

# Kerala's Perinatal Health Model: A Beacon for Mental Health

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## ABSTRACT

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Kerala has remarkable healthcare achievements, particularly in perinatal care which is lauded internationally. The Kerala model of perinatal health has been hailed as a success story which has not only improved physical health but also mental health. Perinatal mental health refers to the psychological well-being of women during pregnancy and the first year postpartum. This period is marked by significant physiological, psychological, and social changes that can predispose women to various mental health disorders. Common conditions include depression, anxiety, postpartum psychosis, and post-traumatic stress disorder, all of which can have profound effects on both maternal and infant outcomes. Early identification, appropriate screening, timely intervention, and multidisciplinary care are essential to prevent adverse consequences. Increasing awareness and integrating perinatal mental health services into routine obstetric care can improve maternal well-being and promote healthy child development. Perinatal mental health is a crucial yet often under-recognized aspect of maternal healthcare, encompassing mental health during pregnancy and the postpartum period. Women in the perinatal period experience multiple biological, emotional, and social transitions that can increase their vulnerability to mental health problems. Promoting maternal mental health ultimately fosters healthier families and strengthens child development.

**Keywords:** Kerala Model, Perinatal Mental Health, Postpartum Depression, Maternal Care, Intervention, Child Development

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Kerala has remarkable healthcare achievements, particularly in perinatal care and is thus lauded internationally. The Kerala model of perinatal health has been hailed as a success story, with impressive statistics showcasing its effectiveness. This model has not only improved physical health outcomes but also has a profound impact on mental health. Kerala has long been recognized for its exceptional health indicators, often referred to as the “Kerala model” of development. This model emphasizes strong social infrastructure, high literacy rates, and robust public health systems, leading to outcomes comparable to those in developed nations. A pivotal component of this success is Kerala's perinatal total health model, which ensures comprehensive care for mothers and newborns during the perinatal period—from pregnancy to the first weeks after birth. This article looks into the intricacies of Kerala's perinatal health initiatives, exploring their foundations, strategies, achievements, and the challenges they face.<sup>2</sup>

Additionally, Kerala's commitment to integrating maternal mental health into the Reproductive and Child Health Program is a significant advancement. This integration aligns with broader national initiatives, such as the Mental Health Care Act of 2017, which mandates joint care for mothers and infants during hospital admissions for mental illness, emphasizing the importance of addressing mental health in the maternal-child health continuum.<sup>5</sup>

## KEY COMPONENTS OF THE KERALA MODEL:

The Kerala model focuses on:

- 1. Universal access to healthcare:** The state's robust healthcare infrastructure ensures that every individual, particularly pregnant women and newborns, has access to quality medical care.
- 2. Community-based interventions:** Trained community health workers and ASHAs (Accredited Social

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Health Activists) play a vital role in promoting health awareness, identifying high-risk pregnancies, and providing essential care.

**3. Skilled birth attendants:** The presence of skilled birth attendants has significantly reduced maternal and neonatal mortality rates.

**4. Emphasis on antenatal and postnatal care:** Regular check-ups, health education, and support during the antenatal and postnatal periods have improved health outcomes.

## UNDERSTANDING PERINATAL MENTAL HEALTH

The perinatal period, spanning from conception to one year postpartum, is a critical phase in a woman's life. During this time, women may experience a range of mental health conditions, including depression, anxiety, and psychosis. These conditions can adversely affect both the mother and the developing child, leading to complications such as preterm birth, low birth weight, and impaired cognitive and emotional development in children. Recognizing and addressing perinatal mental health issues is crucial for ensuring the well-being of both mother and child. Two of the strongest predictors of maternal depression and anxiety are poverty and domestic violence.<sup>4</sup>

For women with more severe mental illness, there is a strong need to develop mother and baby psychiatric units in district and teaching hospitals with integrative approach from Psychiatry, Obstetrics and Gynaecology, Paediatrics and Anaesthesia departments.

## FOUNDATIONS OF KERALA'S HEALTH MODEL

The roots of Kerala's health achievements can be traced back to its historical emphasis on social welfare. Even before its formation as a state in 1956, regions that now constitute Kerala prioritized public health and education. In 1879, mandatory vaccinations were introduced for public servants, prisoners, and students, showcasing an early commitment to preventive health-care. Missionary activities further bolstered health and educational infrastructure, especially in underserved areas. Post-independence, Kerala's government continued this legacy by investing heavily in health, education, and public services, leading to remarkable health outcomes despite modest economic growth.<sup>1</sup>

## STRUCTURE OF THE PERINATAL HEALTH SYSTEM

Kerala's perinatal health system is structured to provide seamless care across various levels:

- 1. Primary Health Centers (PHCs):** Serving as the first point of contact, PHCs offer antenatal care, routine check-ups, immunizations, and health education.
- 2. Community Health Centers (CHCs):** These centers handle more complex cases, providing specialized maternal and neonatal services.
- 3. District Hospitals and Medical Colleges:** Equipped with advanced facilities, they manage high-risk pregnancies and neonatal complications.

This tiered system ensures that care is both accessible and appropriately specialized, catering to the diverse needs of the population.

## KEY COMPONENTS OF THE PERINATAL HEALTH MODEL

- 1. Universal Antenatal Care:** Kerala emphasizes early and regular antenatal visits. Expectant mothers typically undergo multiple check-ups, ensuring timely detection and management of potential complications.
- 2. Skilled Birth Attendance:** Nearly all deliveries in Kerala occur under the supervision of trained health professionals, significantly reducing maternal and neonatal mortality.
- 3. Comprehensive Immunization:** The state boasts high immunization rates, protecting newborns from various preventable diseases.
- 4. Maternal Nutrition Programs:** Targeted interventions address nutritional deficiencies, ensuring healthier pregnancies and better birth outcomes.
- 5. Postnatal Care:** Mothers and newborns receive regular postnatal visits, facilitating early detection of issues and promoting practices like exclusive breastfeeding.

Perinatal mental health encompasses the emotional and psychological well-being of women during pregnancy and the postpartum period. In Kerala, a state

renowned for its progressive health indicators, addressing perinatal mental health has become a focal point in recent years. This comprehensive article delves into the significance of perinatal mental health, the challenges faced in Kerala, and the initiatives undertaken to support maternal mental well-being.<sup>3</sup>

## BENEFITS TO MENTAL HEALTH

The Kerala model has several benefits for mental health:

1. **Reduced maternal anxiety and stress:** The model's focus on universal access to healthcare and community-based interventions alleviates anxiety and stress among pregnant women, promoting better mental well-being.
2. **Improved emotional support:** The presence of skilled birth attendants and community health workers provides emotional support to new mothers, reducing feelings of isolation and loneliness.
3. **Enhanced bonding and attachment:** The model's emphasis on antenatal and postnatal care fosters a strong bond between mothers and their newborns, promoting healthy attachment and emotional development.
4. **Reduced risk of postpartum depression:** The comprehensive care provided under the Kerala model reduces the risk of postpartum depression, a common mental health issue affecting new mothers.

## THE KERALA CONTEXT

Kerala, often lauded for its high literacy rates and robust healthcare system, has not been immune to mental health challenges. Studies have indicated a significant prevalence of mental health disorders among women in the state. A systematic review highlighted gender disparities in mental health issues, emphasizing the need for targeted interventions for women.

## INITIATIVES AND PROGRAMS

In response to the growing recognition of perinatal mental health challenges, Kerala has implemented several initiatives:

1. **Amma Manasu (Mother's Mind):** Kerala has developed a maternal mental health programme, Amma Manasu. Mothers will be assessed during their antenatal and postnatal visits by trained junior public

health nurses. Referral pathways will be established for stepped care and include doctors in primary care and the District Mental Health Programme. The Mother and Child Tracking System (MCTS) is an online data-entry platform used in India for all pregnant mothers and their babies. Couples are routinely sent information regarding nutrition, antenatal appointments and immunisation. It will be useful to use this technology both to identify mothers at high risk for mental health problems. Launched in 2017, this program aims to address psychiatric disorders during pregnancy and post-delivery. It involves mental health teams in each district, with junior public health nurses conducting screenings during antenatal and postnatal visits. Mild cases receive counselling, while severe cases are referred to specialists.<sup>1</sup>

2. **Integration into Reproductive and Child Health Programme:** Kerala has integrated maternal mental health into its Reproductive and Child Health Programme, ensuring that mental health screening and management are part of routine antenatal care.
3. **District Mental Health Programme (DMHP):** This program aims to provide mental health services at the community level, ensuring accessibility and reducing stigma associated with seeking mental health care.

Recent initiatives, such as the Thalolam project, aim to enhance mental health integration within community healthcare frameworks, providing a promising model for improved perinatal mental health services.

## ACHIEVEMENTS AND OUTCOMES

The impact of Kerala's perinatal health initiatives is evident in its health indicators:

**Infant Mortality Rate (IMR):** As of 2025, Kerala's is 7 per 1,000 live births, significantly lower than India's national average of 28.

**Maternal Mortality Ratio (MMR):** The state records an MMR of 29 per 100,000 live births, among the lowest in the country.

**Life Expectancy:** Kerala's life expectancy at birth is approximately 74.49 years for males and 80.15 years for females surpassing the national average.

Healthcare professionals should be educated about the importance and relevance of perinatal mental health. They should be able to identify pregnant and postpar-

tum women with mental health problems. Therefore, it is of utmost importance to enhance the level of awareness of perinatal mental health among health professionals. Also developing or adapting simple tools for detection of mental health disorders should be a priority.

## POSTPARTUM MENTAL HEALTH

Postpartum mental health is a critical aspect of maternal well-being that significantly influences both the mother's health and the development of her child. In Kerala, a state renowned for its progressive healthcare system, addressing postpartum mental health has become increasingly significant. This article explores the prevalence, challenges, and initiatives related to postpartum mental health in Kerala.

The postpartum period, following childbirth, is a time of significant physical and emotional changes for women. While many adapt smoothly, some experience mental health challenges, including:

**Postpartum Blues:** Affecting up to 85% of new mothers, this condition involves mood swings, irritability, and anxiety, typically resolving within two weeks.

**Postpartum Depression (PPD):** Characterized by persistent sadness, fatigue, and feelings of worthlessness, PPD can impair daily functioning and bonding with the infant.

**Postpartum Psychosis:** A rare but severe condition, occurring in approximately 1 to 2 per 1,000 women, marked by confusion, hallucinations, and delusions, often requiring immediate medical attention.

## PREVALENCE IN KERALA

While specific data on postpartum mental health disorders in Kerala is limited, studies indicate a significant prevalence of perinatal mental health issues in India, with depression rates ranging from 9.8% to 36.7% and anxiety up to 55.7%. Given Kerala's unique socio-cultural context, these figures underscore the importance of targeted mental health interventions.

## CHALLENGES IN ADDRESSING POSTPARTUM MENTAL HEALTH

Several challenges hinder effective management of postpartum mental health in Kerala:

**1. Stigma and Awareness:** One of the primary obstacles to addressing perinatal mental health in Kerala

is the pervasive stigma surrounding mental illness. Although Kerala boasts high literacy rates, cultural taboos continue to hinder open discussions about mental health, especially among mothers. Pregnancy and childbirth are culturally celebrated, leading many women to feel pressured to conceal any feelings of depression or anxiety. This reluctance to seek help not only exacerbates the problem but can also result in long-term psychological issues for both mothers and their families. Cultural stigmas surrounding mental health can deter women from seeking help, exacerbating their conditions.<sup>4</sup>

**2. Detection and Screening:** The lack of standardized, culturally appropriate screening tools makes early detection challenging.

**3. Resource Limitations:** Despite Kerala's robust healthcare infrastructure, there is a need for more trained mental health professionals to address postpartum disorders effectively.

## AREAS FOR IMPROVEMENT

Despite its successes, Kerala's perinatal health system faces challenges:

**1. Non-Communicable Diseases (NCDs):** There's a rising prevalence of NCDs, such as hypertension and diabetes, which can complicate pregnancies. Addressing these requires integrated care models that manage both maternal health and chronic conditions.

**2. Perinatal Mental Health:** Mental health issues during the perinatal period are often under-recognized. Enhancing awareness, developing culturally appropriate screening tools, and training primary care providers are essential steps forward.

**3. Health Inequities:** While overall indicators are positive, disparities persist among marginalized communities. Tailored interventions are needed to ensure equitable access to perinatal care.

## CHALLENGES AND RECOMMENDATIONS

Despite these initiatives, challenges persist:

**Awareness and Stigma:** Many women may not recognize symptoms of perinatal mental health disorders or may hesitate to seek help due to societal stigma.

**Resource Constraints:** There is a need for more trained professionals and infrastructure to address the mental health needs of perinatal women effectively.



**Data Gaps:** Limited data on the prevalence and impact of perinatal mental health disorders hampers the development of targeted interventions.

Addressing these challenges requires a multifaceted approach, including community awareness programs, capacity building for healthcare providers, and robust data collection mechanisms.

## FUTURE DIRECTIVES

Understanding the magnitude and presentation of mental health problems in 'high-risk' groups, including adolescent mothers, mothers with poor perinatal outcomes, those with a history of mood disorders related or unrelated to previous childbirth, HIV infection, mothers who have undergone assisted reproduction and migrant mothers, in order to develop targeted interventions.

Several cultural factors add to both risk and resilience. Risks include partner violence, patriarchy and gender preference, whereas protective cultural factors include rituals and infant-rearing practices.<sup>6</sup>

It is also important to study father's role in the well-being of the mother–infant relationship. Developing and validating simple screening methods that identify psychosocial risk factors and maternal distress. When there are limited resources, outcomes need to be chosen carefully and should include acceptability, adoption, appropriateness, feasibility, cost, coverage and sustainability.

## CONCLUSION

The Kerala model of perinatal health has demonstrated that a well-structured healthcare system can have a profound impact on both physical and mental health outcomes. By prioritizing universal access to healthcare, community-based interventions, and skilled birth attendants, Kerala has created a beacon for perinatal care that can be replicated in other regions. As the world strives to improve maternal and child health, the Kerala model serves as a shining example of what can be achieved through concerted efforts and a commitment to healthcare excellence.

Addressing postpartum mental health in Kerala requires a multifaceted approach, combining awareness, early detection, and accessible treatment. By building on existing initiatives and fostering a supportive environment, Kerala can enhance the well-being of mothers

and their families, reinforcing its commitment to comprehensive healthcare.

Kerala's perinatal total health model stands as a testament to the state's commitment to maternal and child health. Through a combination of robust infrastructure, comprehensive care strategies, and continuous community engagement, Kerala has achieved outcomes that many regions aspire to. Addressing emerging challenges with the same dedication will ensure that the state continues to lead in perinatal health. Kerala's proactive stance on perinatal mental health serves as a model for other regions. By integrating mental health services into existing healthcare frameworks and launching dedicated programs like Amma Manasu, the state underscores the importance of maternal mental well-being. Continuous efforts to enhance awareness, reduce stigma, and strengthen healthcare infrastructure are essential to support mothers during the perinatal period.

## END NOTE

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