

FROM PROTOCOL TO MEASUREMENT: PILOTING A CULTURALLY ADAPTED RESPECTFUL MATERNITY CARE INSTRUMENT IN TRIBAL ODISHA, INDIA

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Abstract:

Background: Respectful maternity care (RMC) is crucial for quality maternal services, particularly in diverse settings. This study assesses healthcare professionals' knowledge, attitude, practice, and perceived barriers (KAP-B) regarding RMC, focusing on nurses' roles, in the sole First Referral Unit (FRU) in the Particularly Vulnerable Tribal Group (PVTG) predominant Gajapati district of Odisha, India. **Objectives:** This study aimed to: (1) Quantify RMC training gaps and protocol adherence among healthcare providers; (2) Compare RMC implementation between nurses and doctors; (3) identify cultural and systemic barriers; and (4) propose context-specific interventions for PVTG-dominated districts.

Methods: A cross-sectional study was conducted using a structured questionnaire administered to all 12 healthcare providers (9 nurses and 3 specialist doctors) engaged at the Maternity wing of the District Headquarters Hospital. Data were analyzed using descriptive statistics, nonparametric tests, and chi-square tests.

Results: Only 25% of respondents had received formal RMC training. All respondents believed in RMC's importance for outcomes. About 67% disagreed that cultural differences influenced RMC provision, while language and beliefs were barriers. Majority indicated frequent adherence to RMC protocols, with no difference between nurses and doctors. Major challenges included inadequate resources and poor communication, with nurses affected by workloads.

Conclusion: Nurses, vital to respectful maternity care (RMC), face hurdles despite acknowledging its value. Context-specific solutions and cultural training enhance RMC quality in tribal regions. Overcoming resource limitations and improving nurses' cross-cultural skills are crucial for maternal care in tribal regions. These challenges require strategies to ensure effective RMC implementation across healthcare settings.

Keywords: Respectful maternity care; tribal communities; maternal health services; healthcare providers; nurses; cultural competence

INTRODUCTION

Respectful maternity care (RMC) is a crucial component of fundamental human rights, meant to ensure that all women are treated with respect during pregnancy and childbirth. It is a vital component of quality maternal healthcare, promoting the autonomy, privacy, and informed choice of women while safeguarding them from mistreatment, harm, and discrimination ([Embargo 2023-11-15] Gomez.Pdf, n.d.; Janssen et al., 2000; Puthussery et al., 2023). Hence, with diverse cultural practices and beliefs, such as tribal-dominated areas, providing RMC takes on heightened significance as it helps bridge cultural differences and build trust with local communities, thereby improving the community's maternal and neonatal health (Ansari & Yeravdekar, 2023).

In many regions of the world, particularly in low and middle-income countries, disrespectful and abusive treatment during childbirth is still the order of the day (Dzomeku et al., 2023; Mira-Catalá et al., 2024). Women from marginalized communities, including Indigenous and tribal populations, are particularly more susceptible to such ill-treatment due to deep-rooted sociocultural practices, language barriers, and limited access to quality healthcare services (Lunda et al., 2024). If unaddressed, these issues can perpetuate an unending cycle of fear, low utilization of skilled birth attendance, and adverse maternal and neonatal outcomes (Jungari et al., 2021).

Recognizing the severity of this issue, the World Health Organization (WHO) has made RMC a fundamental aspect of its endeavors to enhance maternal health and ensure the attainment of the Sustainable Development Goals (SDGs) that pertain to reducing maternal mortality and universal access to sexual and reproductive healthcare services (OECD & The World Bank, 2023, 2023; Puthussery et al., 2023). The WHO's vision for RMC is one that respects women's basic human rights, delivers high-quality care, ensures timely referrals,

and guarantees effective communication and support throughout the childbirth continuum (Altaf et al., n.d.).

In India, where a significant part of the population is found in rural and tribal areas, ensuring that RMC is provided to these underserved areas is key to solving persistent disparities in maternal health (Orpin, 2019; Tilden et al., 2025). This study explored the RMC practices of healthcare professionals at the District Headquarters Hospital situated in one of the PVTG-dominated districts in India. To identify gaps and provide suggestions that can be acted upon to improve RMC provision, this study considers their knowledge, attitudes, implementation challenges, and perceived barriers.

Through a comprehensive examination of RMC practices and their associated barriers, this study seeks to contribute to the broader efforts of promoting respectful, culturally competent, and patient-centered maternal healthcare services, specifically for women belonging to Particularly Vulnerable Tribal Groups (PVTGs). Ultimately, by upholding the principles of RMC, healthcare systems would create a culture of trust in which mothers could give birth without fear, paving the way for improved maternal and neonatal health outcomes, particularly among marginalized communities (Cantor et al., 2024; Irvine, 2022; Kaur et al., 2025).

According to the Health Management Information System (HMIS) data for the fiscal year 2023-2024 provided by the District Administration of Gajapati District, approximately 31% of all institutional deliveries, including caesarean sections, were conducted at the District Headquarters Hospital (DHH). The DHH serves as the sole First Referral Unit (FRU) in this PVTG-dominated district.

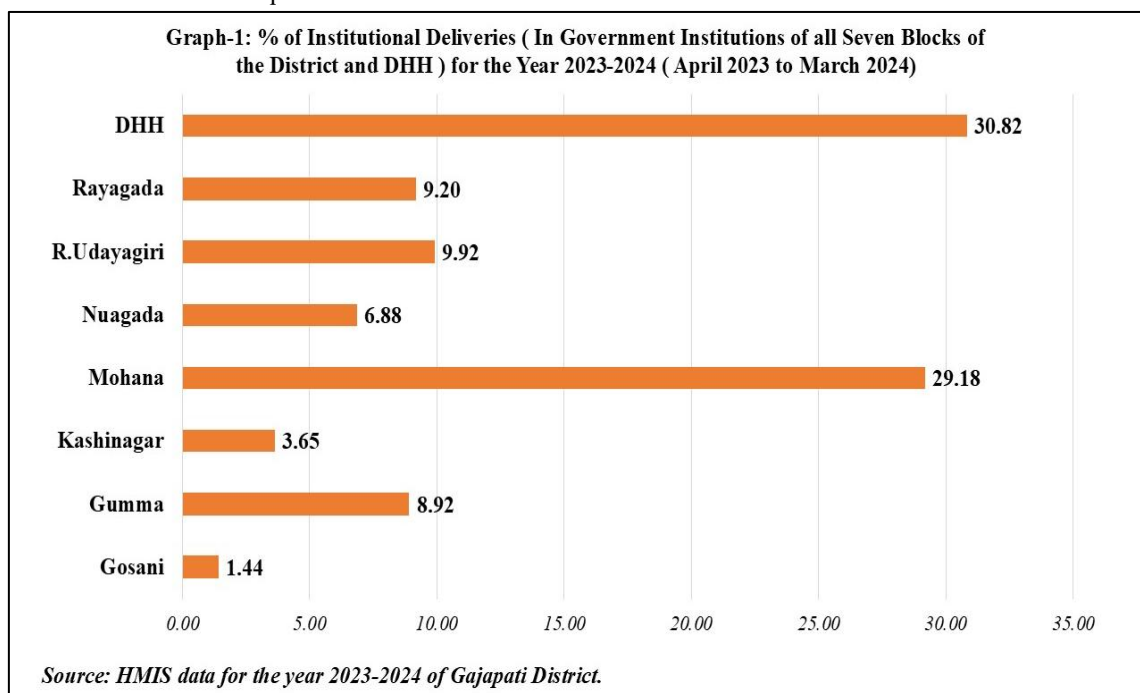
RESEARCH METHODOLOGY

Study Design

A cross-sectional survey design was employed to investigate the contemporary landscape of Respectful Maternity Care (RMC) provided to Particularly Vulnerable Tribal Group (PVTG) women by healthcare providers at the District Headquarters Hospital (DHH), the sole First Referral Unit (FRU) in Gajapati district, Odisha, India. This methodological approach was strategically selected to capture a comprehensive snapshot of RMC practices, attitudes, and knowledge at a single temporal point, thereby facilitating a detailed and precise analysis of the prevailing conditions. The cross-sectional design aligns with similar studies examining healthcare provider perspectives on RMC (Mirzania et al., 2023). The study is presented as a facility-based pilot investigation using total population sampling of maternity-ward staff.

Study Setting and Participants

The research was conducted in DHH-Paralakhemundi, following the site selection criteria established by previous studies in similar healthcare settings (Bradley et al., 2016). The maternity ward of this facility constituted the study area. The sampling approach followed the total population sampling technique as described by (Etikan, 2016), where all eligible participants in a defined setting are included. Nurses (Nursing Officers) as well as doctors (Obstetricians and Gynaecologists) who were actively engaged in providing care in the maternity ward throughout the study period were invited for participation. All the 12 health care professionals (nine nurses and three doctors) dedicatedly working for the maternity division, voluntarily consented to fill out the questionnaire.



Data Collection Instrument

Based on an extensive literature review on RMC and expert consultation; a structured questionnaire was developed following the validated framework proposed by (Bohren et al., 2015) and adapted by (Vogel et

al., 2016). The instrument included both closed-end and open-end questions spanning various domains including demographic data, RMC knowledge, perceptions towards it, practice aspects, patient responses and obstacles perceived. Content validity was assured through piloting the tool with a small group of health workers in a nearby Community Health Center (CHC), followed by refinements based on the feedback received, adhering to the validation process described by Polit and Beck (Polit & Beck, 2017).

Data were collected over a two-week period. Questionnaires were self-administered in order to maintain the respondent's anonymity and elicit as objective responses as possible, following the methodological recommendations of (Ann, 2014) for healthcare surveys. It was made clear to the participants that the data gathered in the study would be kept discreet.

Data Analysis

SPSS version 26.0 was used for data coding and analysis, following the current best practices for healthcare research (LoBiondo-Wood & Haber, 2014). Descriptive statistics summarized participants' characteristics and variables. Given the small sample size ($n=12$) and non-normal distribution confirmed by the Kolmogorov-Smirnov test ($p<0.05$), non-parametric tests were employed as recommended for small healthcare samples (Kim, 2017).

The Kruskal-Wallis test was used to compare RMC knowledge, attitudes, and practices across occupational categories, as this test is suitable for comparing ordinal or non-normally distributed continuous variables in small samples (Clark et al., 2023; McKnight & Najab, 2010). For pairwise comparisons of significant differences, the Mann-Whitney U test was employed as the non-parametric alternative to the independent samples t-test (Winter et al., 2016).

For categorical variables, chi-square tests were used to determine associations. When the expected cell frequencies were below five, Fisher's exact test was used, as recommended for small samples in recent healthcare guidelines (Kim, 2017). Statistical significance was set at $p<0.05$. Effect sizes were calculated to show the magnitude of the observed differences, following current recommendations for transparent reporting in cross-sectional studies (Sullivan & Feinn, 2012).

Limitations

Several limitations warrant consideration when interpreting the findings of this study. The small sample size of 12 healthcare practitioners, representing the maternity department staff, limits the statistical power and generalizability. This challenge is common in facility-based studies, particularly in specialized healthcare settings that serve marginalized populations (Korngiebel et al., 2015). The sample size constraint prevented robust subgroup analyses and may have resulted in Type II errors.

The cross-sectional design precluded causal inferences about the relationship between training, cultural awareness, and RMC implementation. Cross-sectional studies capture only a snapshot of practices that may vary according to workload, patient demographics, and institutional changes (Setia, 2016; Wang & Cheng, 2020). Longitudinal studies are required to establish temporal relationships.

Self-reported data introduce potential biases, including social desirability bias, where respondents may overestimate their adherence to RMC protocols. Recent studies emphasize that the absence of patient perspectives limits our ability to validate healthcare providers' self-assessments (Althubaiti, 2016; Bohren et al., 2019).

The study's focus on a single facility in a PVTG-dominated district limits its transferability to other tribal healthcare settings with different cultural dynamics or organizational structures. Research emphasizes the heterogeneity among communities and the need for locally adapted approaches (Korngiebel et al., 2015; Walters et al., 2020).

Ethical Considerations

This study protocol received ethical clearance from the Institutional Ethics Committee of Medipulse Hospital, Jodhpur (Approval No. MH/IEC/2024/BHR/0007, dated September 11, 2024).

RESULT

Table-1: Assessing Maternity Care Practices and Cultural Considerations: Descriptive Statistics

Descriptive Statistics				
	N	Mean	Std. Deviation	Variance
Occupation	12	1.75	0.452	0.205
Years of Experience in Maternity Care	12	3.08	0.793	0.629
Have you received formal training on Respectful Maternity Care (RMC)?	12	1.75	0.452	0.205
How adequate do you think the training was for preparing you to provide RMC?	3	2.67	2.082	4.333

To what extent do you believe that providing respectful maternity care is important for patient outcomes?	12	4.50	0.522	0.273
Do you think that cultural differences in the tribal-dominated district affect the provision of Respectful Maternity Care?	12	2.08	0.793	0.629
What kind of cultural differences do you encounter or consider when providing RMC?	12	2.25	1.545	2.386
On a scale of 1 to 5, how consistently do you follow the established protocols for Respectful Maternity Care?	12	3.58	0.669	0.447
How comfortable are you in communicating with patients from diverse cultural backgrounds?	12	3.58	0.669	0.447
How often do you seek feedback from maternity care patients regarding their experience with the care provided?	12	3.33	0.492	0.242
On a scale of 1 to 10, how would you rate your communication skills with maternity care patients?	12	3.08	0.669	0.447
What challenges do you perceive in providing Respectful Maternity Care in a tribal-dominated district?	12	5.17	2.038	4.152
Valid N (listwise)	3			

The above **Table 1** presents the descriptive statistics for maternity care practices and cultural considerations among healthcare providers (N=12). The data encompass various aspects, including occupational distribution, years of experience, RMC training status, perceived importance of RMC, cultural considerations, protocol adherence, communication comfort levels, and perceived challenges. The mean values, standard deviations, and variances are reported for each variable. Notable findings include a mean experience of 3.08 years (SD=0.793) and a high perceived importance of RMC (mean=4.50, SD=0.522).

Training on Respectful Maternity Care (RMC)

This section evaluates healthcare professionals' training in Respectful Maternity Care (RMC) using a combination of dichotomous, Likert scale, and open-ended questions. The study revealed a significant gap in formal RMC training among healthcare professionals. Only 25% of respondents had received formal training on RMC, with a mean value of 1.75 (SD = 0.452), indicating that approximately 75% of respondents had not been trained. Among those who received training (n=3), the perceived adequacy of training had a mean score of 2.67 (SD = 2.082), falling between "slightly adequate" and "moderately adequate" on the 5-point Likert scale.

Perceived Importance of RMC for Patient Outcomes

Respondents demonstrated a strong belief in the importance of RMC for patient outcomes, with a mean value of 4.50 (SD = 0.522). The majority (75%) of respondents rated RMC as "extremely important" for improving patient outcomes.

Kruskal-Wallis Tests: Experience, Training, and RMC Importance

Kruskal-Wallis tests were conducted to examine potential differences in beliefs about RMC importance based on experience and training status.

Years of Experience vs. Belief in RMC Importance: The test revealed no statistically significant difference in beliefs about RMC importance based on years of experience ($H = 1.229$, $df = 1$, $p = 0.268$). The mean ranks were 5.42 for the "very important" group and 7.58 for the "extremely important" group.

Table-2: Exploring Maternity Care Experience and Perceptions: Non-Parametric Analysis

Non-Parametric Tests (Descriptive Statistics)					
	N	Mean	Std. Deviation	Minimum	Maximum
Years of Experience in Maternity Care	12	3.08	0.793	2	4
To what extent do you believe that providing respectful maternity care is important for patient outcomes?	12	4.50	0.522	4	5

The above Table 2 illustrates the non-parametric analysis of maternity care experience and perceptions. The analysis focuses on two key variables: years of experience in maternity care and providers' beliefs about RMC importance. The data showed maternity care experience ranging from 2 to 4 years (mean=3.08, SD=0.793) and consistently high belief ratings in RMC importance (mean=4.50, SD=0.522), indicating strong provider recognition of RMC significance.

Table 3: Exploring Maternity Care Importance: Kruskal-Wallis Rank Analysis

Kruskal-Wallis Test (Ranks)			
To what extent do you believe that providing respectful maternity care is important for patient outcomes?		N	Mean Rank
Years of Experience in Maternity Care	Very Important	6	5.42
	Extremely Important	6	7.58
	Total	12	
Test Statistics a,b			
	Years of Experience in Maternity Care		
Kruskal-Wallis H	1.229		
df	1		
Asymp. Sig.	0.268		
a. Kruskal Wallis Test			
b. Grouping Variable: To what extent do you believe that providing respectful maternity care is important for patient outcomes?			

The above Table 3 presents the Kruskal-Wallis rank analysis examining the relationship between years of experience and beliefs about RMC importance. The analysis categorizes responses into "Very Important" (mean rank=5.42) and "Extremely Important" (mean rank=7.58) groups. The test statistics (H=1.229, df=1, p=0.268) indicate no statistically significant difference in RMC importance beliefs based on experience.

RMC Training Status vs. Belief in RMC Importance: No statistically significant difference was found in beliefs about RMC importance based on training status (H = 0.407, df = 1, p = 0.523). The mean ranks were 7.00 for those who received training and 6.00 for those who did not.

Table-4 Descriptive Statistics for Respectful Maternity Care Training and Importance Ratings

Non-Parametric Tests (Descriptive Statistics)					
	N	Mean	Std. Deviation	Minimum	Maximum
Have you received formal training on Respectful Maternity Care (RMC)?	12	1.75	0.452	1	2
To what extent do you believe that providing respectful maternity care is important for patient outcomes?	12	4.50	0.522	4	5

This Table 4 provides descriptive statistics comparing formal RMC training status with perceived importance ratings. The analysis shows that 75% of providers lack formal RMC training (mean=1.75, SD=0.452), yet maintain high ratings of RMC importance (mean=4.50, SD=0.522), suggesting strong recognition of RMC value regardless of formal training status.

Table-5 Kruskal-Wallis Test Results: Impact of Formal Training on Respectful Maternity Care Ratings

Kruskal-Wallis Test (Ranks)			
To what extent do you believe that providing respectful maternity care is important for patient outcomes?		N	Mean Rank
Years of Experience in Maternity Care	Very Important	6	7.00

	Extremely Important	6	6.00
	Total	12	
Test Statistics a,b			
	Have you received formal training on Respectful Maternity Care (RMC)?		
Kruskal-Wallis H	0.407		
df	1		
Asymp. Sig.	0.523		
a. Kruskal Wallis Test b. Grouping Variable: To what extent do you believe that providing respectful maternity care is important for patient outcomes?			

The above Table 5 details the Kruskal-Wallis test results examining the impact of formal RMC training on care ratings. The mean ranks for the training status groups (7.00 for trained vs. 6.00 for untrained) and test statistics ($H=0.407$, $df=1$, $p=0.523$) indicated no significant difference in RMC importance ratings based on training status, suggesting that formal training did not significantly influence providers' perception of RMC importance.

Cultural Differences and RMC Provision

The majority of respondents (66.7%) disagreed or strongly disagreed that cultural differences affect the provision of RMC in the tribal-dominated district. However, the respondents reported encountering cultural differences related to language, beliefs, and customs when providing RMC. The high standard deviation (1.545) indicates substantial variability in the types of cultural differences encountered or considered by the respondents.

Implementation of RMC Protocols

Regarding adherence to RMC protocols, 33.3% of respondents reported following them frequently, and 25% always followed them. However, 33.3% reported following the protocols occasionally, and 8.3% rarely followed them. In terms of comfort levels in communicating with patients from diverse cultural backgrounds, 41.7% felt moderately comfortable, 33.3% very comfortable, and 25% slightly comfortable.

Patient Feedback and Communication Practices

Most respondents reported occasionally (50%) or frequently (33.3%) seeking feedback from maternity care patients. In the self-assessment of communication skills with maternity care patients, the majority rated their skills as good (50%) or very good (33.3%).

Challenges in Providing RMC

In delivering RMC, challenges as often cited include; lack of resources (25%), poor communication (25%) and poor coordination (25%). Other challenges included staff shortages, inadequate support, heavy workloads, and cultural or social norms. These results depict the complex interplay of factors affecting RMC provision in PVTG-dominated districts, including training gaps, cultural implications, and implementation challenges. Therefore, there is need for targeted interventions that will not only improve RMC practices but also address the obstacles that have been highlighted.

Role of Nurses in Providing RMC

Out of the 12 healthcare professionals surveyed, 9 (75%) were nurses. An analysis of their responses revealed the following:

- Only 22% (2 out of 9) of nurses had received formal RMC training.
- 78% of nurses rated RMC as "extremely important" for patient outcomes.
- 67% of nurses reported following RMC protocols frequently or always.
- 56% of nurses felt moderately or very comfortable communicating with patients from diverse cultural backgrounds.
- The main challenges cited by nurses in providing RMC were lack of resources (33%), poor communication (22%), and heavy workloads (22%).

A Kruskal-Wallis test comparing nurses and doctors showed no statistically significant difference in adherence to RMC protocols ($H = 0.857$, $df = 1$, $p = 0.355$), suggesting similar practices across professional roles.

DISCUSSION

This paper provides some valuable insights and understandings regarding the current status of RMC among the studied PVTG community in a district of Odisha, India. The results highlight several elements of

healthcare professionals' awareness, abilities, beliefs, and behaviors concerning RMC, and obstacles to the establishment of such practices.

Significant Gap in Formal RMC Training

One of the most critical outcomes of this study is the lack of formal training in RMC among healthcare professionals. Only 25% of respondents reported receiving formal training on RMC, which shows a significant gap in capacity building for this essential component of maternal health. This lack of training has profound implications for the quality of care offered to mothers during labor and delivery, especially in PVTG-dominated settings.

Additionally, its inadequacy has been emphasized by how some respondents perceive their own training as enough or not. Hence, even if healthcare providers get some kind of training at all, it could still be insufficiently complete or tailored depending on what those specific healthcare providers working in tribal areas. When culturally sensitive validation patterns do not exist, there may develop differences among different caregivers about how to offer their services and potentially perpetuate disrespectful or culturally inappropriate practices.

Disconnect Between Cultural Awareness and Perceived Impact on RMC

The most intriguing finding revealed a paradox: while healthcare professionals reported cultural differences in language, beliefs, and traditions, 66.7% disagreed that these differences affected RMC provision. This cognitive dissonance aligns with the research on cultural competency gaps in healthcare.

Healthcare providers often exhibit "cultural overconfidence" acknowledging cultural differences while underestimating their impact on care quality (McCann et al., 2023; Vandecasteele et al., 2024). This may stem from inadequate cultural humility training that focuses on cultural knowledge rather than reflexive practice (Mrayyan 2024).

Cultural humility emphasizes ongoing self-reflection and the recognition of power imbalances (Elbanna et al., 2023). Studies show providers frequently underestimate how their cultural biases influence care delivery, particularly with indigenous populations (Curtis et al., 2025; Fritter & Shihabuddin, 2024).

The high standard deviation ($SD=1.545$) in reported cultural differences suggests heterogeneous experiences among providers, attributed to varying levels of cultural exposure and institutional support (Tremblay et al., 2023). This variability is concerning in tribal healthcare settings, where cultural safety requires a systematic approach.

Healthcare providers in Indigenous communities may develop 'functional blindness' to cultural impacts as a coping mechanism (Browne et al., 2016). This explains why the respondents acknowledged cultural differences while denying their influence on care.

This disconnect may reflect 'institutional colorblindness', where organizational cultures emphasize standardized protocols over culturally responsive care (Curtis et al., 2019; Kirmayer et al., 2016). When systems prioritize universal approaches, providers may believe that professional standards supersede cultural considerations.

Traditional cultural competence training often fails to bridge the gap between awareness and practice (De-Maria et al., 2024). This aligns with our finding that only 25% of providers received formal RMC training, suggesting inadequate preparation for the cultural complexities.

Inconsistent Protocol Adherence

The study indicated inconsistent implementation of RMC by different healthcare providers. Many said that they always followed them, while others stated that they did not follow these protocols frequently or sometimes at all. This disparity in protocol implementation is concerning, as it can result in inconsistent services, and therefore, a potential compromise in the quality and safety of maternal health care services. Inadequate training, lack of resources, heavy work burden, and potential attitudes are some of the factors contributing to this inconsistency in adhering to RMC protocols. Furthermore, the findings show that when experience counts, this does not suffice because experience itself does not correlate with adherence to RMC protocols as far as years of service range over years of practice range.

Varying Comfort Levels in Cross-Cultural Communication

The study found varying levels of comfort among healthcare providers when communicating with patients from diverse cultural backgrounds. While most felt moderately or very comfortable, a quarter of respondents reported being only slightly comfortable. This finding highlights the need for enhanced cross-cultural communication skills among healthcare providers working in culturally diverse settings.

Effective communication is crucial for providing respectful, patient-centered care and navigating cultural differences in maternity care settings. The varying comfort levels observed in this study may reflect differences in training, experience, or personal attitudes towards cultural diversity. Addressing these disparities through targeted training and support could significantly improve the provision of culturally competent RMC.

The study found different degrees of comfort among healthcare providers when dealing with patients from different cultural backgrounds. While most reported that they often felt very comfortable or moderately comfortable at the same time, around a quarter said they were not very much at ease at all. This suggests a need for improved skills in cross-cultural communication among healthcare personnel serving in culturally diverse settings.

Effective communication is crucial in providing respect-driven care, where patients' needs are considered, and for navigating cultural differences in maternity care settings. These differences in levels of contentment

captured in this study could be a result of dissimilarities in training experiences and personality attitudes towards cultural variety. So as to make culturally relevant RMC better, gaps like these can be bridged via proper training programs and the provision of essential support systems for maternity care workers.

Patient Feedback and Communication Practices

The investigation revealed that most healthcare providers occasionally or frequently sought feedback from maternity care patients. This attitude is commendable because it means that the professionals are interested in understanding what their patients go through. Nevertheless, no correlation was found between seeking patient feedback and improved communication skills, suggesting that feedback mechanisms may not be employed effectively to improve the quality of care.

Most respondents rated their communication skills with maternity care patients as good or very good. While this self-assessment is positive, it should be interpreted cautiously, as it may not precisely reflect patients' experiences or perceptions of care quality.

Perceived Challenges in Providing RMC

Ineffective communication, weak coordination, and resource scarcity have been recognized as the main issues hampering RMC provision. This is congruent with the conclusions drawn in other studies conducted in low-resource settings. This clearly indicates that there are systemic and organizational barriers to the effective implementation of RMC. In addition, other factors such as lack of staff, inadequate support, excessive workloads, and cultural or social norms illustrate how all these obstacles make it a difficult task to offer RMC services in such contexts.

Role of Nurses in RMC Provision

Nurses play a crucial role in providing RMC at District Headquarter Hospitals, constituting 75% of the maternity care workforce in this study. However, the findings highlight significant gaps in their preparation and support for delivering culturally sensitive RMC.

The low rate of formal RMC training among nurses (22%) is particularly concerning, given their frontline role in maternity care. This lack of training may have contributed to the inconsistent adherence to RMC protocols observed in this study. Despite this, the high importance nurses place on RMC (78% rating it as "extremely important") suggests a strong foundation for improvement initiatives.

The challenges cited by nurses, including resource constraints and heavy workloads, align with the broader issues in healthcare delivery in tribal areas. (Bhukta, 2020) study on healthcare among the Sabars of Rayagada district in Odisha highlights similar resource limitations in tribal healthcare settings. These constraints may hinder nurses' ability to provide comprehensive RMC, despite their recognition of its importance.

The moderate comfort level reported by nurses in cross-cultural communication (56% feeling moderately or very comfortable) indicates the need for enhanced cultural competency training. This is particularly crucial in the context of serving Particularly Vulnerable Tribal Groups (PVTGs) (Glover et al., 2024). (GNANA, n.d.) ethnographic study on Savara tribal women emphasizes the unique cultural contexts and health beliefs of tribal communities, which nurses must navigate to provide effective RMC.

Interestingly, the lack of a significant difference between nurses and doctors in RMC protocol adherence suggests that challenges in RMC implementation span professional roles. This highlights the need for system-wide interventions rather than targeting specific professional groups.

The role of nurses in addressing undernutrition, a significant health concern in tribal areas as highlighted by (Chattopadhyay et al., 2023), is also crucial. Nurses' frequent interactions with pregnant women position them ideally to provide nutritional counseling and support, which is an essential component of respectful and comprehensive maternity care (Simarmata et al., 2024).

To enhance nurses' capacity to provide high-quality RMC, targeted interventions are needed.

1. Comprehensive RMC training programs that incorporate cultural competency specific to local tribal populations.
2. Addressing resource constraints and workload issues to create an enabling environment for RMC provision.
3. Developing and implementing standardized RMC protocols tailored to the local context.
4. Establishing mentorship programs to support nurses in navigating cultural and communication challenges.

Integration with Existing Literature

This study aligns with and expands upon existing research on Respectful Maternity Care (RMC) in low- and middle-income countries, especially in culturally diverse settings. The identified gaps in training, cross-cultural communication challenges, and resource limitations mirror the findings of recent global studies on RMC.

Inconsistent adherence to RMC protocols and communication challenges, as observed, are consistent with (Bohren et al., 2019), who reported significant variations in facility-based childbirth care across four countries, underscoring the need for context-specific interventions. Similar challenges in our study setting reflect global perspectives from (Shakibazadeh et al., 2018), who highlighted systemic issues like resource constraints and cultural barriers.

Our results reinforce the necessity for comprehensive RMC policies and training, a point emphasized by (Downe et al., 2018), who demonstrated the effectiveness of respectful care policies in improving women's intrapartum experiences. The resource constraints and heavy workloads reported by nurses also align with (Filby et al., 2016), who identified these as key barriers to quality midwifery care globally.

Moreover, the need for culturally tailored RMC in tribal settings complements (Miller et al., 2016), who advocated for evidence-based, respectful maternity care beyond the extremes of "too little, too late" and "too much, too soon." This study highlights the need for targeted, nurse-focused strategies to enhance the quality of maternal care in marginalized populations (Pandiselvi et al., 2024).

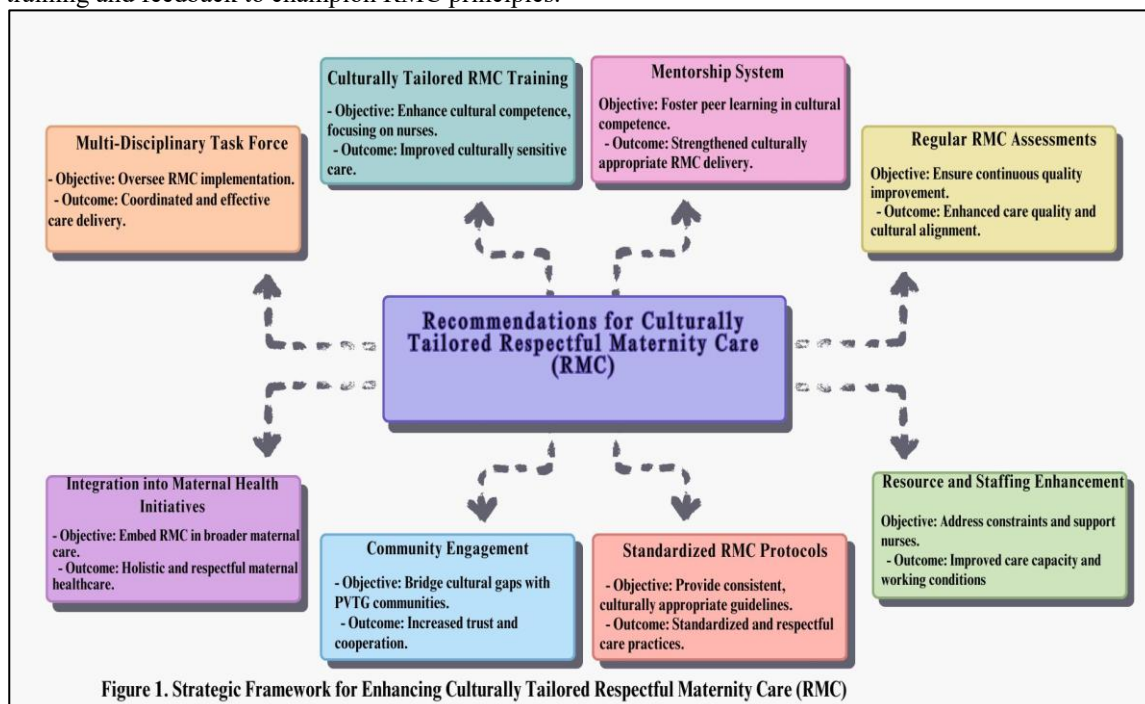
Strengths and Limitations

This study offers several strengths in its approach to examining the RMC in a tribal-dominated district. First, it provides a comprehensive assessment of RMC knowledge, attitudes, and practices among healthcare providers, with a particular focus on nurses, who constitute the majority of the maternity care workforce. The inclusion of both quantitative and qualitative data allowed for a nuanced understanding of the challenges of implementing RMC in this unique context. Additionally, the study's focus on a Particularly Vulnerable Tribal Group (PVTG) addresses a significant gap in the literature on maternal health services in marginalized communities.

However, several limitations should be considered when interpreting these results. The small sample size (n=12, with 9 nurses) limits the generalizability of the findings and statistical power of the analyses. While this sample represents the entire maternity care staff of the District Headquarter Hospital, it may not reflect the broader healthcare landscape in similar settings. The cross-sectional design precludes causal inferences about the relationships between variables, such as training and RMC implementation. Furthermore, reliance on self-reported data may introduce social desirability bias, particularly regarding adherence to RMC protocols and communication skills.

Recommendation:

This study advocates for enhancing Respectful Maternity Care (RMC) through cultural competence, particularly among nurses. The key recommendations include tailored training, mentorship, continuous quality assessments, resource optimization, and community engagement. Integrating RMC into broader health initiatives and expanding research on PVTG areas are crucial for providing informed and culturally sensitive care. The benefits of RMC during pregnancy should be prioritized. Finally, fostering a cultural shift within the organization requires strong leadership, enforcement of supportive policies, and continuous training and feedback to champion RMC principles.



CONCLUSION

This study successfully met its primary objectives by quantifying significant gaps in RMC preparedness, contrasting implementation roles across different provider types, identifying cultural-systemic barriers, and proposing targeted solutions for districts predominantly inhabited by PVTGs. Four principal findings are highlighted: First, substantial deficits in formal RMC training, affecting 75% of providers, compromise care quality despite strong recognition of RMC's importance among providers. Second, although nurses exhibit protocol adherence comparable to that of physicians, their frontline roles render them disproportionately susceptible to resource constraints and excessive workloads. Third, the paradoxical disconnect between the widespread acknowledgment of cultural barriers (such as language and belief systems) and the dismissal of their clinical impact reflects deeply ingrained structural blind spots in tribal healthcare delivery. Fourth, cultural fragmentation is evident in the inconsistent recognition of tribal diversity, perpetuating homogenized care approaches.

To translate these findings into actionable change, three evidence-informed priorities were identified: 1) Tribal co-design of RMC protocols to ensure care aligns with community-specific kinship structures and health cosmologies; 2) competency-based cultural safety training that incorporates implicit bias mitigation and traditional birth knowledge; and 3) strategic workload reallocation through midwife-led task-shifting. Future initiatives must address colonial healthcare legacies by centering tribal sovereignty in maternal health governance. Implementation research should evaluate these approaches using mixed-method frameworks that measure both clinical outcomes and community-defined dignity metrics. Ultimately, reconciling biomedical and traditional paradigms through sustained dialogue is essential for achieving respectful and equitable maternity services for marginalized populations.

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