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STRUCTURAL BARRIERS TO MATERNAL HEALTH: A STUDY OF PANIYA TRIBAL WOMEN IN WAYANAD, KERALA

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ABSTRACT

Kerala is widely recognized for its achievements in public health, yet substantial inequalities persist among its tribal communities. The Paniya women of Wayanad experience maternal-health disadvantages shaped not by a single factor but by the interaction of poverty, geographical isolation, inadequate nutrition, early marriage, limited reproductive-health awareness, transportation difficulties, and gaps in the delivery of welfare programmes. This paper examines these structural barriers through a critical review of government reports, census materials, health-policy documents, and published studies concerning Paniya and other tribal women in Wayanad. The study argues that the existence of public health facilities alone does not guarantee equitable maternal healthcare. Social exclusion, distance from specialized facilities, economic insecurity, and culturally inadequate communication can prevent women from receiving timely and continuous care. Particular attention is given to antenatal care, maternal anaemia, nutrition, family planning, institutional delivery, community health workers, and government schemes. The paper concludes that maternal health among Paniya women must be addressed through an integrated approach combining accessible transport, nutritional support, culturally responsive healthcare, reproductive-health education, strengthened community health workers, and more effective implementation of welfare programmes.

KEYWORDS: *Paniya women; maternal health; Wayanad; tribal healthcare; structural barriers; reproductive health.*

1. INTRODUCTION

Background of the Study

Maternal health is not determined solely by the availability of hospitals or medicines; it is also shaped by the social, economic, geographical, cultural, and institutional circumstances in which women experience pregnancy and childbirth. The World Health Organization has emphasized that antenatal care should provide not merely clinical surveillance but a positive, respectful and person-centred pregnancy experience.[1]

This principle assumes particular significance in the case of tribal women, whose access to healthcare may be constrained by poverty, remoteness, inadequate transport, nutritional deprivation, low levels of education, and social exclusion. The national review of tribal health in India identified early marriage, early childbirth, low body mass index, anaemia, inadequate antenatal care, distance and transport difficulties as important determinants of maternal vulnerability among Scheduled Tribes.[2]

Wayanad occupies a distinctive position in Kerala's tribal geography. Government data describe it as the district with the largest Scheduled Tribe population in the state, while the Paniyan community constitutes the largest tribal community in the district. A socioeconomic survey reported that Paniyans accounted for approximately 45% of Wayanad's tribal population, demonstrating the importance of examining their health conditions separately rather than treating all tribal communities as a homogeneous category.[3]

The historical experience of the Paniya community also provides an important context for understanding present health inequalities. The community has historically been associated with agricultural labour and forms of economic dependence, while contemporary Paniya settlements continue to experience varying degrees of landlessness, poverty, inadequate infrastructure and social marginalization. These historical and socioeconomic conditions influence women's ability to obtain nutrition, transportation, information and timely healthcare.[4]

Studies undertaken in Wayanad demonstrate that the apparent success of Kerala's health system does not eliminate inequalities between tribal and non-tribal populations. A study conducted in Thariode found that tribal women achieved relatively high levels of maternal-health utilization, but their utilization remained below that of non-tribal women, with education and lack of transport emerging as important barriers.[5]

Research Problem

The central problem addressed in this paper is the persistence of maternal-health inequality among Paniya women despite Kerala's extensive public-health infrastructure. The issue therefore cannot be explained simply in terms of the absence of healthcare facilities. Rather, it requires examination of the structural conditions that determine whether women can reach, understand, afford and effectively use those facilities.[6]

Recent research focusing specifically on Paniya women has identified a combination of early marriage, maternal anaemia, inadequate family-planning awareness, short birth intervals, poverty, poor road connectivity and limited knowledge of government schemes. These findings indicate that maternal health is embedded within a wider structure of social disadvantage rather than being an isolated medical problem.[7]

Research Objectives

1. To examine the principal structural barriers affecting maternal health among Paniya tribal women in Wayanad.
2. To analyze the influence of poverty, nutrition, early marriage and geographical isolation on maternal healthcare.
3. To examine access to antenatal, institutional and postnatal healthcare.
4. To assess the importance of family planning and reproductive-health awareness.
5. To examine the role of ASHA workers, tribal health workers and government programmes.
6. To suggest measures for achieving more equitable maternal-health outcomes.

Hypothesis

The maternal-health disadvantages experienced by Paniya women in Wayanad are significantly associated with interconnected structural factors—poverty, nutritional deprivation, geographical isolation, inadequate reproductive-health awareness and weaknesses in the implementation of public-health programmes—rather than with cultural practices alone.

Significance of the Study

The study is significant because it shifts attention from individual behaviour to the broader social conditions that shape maternal-health choices. It also contributes to the study of Kerala by demonstrating that impressive aggregate health indicators may conceal substantial inequalities within marginalized communities.[8]

Scope and Limitations

The paper concentrates on Paniya women in Wayanad and particularly on pregnancy, antenatal care, childbirth, nutrition, anaemia, reproductive health and healthcare accessibility. It is an analytical study based principally on published research and official documentary sources rather than a new primary survey conducted by the author. Consequently, its findings should not be interpreted as a statistical survey of every Paniya settlement in Wayanad.[9]

2. LITERATURE REVIEW

Review of Previous Studies

One of the important early studies of maternal healthcare among tribal women in Kerala was conducted in Thariode, Wayanad. It found that 85.7% of tribal women in its sample fully utilized the defined package of maternal healthcare, compared with complete utilization among non-tribal women. The study identified awareness, affordability, accessibility, quality of services and motivation by health workers as important determinants.[10]

Research on nutrition provides another important dimension. A study of tribal women in Kainatty, Wayanad, examined women aged fifteen to forty-nine years and identified undernutrition as a significant concern. The study is important because maternal nutrition affects pregnancy outcomes while simultaneously reflecting wider household poverty and food insecurity.[11]

Research on reproductive health has further demonstrated that tribal women's reproductive experiences cannot be understood exclusively through the biomedical framework. A qualitative study involving Paniya and Kurichiya women in Wayanad found that menstrual practices, fertility intentions and family-planning decisions were shaped by cultural knowledge, household relationships and perceptions of reproductive health.[12]

A large cross-sectional study of 2,495 tribal women in Wayanad found that Paniya women constituted 59.2% of the sample. Although contraceptive use was reported by approximately one-fourth of participants, knowledge about contraception was inadequate among a substantial proportion, with educational attainment strongly associated with better knowledge.[13]

More recent research has brought the discussion specifically to Paniya maternal healthcare. A village-level study published in 2023 reported that poverty, anaemia, low weight, geographical constraints and reluctance or inability to travel for specialist consultation affected the utilization of maternal healthcare among Paniya women. At the same time, ASHA workers and tribal health promoters were identified as important intermediaries between women and the formal health system.[14]

A 2025 study based on 57 pregnant and lactating Paniya women reported particularly serious problems involving early marriage, anaemia, scheme awareness, transportation and access to specialized healthcare. The study found that 93.8% of women married before eighteen were anaemic and reported significant difficulties in reaching hospitals from remote settlements.[15]

Research Gap

Although previous studies have examined maternal healthcare utilization, nutrition, contraception and reproductive health separately, fewer studies integrate these dimensions within a single structural framework. The major gap therefore lies in connecting household poverty, geographical isolation, nutritional insecurity, gender relations, reproductive behaviour and institutional barriers into one explanation of maternal-health inequality among Paniya women.[16]

Contribution of the Present Study

The present study contributes by interpreting available evidence through the concept of structural barriers. It argues that maternal-health inequalities are produced through the interaction of several disadvantages and that interventions directed at only one factor—such as hospital availability or health education—cannot fully resolve the problem.[17]

3. THEORETICAL/CONCEPTUAL FRAMEWORK

Social Determinants of Health

The study adopts the social-determinants-of-health perspective, which views health outcomes as products of conditions in which people are born, grow, live, work and age. From this perspective, maternal anaemia, inadequate antenatal care or delayed hospital attendance cannot be treated simply as individual failures; they may reflect poverty, insecure livelihoods, unequal access to resources, education and transportation.[18]

Structural Inequality and Maternal Health

Structural inequality refers to the institutional and social arrangements that systematically distribute opportunities and disadvantages unevenly. In the Paniya context, structural barriers may include remote settlement patterns, inadequate roads, economic insecurity, limited access to information, weak implementation of welfare benefits and difficulties in communicating with formal healthcare institutions.[19]

Conceptual Model

The conceptual framework adopted here links five interconnected dimensions: socioeconomic conditions, geographical accessibility, nutritional and reproductive conditions, institutional accessibility, and cultural communication. These dimensions influence the intermediate variables of healthcare awareness and utilization, which in turn affect maternal health outcomes.[20]

4. METHODOLOGY

Research Design

The paper follows a descriptive and analytical research design. It synthesizes evidence from government reports, Census materials, health-policy documents and peer-reviewed studies concerning tribal women and, wherever available, Paniya women specifically. The method is therefore documentary and interpretive rather than based on an independently generated household survey.[21]

Sources of Data

The principal sources include Census of India data, publications of the Government of Kerala, the Kerala Scheduled Tribes Development Department, health-policy documents, World Health Organization recommendations, National Health Mission materials and published academic studies on maternal and reproductive health among tribal women in Wayanad.[22]

Methods of Analysis

The evidence has been analyzed thematically under the major categories of accessibility, affordability, nutrition, reproductive health, institutional care, health awareness, transportation and community-level health intervention. Particular attention has been given to findings that recur across independent studies, since repeated evidence provides a stronger basis for identifying structural patterns.[23]

5. RESULTS/FINDINGS

Geographical Isolation

Geographical accessibility emerges as one of the most persistent barriers. Paniya settlements are often located away from major roads and specialized medical facilities. Recent evidence from Vellamunda indicates that while a primary health facility may be comparatively close, access to specialized maternal services can require considerably longer travel through difficult terrain.[24]

Distance becomes especially important during labour and obstetric emergencies. A health facility may formally exist within a district, yet the practical ability to reach it quickly depends on roads, vehicles, household resources and communication networks. Thus, geographical proximity measured on a map does not necessarily constitute effective accessibility.[25]

Poverty and Economic Insecurity

Economic deprivation affects maternal health through several pathways. Poor households may experience difficulty in maintaining adequate nutrition, arranging transportation, taking time away from wage labour or meeting incidental expenses associated with repeated hospital visits. Even where public healthcare is officially affordable, the indirect costs of access may remain substantial.[26]

Maternal Nutrition and Anaemia

Maternal nutrition constitutes a major component of the problem. Studies in Wayanad have documented nutritional disadvantage among tribal women, while recent Paniya-specific research reported a very high prevalence of anaemia among pregnant and lactating women. Anaemia should therefore be understood not simply as a clinical condition but also as an indicator of nutritional and socioeconomic vulnerability.[27]

Early Marriage and Early Childbearing

Early marriage and early pregnancy represent another important structural concern. Recent evidence from Paniya women indicates a substantial proportion of respondents married during adolescence and demonstrates a statistically significant association between early marriage and anaemia. Such patterns can reduce opportunities for education, increase reproductive exposure and intensify nutritional stress.[28]

Family Planning and Birth Spacing

Family planning constitutes an important preventive dimension of maternal health. Research in Wayanad shows that contraceptive awareness and use remain uneven among tribal women and that education is closely associated with reproductive-health knowledge. The evidence suggests that family planning should be presented through respectful, culturally appropriate counselling rather than through coercive population-control approaches.[29]

Antenatal and Institutional Care

Kerala's tribal women generally have better maternal-health coverage than many tribal populations elsewhere in India, yet the remaining gaps are significant. Earlier research in Wayanad found relatively high utilization but still identified education, accessibility and transport as barriers. More recent Paniya-specific evidence suggests that repeated antenatal specialist consultations remain difficult for women living in remote settlements.[30]

Awareness of Government Schemes

The existence of welfare programmes does not automatically ensure their utilization. Recent evidence indicates that a substantial proportion of surveyed Paniya women were unaware of maternal-benefit schemes such as PMMVY, JSY and Mathruyanam, while some women who knew about them experienced difficulties in receiving benefits. This reveals an implementation gap between policy design and community-level delivery.[31]

Role of ASHA Workers and Tribal Health Workers

Community health workers play a crucial role in reducing the distance between tribal settlements and formal healthcare institutions. ASHA workers have been identified as important sources of information and encouragement, while tribal health workers can potentially provide culturally meaningful communication. Their effectiveness, however, depends on training, institutional support, accountability and community trust.[32]

6. DISCUSSION

The findings demonstrate that maternal-health inequality among Paniya women is multidimensional. No single barrier adequately explains the observed disadvantages. Poverty can contribute to poor nutrition; poor nutrition can increase anaemia; anaemia can complicate pregnancy;

geographical isolation can delay treatment; and weak awareness can prevent women from benefiting fully from available programmes.[33]

The evidence also challenges explanations that attribute inadequate healthcare utilization primarily to tribal culture. Cultural practices are relevant, but they operate within broader socioeconomic and institutional environments. When transport is unavailable, specialists services are distant, household incomes are insecure and communication is inadequate, low utilization cannot reasonably be explained by cultural preference alone.[34]

The findings are consistent with the WHO emphasis on quality, continuity and respectful antenatal care. The objective of maternal healthcare should not be reduced to the physical survival of mother and child; women must also be able to access information, nutritional support, counselling, respectful treatment and timely referral throughout pregnancy.[35]

The nutritional dimension is particularly important. Evidence from Wayanad demonstrates that under nutrition among tribal women is a continuing concern, while Paniya-specific evidence identifies widespread anaemia. These conditions suggest that maternal-health programmes must connect antenatal services with food security, nutritional supplementation and monitoring rather than treating anaemia only after it appears clinically.[36]

The evidence concerning reproductive health also indicates that women's autonomy and knowledge deserve greater attention. Awareness of contraception does not necessarily translate into use, while cultural practices and family decision-making can influence reproductive choices. Effective reproductive-health programmes therefore require dialogue with women, men, families and community leaders rather than one-directional dissemination of information.[37]

The role of community health workers deserves particular emphasis. The available evidence shows that ASHA workers can function as bridges between the health system and Paniya settlements. However, the experience of tribal health workers also demonstrates that simply appointing community representatives is insufficient. Training, supervision, resources and clearly defined responsibilities are essential for creating an effective local health-support system.[38]

Finally, the Paniya experience demonstrates the importance of examining health inequalities within successful health systems. Kerala's overall maternal-health achievements are genuine, but state-level averages can conceal severe inequalities within particular communities. Equity therefore requires measuring not only overall performance but also who benefits from the health system, which remains excluded and why.[39]

7. CONCLUSION

The study concludes that maternal-health problems among Paniya women in Wayanad are fundamentally structural. Poverty, nutritional insecurity, early marriage, reproductive-health limitations, geographical isolation, inadequate transportation and gaps in the implementation of public-health schemes operate together to restrict women's ability to obtain timely and continuous maternal care. The evidence therefore supports the central hypothesis that maternal-health inequality cannot be adequately explained through individual behaviour or cultural practices alone.[40]

The evidence also demonstrates that Kerala possesses important institutional strengths on which more equitable tribal maternal healthcare can be built. The expansion of outreach services, antenatal tribal homes, community health workers, transport assistance and nutritional programmes provides a foundation for improvement.[41] What is required is stronger last-mile implementation, culturally responsive communication, reliable transport, systematic nutritional monitoring and greater community participation.

The central lesson is that maternal health must be understood as a question of social justice as well as public health. For Paniya women, equitable healthcare means more than the physical presence of hospitals. It means the practical ability to reach them, understand the services available, receive respectful treatment, obtain adequate nutrition, exercise reproductive choice and receive continuous support before, during and after childbirth.

RECOMMENDATIONS

1. **Improve transport and road connectivity** to remote Paniya settlements, particularly for emergency obstetric care.
2. **Strengthen antenatal outreach services** through regular visits by trained medical and nursing personnel.
3. **Expand nutritional interventions** for pregnant women, lactating mothers and adolescent girls, with systematic monitoring of anaemia.
4. **Promote reproductive-health and family-planning education** through culturally sensitive community programmes.
5. **Strengthen ASHA and tribal health-worker training**, supervision and institutional support.
6. **Improve awareness of government schemes** such as PMMVY, JSY and Mathruyanam and ensure timely delivery of benefits.
7. **Strengthen antenatal tribal homes** and similar community-based facilities for women approaching childbirth.
8. **Promote delayed marriage and informed reproductive choices** through education and community participation.
9. **Ensure culturally respectful healthcare** by improving communication between health personnel and Paniya communities.
10. **Adopt an equity-based monitoring system** that separately evaluates maternal-health outcomes among tribal communities rather than relying exclusively on Kerala-wide averages.

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