery location and scheduling transportation is consistent with earlier research

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highlighting the contribution of education to better health-seeking behavior[8,9].

Women were able to get useful advice and have misconceptions cleared up during the organized sessions. This is in line with the findings of Agha and Tappis (2016), who found that maternal health indices in low-income settings were considerably improved by community-based health promotion[10].

The usefulness of participatory, culturally relevant teaching strategies is also demonstrated by the changes that have been seen. The post-test results support studies showing that education improved birth outcomes in Ethiopia and Nepal[11,12].

The lack of a control group, non-random sampling, and small sample size are drawbacks despite the favorable results. It is advised that more research be done with randomized controlled designs.

Conclusions

In low-income communities, health education is a potent intervention to improve pregnant women's readiness for childbirth. In the end, structured, locally delivered workshops can lower maternal and newborn morbidity by promoting healthy habits and greatly increasing knowledge.

Recommendations

1. Integrate health education as a routine part of antenatal services in all community health centers.
2. Train community health workers to deliver consistent birth preparedness messages.
3. Develop low-literacy educational materials (visual charts, audio messages) for wide dissemination.
4. Conduct regular refresher programs for frontline health workers.
5. Include family members in sessions to support women's decisions and preparedness planning.

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Conflicts of interests: There is no conflict of interest

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