# A study to evaluate the impact of a midwife-led respectful maternity care education program on staff nurses and the satisfaction levels of postnatal mothers admitted to a maternity tertiary care hospital in Mahesana district

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**KEYWORDS**

Respectful maternity care, midwife-led education, staff nurses, postnatal satisfaction, maternal healthcare, quality of care.

**ABSTRACT**

**Background:** Respectful maternity care is an essential component of maternal care, promoting dignity, compassion, and patient-centered care during delivery. Despite this, cases of disrespect and poor care practices are still common. The current study sought to evaluate the effect of a midwife-led respectful maternity care education program on staff nurses' knowledge and practice and postnatal mothers' satisfaction levels.

**Methods:** A quasi-experimental study was carried out at a maternity tertiary care hospital in Kheralu, Gujarat. Thirty staff nurses and 30 postnatal mothers were involved. The intervention included a structured educational program for the nurses, followed by the implementation of routine care. Pre- and post-test were measured using structured questionnaires and observational checklists. Statistical tests, such as paired t-tests and McNemar's test, were used to assess differences before and after the intervention.

**Results:** The research proved a notable increase in nurses' knowledge and practice scores after the intervention ($p < 0.001$). The proportion of nurses with sufficient knowledge improved from 0% to 76.67%, and good performance levels improved from 0% to 80%. Likewise, postnatal mothers' satisfaction levels were enhanced, with high satisfaction improving from 0% to 76.67% ($p < 0.001$). Experienced nurses had better post-test knowledge and performance scores, indicating a positive relationship between experience and intervention effectiveness.

**Conclusion:** The respectful maternity care education program, led by a midwife, was a successful approach in upgrading nurses' competencies and increasing postnatal mothers' satisfaction. Incorporating such programs as part of routine maternal care may facilitate dignified and high-quality care during childbearing.

## I. INTRODUCTION

Maternal health is a fundamental component of health care that has a significant impact on the well-being of the mother and the newborn. Respectful maternity care (RMC) is a natural component of quality maternal health care, and it guarantees that women receive dignified, respectful, and compassionate and evidence-based care during pregnancy, childbirth, and the postpartum period. Respect and protection of women's rights like dignity, privacy, confidentiality, and protection from harm and mistreatment are the core values of RMC. Despite the international community's efforts towards the establishment of maternal health care services, maternal mortality is still a significant issue, particularly in developing countries where disparities in health exist [1].

According to the World Health Organization (WHO), the experience of care is as crucial as clinical care in the success of the outcome of childbirth. Quality maternity care should not only focus on medical intervention but humane and supportive care with respect to women's autonomy and choices. It has been proven through research that the failure to provide respectful maternity care leads to a loss of confidence in the healthcare provider, underuse of institutional birth facilities, and increased maternal and neonatal complications. Therefore, the inclusion of RMC in midwifery-led education and training programs is crucial in a bid to improve the quality of care and improve maternal and neonatal health outcomes [2-3].

In India, institutional deliveries have risen significantly, with the National Family Health Survey (NFHS-5) reporting a rise from 70.6% in 2008-2009 to 95.5% in 2021-2022. However, there are gaps, particularly in ensuring positive birth and freedom from mistreatment. Studies have revealed that the majority of women do not experience culturally respectful care, are not enabled to ask questions, and are not typically informed about procedures being done during labor and birth. Furthermore, an overwhelming majority of healthcare providers do not obtain consent prior to procedures, maintain privacy, or offer continuous emotional support during labor. These gaps indicate the necessity for formal training programs for midwives and staff nurses to enhance their knowledge and practice of respectful maternity care [4-5].

The Government of India has also come to realize this necessity and has initiated various programs, including the "LaQshya" program, to improve the quality of maternal care in labor wards and maternity operation theatres. Moreover, the introduction of Regional Midwifery Training Institutes (RMTIs) in various states is directed towards enhancing midwifery education and ensuring best practice implementation in maternity care. Midwife-led models of care have been globally recognized for their capacity to provide high-quality, woman-centered care, permitting natural birth and reducing unnecessary medical interventions [6-7].

This study aims to assess the effectiveness of a midwife-led respectful maternity care education program among staff nurses and assess the degree of satisfaction among postnatal mothers admitted to a maternity tertiary care hospital in Mahesana district. Identifying gaps in knowledge and practice, this study aims to contribute to the enhancement of maternal

healthcare services, ultimately ensuring that every woman receives the respectful and dignified care she deserves [8].

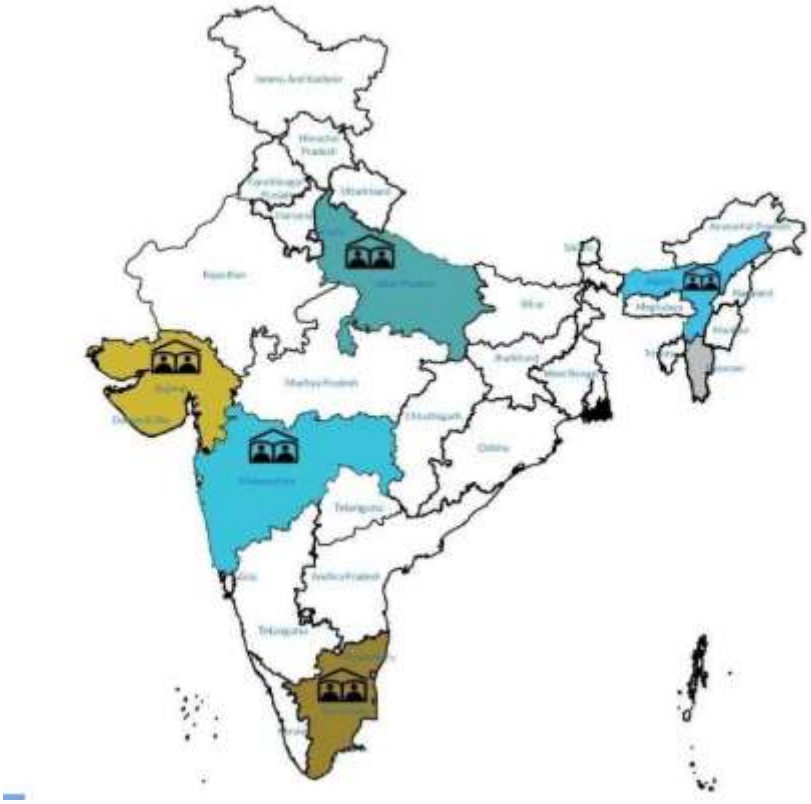

**Figure 1. Locations of Regional Midwifery Training Institutes**

The figure Locations of Regional Midwifery Training Institutes should be positioned in the context of how Regional Midwifery Training Institutes are established. It should be positioned after the naming of the actual locations of the institutes, with the subheading International Locations of Regional Midwifery Training Institutes. This will position the visual information alongside the text and makes it easier to understand the geographical distribution of the centers.

## II. METHODS

### Research Design and Approach

The study employed a quantitative research design to evaluate the effectiveness of a midwife-led respectful maternity care education program among staff nurses and to establish the level of satisfaction among postnatal mothers. A quasi-experimental one-group pretest-posttest research design was employed, where pretest data were gathered prior to the intervention, followed by an education program, and posttest data were gathered after a period of time. The design allowed the evaluation of changes in the levels of knowledge among staff nurses and the level of satisfaction among postnatal mothers.

### Study Setting

The study was carried out at the Institute of Obstetrics and Gynaecology, a maternity tertiary care hospital in Kheralu, Gujarat. The hospital is a 150-bedded hospital with specializations in antenatal, postnatal, neonatal, and gynecological medical and surgical care. The hospital has labor wards, intensive care units, operation theaters, and emergency departments. The

hospital was selected based on its feasibility, availability of a large enough sample size, and availability of trained nursing staff needed for the study.

**Population and Sample Size**

The target population was divided into two phases: Phase I was staff nurses working in the maternity tertiary care hospital, and Phase II was postnatal mothers admitted to the postnatal ward of the same hospital. The accessible population in Phase I was staff nurses working in the labor ward, while Phase II was postnatal mothers admitted for postnatal care. Thirty staff nurses and 30 postnatal mothers were selected for the study.

**Sampling Technique and Criteria for Selection**

A purposive sampling technique was used to enroll postnatal mothers and staff nurses according to predetermined inclusion and exclusion criteria. The inclusion criteria for staff nurses were being a staff nurse working in the Institute of Obstetrics and Gynaecology, willing to participate, and available during the study period. Postnatal mothers who were included in the study were those who had undergone normal vaginal delivery and were willing to participate. Staff nurses who were unwilling to participate were excluded. Postnatal mothers who were unable to communicate in Hindi or English, with medical complications, or with newborns with medical complications were excluded from the study.

**Variables**

The independent variable in Phase I was the respectful maternity care education program carried out by midwives and practiced among staff nurses, but in Phase II, it was routine maternity care practiced by trained staff nurses to postnatal mothers. The dependent variables were the level of knowledge of staff nurses regarding respectful maternity care in Phase I and the level of satisfaction of postnatal mothers regarding communication and care from healthcare providers in Phase II. Extraneous variables were demographic in nature, i.e., age, level of education, marital status, religion, work experience, and language proficiency for staff nurses, while for postnatal mothers, other variables were occupation, obstetric history, family type, and place of residence.

**Development and Description of the Tool**

The research tool was designed to assess staff nurses' knowledge and performance and satisfaction levels among postnatal mothers. The tool was designed after receiving views from nursing and obstetric professionals to build content validity. The tool had various sections. The first part assessed demographic variables among staff nurses and a semi-structured multiple-choice questionnaire to assess knowledge regarding respectful maternity care. Scoring rubrics were used to categorize levels of knowledge as poor (0-50%), moderate (51-75%), and good (76-100%). Additionally, an observational checklist was used to identify their performance, and scores were categorized as poor (0-50%), moderate (51-75%), and good (76-100%). The second part assessed postnatal mothers' demographic profile and satisfaction levels through a structured questionnaire. Satisfaction scores were categorized as not satisfied (0-50%), moderately satisfied (51-75%), and well satisfied (76-100%).

**Content Validity and Reliability**

The research tool was validated by nursing and obstetric professionals, and recommendations were taken for its improvement to be more effective. The test-retest method was followed to ensure reliability, and values of the correlation coefficient, i.e., 0.83 for scores on knowledge, 0.85 for scores on performance, and 0.82 for scores on satisfaction, reflecting high reliability.

**Ethical Considerations**

Ethical principles of beneficence, confidentiality, and justice were ensured during the conduct of the study. Participants were informed regarding minimum risks involved and confidentiality ensured by anonymizing the data. Participants were selected entirely on research grounds to ensure fairness and privacy during data colle**ction.**

**Pilot Study**

A pilot study was conducted at Mehsana maternity care hospital to assess the feasibility of the main study. A permission letter was obtained from the director of the hospital, and 10 participants, including five staff nurses and five postnatal mothers, were selected. The pretest data were gathered, followed by the distribution of a 45-minute midwife-guided educational program through PowerPoint presentation, flashcards, and pamphlets. Posttest measures were taken after seven days among staff nurses, while postnatal mothers were monitored for their level of satisfaction. The results concluded that the study design was feasible and effective to implement.

**Data Collection Procedure**

The procedure of data collection was conducted in two phases. In Phase I, 30 staff nurses meeting the inclusion criteria were identified and provided with an appropriate explanation of the study purpose. Written informed consent was obtained prior to pretest application using the structured questionnaire. It was followed by a respectful maternity care education program presented by the midwife with training through flashcards and pamphlets for 45 minutes. A posttest measure was taken after seven days using the same tool.

Phase II was carried out with 30 postnatal mothers who were selected with the same purposive sampling method. After obtaining informed consent, the pretest assessment was obtained for measurement of satisfaction level. Routine respectful maternity care was given thereafter by trained staff nurses. A posttest measure was obtained one week later using the same satisfaction questionnaire. Data collection was carried out with an attitude of gratitude for the participants.

**Plan for Data Analysis**

The thus-collected data were examined using descriptive and inferential statistical techniques. Descriptive statistics were used for quantification of demographic variables by frequency and percentage distribution. Mean and standard deviation were used for representation of knowledge, performance, and satisfaction scores. Inferential statistics were used for evaluation of association between demographic variables and knowledge, performance, and satisfaction scores by using Pearson's chi-square test. Pretest and posttest knowledge scores were compared by paired t-test, whereas qualitative improvement in knowledge levels was examined by extended McNemar test. Data were represented graphically by simple bar diagrams, multiple bar diagrams, pie charts, and box plots. P-value less than 0.05 was considered statistically significant in all analyses and two-tailed tests were used for statistical calculation.

## III. RESULTS

This research examined the impact of a midwife-led respectful maternity care education program on the knowledge, practice, and level of satisfaction of postnatal mothers among staff nurses. The results showed that there were significant improvements in all aspects measured after intervention.

### Demographic Characteristics of Staff Nurses and Postnatal Mothers

The research covered 30 staff nurses and 30 postnatal mothers. Demographic characteristics of the staff nurses are presented in Table 1. The majority of nurses were aged between 31-40 years, had Diploma or Bachelor's degree, and possessed significant work experience, especially in performing labor. The nurses were mostly married and Hindu. Demographic characteristics of the postnatal mothers are presented in Table 4.18. The majority of the mothers were aged between 21-30 years.

**Table 1: Profile of Staff Nurses**

| Demographic Variable | Category | Number (N=30) | Percentage (%) |
|---|---|---|---|
| Age | 31-35 years | 10 | 33.33 |
| | 36-40 years | 13 | 43.43 |
| Education Status | Diploma/G.N.M | 22 | 73.33 |
| Marital Status | Married | 24 | 80.00 |
| Total Work Experience | 6-10 years | 14 | 46.66 |
| Experience in Labor | 6-10 years | 13 | 43.33 |
| Mother Tongue | Gujarati | 25 | 83.33 |

**Impact on Staff Nurses: Knowledge and Practice**

The educational program made staff nurses significantly aware of respectful maternity care. Table 2 describes pre- and post-test knowledge and performance level. Most nurses upgraded their level of knowledge from a moderate to adequate. The knowledge score rose greatly from 8.20 to 12.77 ($t = 10.53$, $p < 0.001$). Likewise, observational checklist performance scores also significantly improved, reflecting nurses' practice positively. The mean checklist score increased from 8 to 12.36 ($t = 3.02$, $p < 0.001$).

**Table 2: Comparison of Pre- and Post-Test Knowledge and Performance Levels in Staff Nurses**

| Level of Knowledge/Performance | Pre-Test (%) | Post-Test (%) | Extended McNemar's Test (p-value) |
|---|---|---|---|
| **Knowledge** | | | |
| Inadequate | 43.33 | 0.00 | p = 0.001 (S) |
| Moderate | 56.67 | 23.33 | |
| Adequate | 0.00 | 76.67 | |
| **Performance** | | | |
| Poor | 46.67 | 0.00 | p = 0.001 (S) |
| Moderate | 53.33 | 20.00 | |
| Good | 0.00 | 80.00 | |

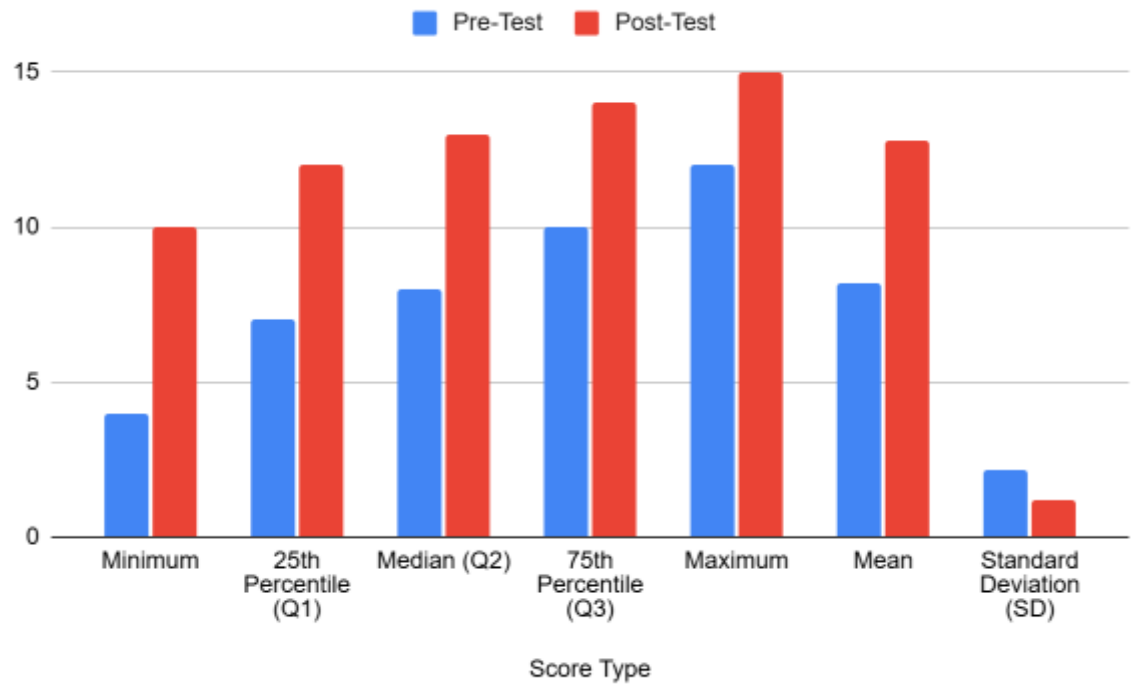


**Figure 1: Comparison of Mean Pretest and Post-test Knowledge Scores Among Staff Nurses**

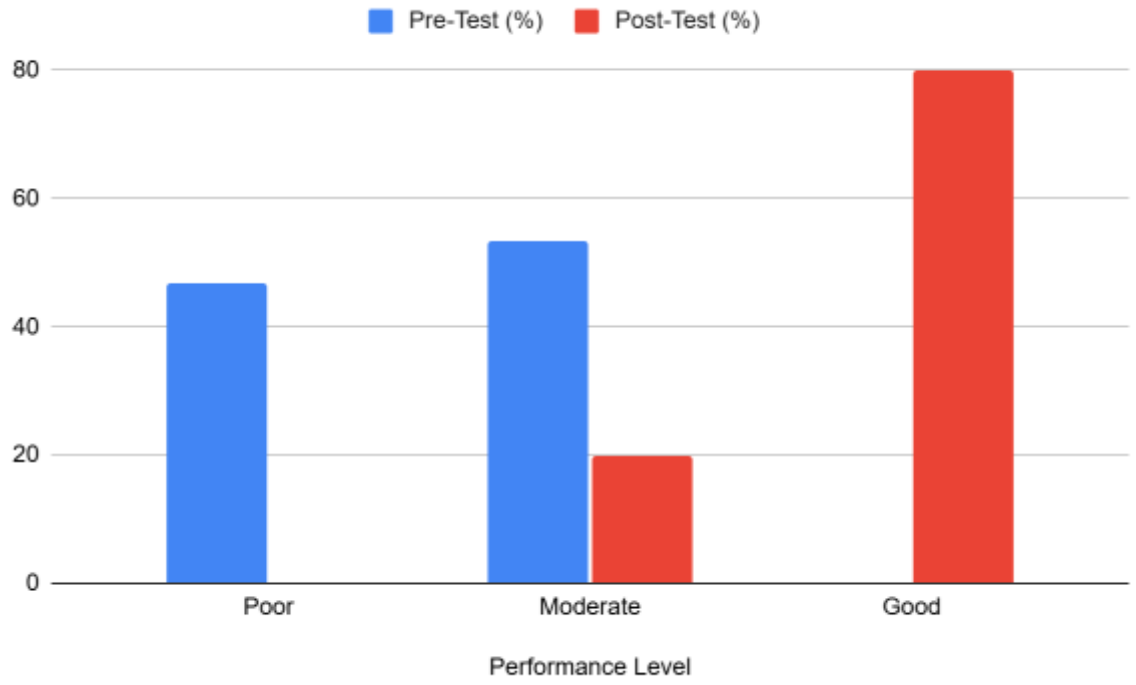


**Figure 2: Comparison of Pretest and Post-test Performance Levels Among Staff Nurses**

### Impact on Postnatal Mothers: Satisfaction

The midwife-led intervention also had a positive effect on the levels of postnatal mothers' satisfaction. Prior to the intervention, most mothers (56.67%) had expressed low levels of

satisfaction; however, after the intervention, an overwhelming 76.67% expressed high levels of satisfaction. The average satisfaction score increased from 4.70 to 8.03 ($t = 9.61$, $p < 0.001$).

**Figure 3: Comparison of Pretest and Posttest Satisfaction Scores of Postnatal Mothers**

**Table 3: Comparison of Pre- and Post-Test Satisfaction Levels in Postnatal Mothers**

| Level of Satisfaction | Pre-Test (%) | Post-Test (%) | Extended McNemar's Test (p-value) |
|---|---|---|---|
| Low | 56.67 | 0.00 | p = 0.001(S) |
| Moderate | 43.33 | 23.33 | |
| High | 0.00 | 76.67 | |

### Association with Demographic Variables

The research also investigated correlations between the post-test scores (performance and knowledge) and the demographic characteristics of the staff nurses. Older nurses with greater work experience and greater labor experience showed higher performance and knowledge scores, which suggests that experience could have had an impact on the effectiveness of the training and nurses' capacity to apply respectful maternity care.

## IV. DISCUSSION

The results of the present study point to the impressive effect of a respectful maternity care education program under the guidance of a midwife on staff nurses' knowledge and practice and on postnatal mothers' levels of satisfaction. The findings reveal considerable enhancement in the quality of maternity care, thus supporting the critical role played by formal training programs in establishing a culture of respectful and patient-focused maternal care.

The results are consistent with other studies that highlight training as playing a crucial role in reducing disrespect and abuse during childbirth. Sen et al. (2018) [9] highlighted that systematic changes are required to correct mistreatment in healthcare facilities and ensure a dignified childbirth experience. Likewise, Solnes Miltenburg et al. (2018) [10] explored how structural violence perpetuates the occurrence of disrespect in maternity care, thereby influencing maternal outcomes. The current study confirms these assertions, showing how focused education has the ability to change nurses' attitudes and behavior towards a respectful and empathetic practice.

Improvement in staff nurses' knowledge and performance is one of the most significant things about this study. Prior to the intervention, most nurses showed moderate knowledge with a significant portion showing poor familiarity with respectful maternity care principles. Nonetheless, following the intervention, a significant change was noted, where 76.67% of the nurses achieved a satisfactory level of knowledge. The average score for knowledge increased considerably from 8.20 to 12.77, confirming the effectiveness of the training program. The result is consistent with Pandiselvi et al. (2024) [13], who concluded that formal training in respectful maternity care enhanced nurses' competency and awareness significantly. In addition, levels of performance were significantly improved with 80% of the

nurses attaining good performance after the intervention, compared to none prior to the training. These findings highlight the significance of ongoing professional development in ensuring quality maternal health care services [15].

The research further indicated a high level of improvement in the levels of satisfaction of postnatal mothers after the intervention. Firstly, over half of the mothers had low satisfaction with the care provided to them, indicating concerns in communication, dignity, and overall birthing experience. Nevertheless, after intervention, 76.67% of mothers indicated high satisfaction, where the mean score for satisfaction was raised from 4.70 to 8.03. This increase indicates that educating staff nurses on respectful maternity care had a direct positive effect on the postnatal mothers' experiences. These results are consistent with the Giving Voice to Mothers study by Vedam et al. (2019) [11], which emphasized the inequalities in maternal care and the significance of patient-centered care in improving maternal satisfaction.

The correlation between demographic variables and post-test scores among staff nurses indicates that experience was a critical factor in the success of the intervention. Nurses who had spent more years at work and labor were better in both knowledge and practice tests, showing that experienced professionals were more open to training. This is seen in the context of WHO respectful maternity care recommendations, which support experience-based training and ongoing professional development to enforce best practices (WHO, 2024). In addition, Ukke et al. (2019) [12] identified that more professionally exposed nurses were likely to practice respectful maternity care, yet another finding affirming this research.

The above findings as a whole thus substantiate the argument that training in respectful maternity care should form a part of maternal healthcare provision. The study offers empirical data demonstrating that evidence-based education courses can contribute greatly to both the improvement of provider behavior and patient satisfaction. It also underscores the importance of dealing with structural issues that cause disrespect and poor treatment in maternity environments, as highlighted by earlier studies (Solnes Miltenburg et al., 2018) [10]. Implementing the interventions in other healthcare environments might decrease maternal distress and enhance childbirth experiences overall.

Although the current study's findings are promising, more research should be carried out to examine the long-term sustainability of these improvements. Subsequent research may explore whether policy-level adjustments or sporadic refresher training is needed to sustain high levels of respectful maternity care. Further, the inclusion of patient feedback mechanisms may assist in streamlining training programs and ensuring that maternity services continue to be patient-focused. The current study provides a strong argument for the universalization of midwife-led training programs to promote a culture of respect, dignity, and quality in maternal healthcare services.

## V. CONCLUSION

The outcome of this research emphasizes the marked effect of midwife-led respectful maternity care training programs on improving the performance and knowledge of staff nurses alongside the level of satisfaction of postnatal mothers. The great improvement in knowledge and practice scores among the nurses after intervention demonstrates the efficacy of systematic training in the development of respectful and patient-focused maternity care. Similarly, the significant increase in postnatal mothers' satisfaction scores highlights the immediate link between quality of care and patient experience. These findings concur with

previous literature, strengthening the need for ongoing professional training and institutional backing in preventing disrespect and mistreatment in childbirth. Considering the positive effects witnessed, incorporation of such training programs into maternal health systems can be an essential measure towards promoting dignified, humane, and high-quality maternity care, thereby leading to enhanced maternal and neonatal health outcomes.

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