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Indigenous Maternal Health: A Case Study of Dai and Mitanin Practices in Rural Chhattisgarh, India

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Abstract

Background: This case study focuses on the indigenous health practitioners, the **Dai** (traditional birth attendant) and the **Mitanin** (community health worker), among the Bhunjia tribe in Chhattisgarh, India. The Dai assists in childbirth using traditional methods, while the Mitanin promotes institutional deliveries and provides prenatal and postnatal care. These practitioners are critical in areas with limited access to formal healthcare, playing a pivotal role in maternal health within the tribal community.

Aim and Objectives: This study explores maternal healthcare practices in indigenous Chhattisgarh, focusing on Dai and Mitanin roles, barriers to modern care, perceptions of antenatal services, and improving healthcare access.

Material and Methods: The study employed qualitative research methods, including interviews and case studies. Data were collected from six indigenous health practitioners (Dai and Mitanin) and mothers from the Bhunjia tribe of Chhattisgarh India. The focus was on understanding their experiences, practices, and the barriers encountered in maternal healthcare within the tribal context.

Results: The findings highlight several barriers to accessing maternal healthcare: Transportation Challenges: Geographical isolation limits access to healthcare facilities. Cultural Beliefs and Practices: Misconceptions about iron and folic acid supplements and reliance on traditional remedies like plant-based decoctions. Socioeconomic Constraints: Competing household responsibilities and financial limitations deter women from seeking institutional deliveries.

Despite improvements in health infrastructure, institutional delivery rates remain low. Traditional practices continue to be preferred due to the accessibility and trust associated with the Dai and Mitanin.

Conclusion: The study emphasizes the need to integrate traditional health practices with formal healthcare systems to improve maternal health outcomes in tribal regions. Addressing misconceptions about antenatal care and enhancing access to healthcare services are critical steps. The Dai and Mitanin, with their deep-rooted connections to the community, play a key role in bridging the gap between traditional and modern healthcare, ensuring safer childbirth practices.

Keywords: Bhunjia tribe, *Dai*, *Mitanin*, Maternal health, Antenatal care, Indigenous practices, traditional medicine.

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INTRODUCTION

Maternal healthcare practices among indigenous communities present a unique blend of tradition and limited access to modern medical services. The case study of the Dai and Mitanin in Chhattisgarh, India, highlights the complex realities faced by these communities. The Dai, traditional childbirth practitioners, have been conducting deliveries for over two decades, often utilizing indigenous knowledge passed down through generations. With some Dai receiving training from government health workers, there has been an attempt to bridge the gap between traditional practices and modern healthcare. The Mitanin, a female health worker or companion, serves as a critical link, motivating pregnant women to seek institutional deliveries and modern healthcare services.

However, despite these efforts, several barriers persist. Many pregnant women in rural areas do not access antenatal care (ANC) due to logistical challenges such as lack of transportation, financial constraints, and deep-rooted misconceptions about modern medical practices. These factors contribute to a continued reliance on traditional methods, often with limited intervention from modern healthcare providers(Sengupta, 2019; Kosariya, Chakravarty, & Sen, 2019). The case studies presented reveal the lived experiences of both the indigenous birth attendants and the pregnant women, emphasizing the challenges they face in terms of healthcare access, traditional beliefs, and maternal health outcomes.

The interplay between tradition and modernity, particularly in remote and underserved areas, raises important questions about the effectiveness of maternal healthcare programs and the need for more accessible healthcare infrastructure(Madankar, Kakade, Basa, & Sabri, 2024). This study aims to shed light on these issues through the lived experiences of women and healthcare practitioners in rural Chhattisgarh, underscoring the urgent need for improvements in healthcare delivery and awareness.

The BhunjiaTribe:

The Bhunjia tribe has been recognized as a Particularly Vulnerable Tribal Group (PVTG) by the Chhattisgarh state government, as well as by the central government in the state of Odisha(TRI, 2024; Tribal Affairs, 2024).Chhattisgarh, particularly in the districts of Gariaband and Raipur. The term "Bhunjia" is derived from the word "Bhumija," meaning "sons of the soil," reflecting their deep-rooted connection to the land and their traditional practices tied to agriculture and forest-based livelihoods. Historically, the Bhunjias are believed to have migrated to the region during periods of historical upheaval and settled in forested and hilly terrains. They are divided into two main sub-groups: the ChaukhutiaBhunjia and the Chinda Bhunjia, differentiated by cultural practices and marital customs. The ChaukhutiaBhunjias are considered more isolated and practice endogamy, whereas the Chinda Bhunjias are more integrated with other communities (TRI, 2024).

The Bhunjia people primarily depend on subsistence farming and forest resources for their livelihood. Their socio-cultural practices are steeped in animistic beliefs, although Hindu influences are evident in their rituals and festivals. They have a unique linguistic heritage, speaking a dialect closely related to Oriya, reflecting their historical connections to the neighboring state of Odisha. The tribe's population remains relatively small, and they are classified as a Particularly Vulnerable Tribal Group (PVTG) by the Indian government, which underscores the challenges they face in terms of education, healthcare, and economic opportunities(Verma, 2020).

RESEARCH METHODOLOGY

This study employs a **qualitative case study approach** to explore maternal healthcare practices among indigenous communities in Chhattisgarh, India. The research focuses on the experiences of traditional childbirth practitioners (Dai), female health workers (Mitanin), and pregnant women in remote rural areas. By examining their perspectives and interactions, the study aims to uncover the challenges and barriers faced in accessing maternal healthcare and highlight the influence of traditional practices.

1. Study Area

The research was conducted in Bhunjia tribe of Chhattisgarh, particularly in villages where Dai and Mitanin play a significant role in maternal healthcare. These areas were chosen due to their geographical remoteness, limited access to modern medical facilities, and the presence of strong indigenous traditions surrounding childbirth.

2. Data Collection Methods

The study utilized the following qualitative data collection methods:

In-depth Interviews: Semi-structured interviews

were conducted with key participants, including:

Dai (traditional birth attendants) with extensive experience in conducting deliveries.

Mitanin (female community health workers) who act as intermediaries between modern health services and pregnant women.

Pregnant women and new mothers to understand their experiences with antenatal care (ANC), childbirth, and postnatal care.

The interviews focused on topics such as traditional childbirth practices, perceptions of modern healthcare, challenges in accessing medical services, and the role of community health workers.

Case Studies: Individual case studies of pregnant women and birth attendants were developed to provide detailed insights into specific experiences. These case studies were used to capture the lived realities of women regarding maternal healthcare practices, the barriers they face, and the coping mechanisms adopted in the absence of adequate healthcare facilities.

Participant Observation: Researchers conducted field visits to observe the daily routines of the Mitanin and Dai, as well as the interactions between healthcare providers and pregnant women. This helped in understanding the practical challenges faced in remote areas and the role of traditional practices in maternal care.

3. Sampling Strategy

The sampling strategy was **purposive**, targeting participants who had direct experience with maternal healthcare in indigenous settings. The following groups were included:

Dai: Traditional midwives with more than a decade of experience, both trained and untrained in modern health practices.

Mitanin: Female health workers who received government training and work as health facilitators in the region.

Pregnant Women/New Mothers: Women from the indigenous communities who had recent childbirth experiences, focusing on those who had limited access to formal healthcare services.

The sample size included six case studies of Dai and Mitanin, along with interviews from a dozen women from the local community.

4. Data Analysis

The data collected from interviews, case studies, and participant observation were analyzed using **thematic analysis**. This involved identifying recurring themes related to traditional maternal practices, healthcare access, barriers to antenatal care, and the impact of modern health interventions. The thematic analysis allowed for the extraction of key insights regarding the blend of traditional and modern practices and the persistent challenges in healthcare delivery.

5. Ethical Considerations

Informed consent was obtained from all participants before conducting interviews or observations. The study ensured confidentiality and anonymity for participants, especially when discussing sensitive health issues or criticizing healthcare providers. Ethical approval was obtained from aInstitutional ethical comity, and care was taken to ensure that no harm came to the participants as a result of their involvement in the study.

AIMS AND OBJECTIVES

Aim:

The primary aim of this study is to explore and understand the maternal healthcare practices among indigenous communities in Chhattisgarh, India, with a specific focus on the role of Dai (traditional birth attendants) and Mitanin (community health workers). The study seeks to analyze the challenges faced by these communities in accessing modern healthcare facilities and the continued reliance on traditional childbirth practices, despite efforts to introduce institutional care and antenatal services.

OBJECTIVES

To investigate the traditional maternal healthcare practices used by the Dai in rural Chhattisgarh, including prenatal, childbirth, and postnatal care.

To examine the role of Mitanin as a bridge between indigenous practices and modern healthcare, and to assess the effectiveness of their involvement in encouraging institutional deliveries.

To identify barriers to accessing modern maternal healthcare services, including transportation challenges, financial constraints, and cultural misconceptions surrounding modern medicine.

To understand the perceptions of pregnant women towards antenatal care (ANC) and the consumption of iron and folic acid (IFA) tablets,

and how these perceptions influence their health-seeking behaviors.

To assess the impact of limited healthcare infrastructure and the availability of healthcare resources on maternal health outcomes in these indigenous communities.

To explore potential strategies for improving maternal healthcare in remote areas, focusing on enhancing access to modern healthcare services while respecting traditional practices.

FINDINGS

Case Study of Indigenous Dai and Mitanin of the Bhunjia Tribe in Chhattisgarh India

Overviewof Indigenous Practitioners: The Dai, an indigenous practitioner of childbirth, has traditionally conducted deliveries for over 20 years. Some Dais have received training from modern health workers affiliated with the Government of Chhattisgarh. The Mitanin serves as a vital link between these government health workers and pregnant women, encouraging them to opt for institutional deliveries while providing essential health services before and after childbirth. The term "Mitanin" locally refers to a female friend of women in the community.

Case Study of Indigenous Dai and Mitanin

Case Study 1

Rasmai, a 50-year-old Dai, has been practicing for 15 years and received Mitanin training in 2002. She advises pregnant women to maintain a regular diet without special food or care. However, many women do not attend regular antenatal care (ANC) checkups due to transportation issues, often having to walk 6-7 km to reach the main road. Additionally, there is a prevalent misconception that consuming iron tablets will lead to larger babies and complications during labor. For emergencies, women contact the health services via a phone number that can only be accessed by climbing a tall tree due to poor mobile connectivity. After delivery, women are offered "Kulthi(Macrotyloma uniflorum) Ras" along with sesame seeds and jaggery.

Case Study 2

Keshr, a 55-year-old Mitanin trained in 2002, has improved her delivery skills over the years. Since 2015, she has only received cotton as part of her delivery kit. Pregnant women do not receive special meals for ANC care and continue their daily routines until labor. Factors preventing iron tablet consumption include unpleasant odors and the belief that they will lead to larger babies and complications. Keshri prepares a decoction of Kulthi(Macrotyloma uniflorum), KakaiaChhal(Terminalia arjuna), and Chhind(Phoenix sylvestris)Kanda, boiling it down from 5 liters to 1 liter before mixing it with jaggery and offering it to the mother shortly after delivery.

Case Study 3

Kunti Bai, aged 65-70, has been a Dai and Mitanin for 15 years. She reports that pregnant women do not require special care, echoing her own experiences during pregnancy when ANC checkups were not feasible. Although health workers now visit villages, women often miss ANC checkups due to their household responsibilities and the need to gather forest products. Financial constraints also limit their ability to seek external medical care. While previously women were not offered food for 3-4 days post-delivery, they are now given "Kulthi (Macrotyloma uniflorum) Ras" and jaggery within 2-3 days.

Case Study 4

Lata Thakur, a 68-year-old Mitanin, notes that pregnant women typically have a normal diet and do not receive special care. They continue household chores until labor begins, facing challenges with accessing the emergency helpline due to poor network connectivity. During the rainy season, the Mahatari Express is often unable to reach villages due to flooding. Kuntala recalls an incident where a pregnant woman named Chandrika could not be transported to a hospital due to severe flooding, resulting in the local medicine man administering an injection that led to a stillborn birth. Despite this, she believes the injection saved the mother's life, and she was given a decoction of "Kulthi (Macrotyloma uniflorum) Ras" and jaggery for recovery.

Case Study 5

Amula, a 50-year-old Mitanin, has been working since 2002. Pregnant women typically eat the same food as the rest of the household, with no special provisions made for them. In the past, deliveries took place at home, with little awareness of government-provided medical facilities. Nowadays, some call for the Mahatari Express during emergencies. Many women avoid iron and folic acid (IFA) tablets due to misconceptions about their impact on delivery. ANC checkups are not prioritized as traditional pregnancy care methods are favored. In earlier times, women were prohibited from eating for three days post-delivery; however, they can now eat after

a few hours. A decoction made from boiling Kulthi (Macrotyloma uniflorum), Hirwa(Macrotyloma uniflorum), Chhind(Phoenix sylvestris) Kanda, and Kantadhoura bark is prepared and given to mothers post-delivery.

Case Study 6

Janmati Bai, 60 years old, shared that transportation and financial constraints deter people from attending ANC checkups. Health workers often do not visit regularly due to the challenging terrain, traveling 8-10 km through dense forests. Vaccination services are inconsistent. The 102-emergency helpline is difficult to reach, and when pregnant women seek care at the Community Health Centre (CHC), staff often demand bribes. She recounts an incident involving Amita, who experienced labor pains and was taken to a sub-centre, where the Auxiliary Nurse Midwife (ANM) demanded a bribe of 3000-4000 rupees. Amita could only provide 1200 rupees, and although she delivered safely, she later developed a fever that persisted for 10-12 days. Her family ultimately sought the help of a traditional healer, but unfortunately, she passed away.

Case Studies of Bhunjia Mothers

Case Study of Respondent 1

In January, during fieldwork in a village, I encountered a Bhunjia woman returning from the forest with a heavy load of dried wood. Despite her fatigue, she had just given birth 21 days prior, marking her fifth delivery. Aged around 28, she appeared pale. After conducting a hemoglobin (Hb) test, I found her level was critically low at 4 g/dl, indicating severe anemia. Despite this, she carried the wood effortlessly, unaware that her tiredness stemmed from her low Hb level, compounded by closely spaced pregnancies.

Case Study of Respondent 2

Living by the river, Shewnti Bai, 24, was in her eighth month of her second pregnancy and reported not receiving any vaccinations. She looked quite pale, and her Hb level was tested at 4.8 g/dl. Despite this, she insisted she felt fine and managed her household chores without difficulty. She mentioned that due to her remote location, health workers had never visited her, as there was no accessible road or nearby Anganwadi (childcare center).

Case Study of Respondent 3

My name is Gouri, and I am a 23-year-old mother with a 2.5-year-old child. This is my second pregnancy. I perform all routine household tasks and consume regular food without any special preparations. During my first pregnancy, I received no special treatment, although an Auxiliary Nurse Midwife (ANM) did conduct checkups and vaccinations. On the day I went into labor, my husband was away, and no one else was around to assist. I waited for him to return, but as the pain intensified, I ended up delivering the baby alone without any assistance.

DISCUSSION

The experiences of the Indigenous Dai and Mitanin practitioners, as well as the Bhunjia mothers in Chhattisgarh, highlight significant gaps in maternal healthcare access and knowledge, reflecting broader trends observed in rural India. Despite government efforts to enhance maternal health services, traditional beliefs and socio-economic constraints continue to impede optimal care practices.

Traditional Practices vs Modern Healthcare

The case studies reveal that many women adhere to traditional practices, such as avoiding iron and folic acid (IFA) tablets due to misconceptions about their effects on labor. For instance, Ramshila and Keshri reported that pregnant women in their communities' fear that iron tablets would lead to larger babies and complicate delivery. This aligns with findings by Sinha *et al*., who noted that misconceptions regarding dietary supplements among rural women are prevalent, contributing to low compliance with antenatal care (ANC) protocols (Sinha, Kumar, & Verma, 2019).

Moreover, the Mitanin's role as a mediator between traditional practices and modern healthcare is critical yet insufficient. Studies have shown that community health workers can improve maternal health outcomes by providing education and support (Nair, Tripathi, & Kumari, 2020). However, the limited training received by Dais, as indicated in the case studies, hampers their effectiveness in encouraging institutional deliveries.

Access to Healthcare Services

A significant barrier identified in the case studies is the lack of transportation and financial constraints that prevent women from attending ANC checkups. For instance, Kyadi Bai and Kuntala Thakur emphasized the difficulties faced in accessing health services due to geographical isolation and poor infrastructure. This situation resonates with findings from Kumar *et al*., who reported that

socio-economic factors and inadequate transport facilities are major deterrents to accessing maternal healthcare in rural areas of India(Kumar, Prasad, & Kaur, 2022; Sen, Chakravarty, & Kosariya, 2017).A review of 114 studies on tribal maternal practices in Maharashtra found poor MCH service use due to traditional beliefs, Dai trust, and home-delivery rituals(Begum, Sebastian, Kulkarni, Singh, & Donta, 2017).Traditional beliefs in Maharashtra's tribal communities influence childbirth practices, limiting antenatal care, institutional deliveries, and breastfeeding. Culturally sensitive interventions are essential to improve maternal and child health outcomes(Begum, Sebastian, Kulkarni, Singh, & Donta, 2017).Tribal women's utilization of maternal healthcare depended on awareness, affordability, accessibility, service quality, and health worker motivation. While 85% of tribal women accessed care, non-tribal utilization was 100%. Education gaps and poor transport hindered access. Affordable, high-quality public healthcare and health worker efforts in Kerala significantly improved maternal care utilization among tribal women(Kumari & Kumari, 2020; Kosariya, Chakravarty, & Sen, Factors Affecting the Utilization of Maternal Health Care Services among Bhunjia tribe of Chhattisgarh (India), 2019; Sen, Chakravarty, & Kosariya, 2017; Sen, Chakravarty, & Kosariya, 2017).

Additionally, the reliance on local medicine and traditional healers, as illustrated in the accounts of Manmati Bai and Kuntala Thakur, underscores a preference for culturally familiar practices over formal healthcare services. This trend is corroborated by Dhok *et al*., who highlighted that traditional healers are often the first point of contact for healthcare in rural settings, leading to delays in seeking professional medical assistance (Dhok, Patil, & Shinde, 2023).

Nutritional Practices and Anemia

The prevalence of anemia among pregnant women, as evidenced by the case studies where respondents exhibited severely low hemoglobin levels, is a pressing public health issue. For example, the anaemic conditions of the Bhunjia women, with hemoglobin levels as low as 4 g/dl, reflect national trends reported by the National Family Health Survey (NFHS-5, 2020), which found that 57.2% of pregnant women in India are anaemic. Kosariya&Chakravarty (2017)observed that 90.17% of lactating women and 87.76% of pregnant women were found to be anaemic(Kosariya & Chakravarty, Anaemia among Bhunjia tribal women of Chhattisgarh, India and their correlation with BMI, 2017).The prevalence of anemia was found to be significantly high among lactating and pregnant ChoukhutiyaBhunjia women. Among lactating women, 64.92% were categorized as underweight, while only 4.39% fell into the overweight category. A positive correlation was observed between BMI and anemia, as indicated by Pearson's correlation analysis(Kosariya & Chakravarty, Maternal Health Status of Choukhutiya Bhunjia Tribe of Gariyaband District of Chhattisgarh, India, 2016).

Moreover, the traditional belief that pregnant women should not consume certain foods post-delivery has detrimental effects on maternal health. As described by Amula, the shift in practices allowing women to eat shortly after childbirth has improved recovery but remains inconsistent across communities. According to Ramachandran, addressing nutritional practices during pregnancy is crucial to reducing maternal and neonatal morbidity and mortality (National Family Health Survey-%, 2020).

CONCLUSION

The experiences of the Indigenous Dai, Mitanin practitioners, and Bhunjia mothers in Chhattisgarh illuminate the complex interplay between traditional practices and modern healthcare. While community health initiatives like the Mitanin program aim to bridge this gap, socio-economic barriers and entrenched beliefs about pregnancy and childbirth significantly hinder progress. Addressing these challenges requires a multi-faceted approach that combines education, improved healthcare access, and community engagement to foster a more supportive environment for maternal health.

Conflict of Intestate: No conflict of interest.

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