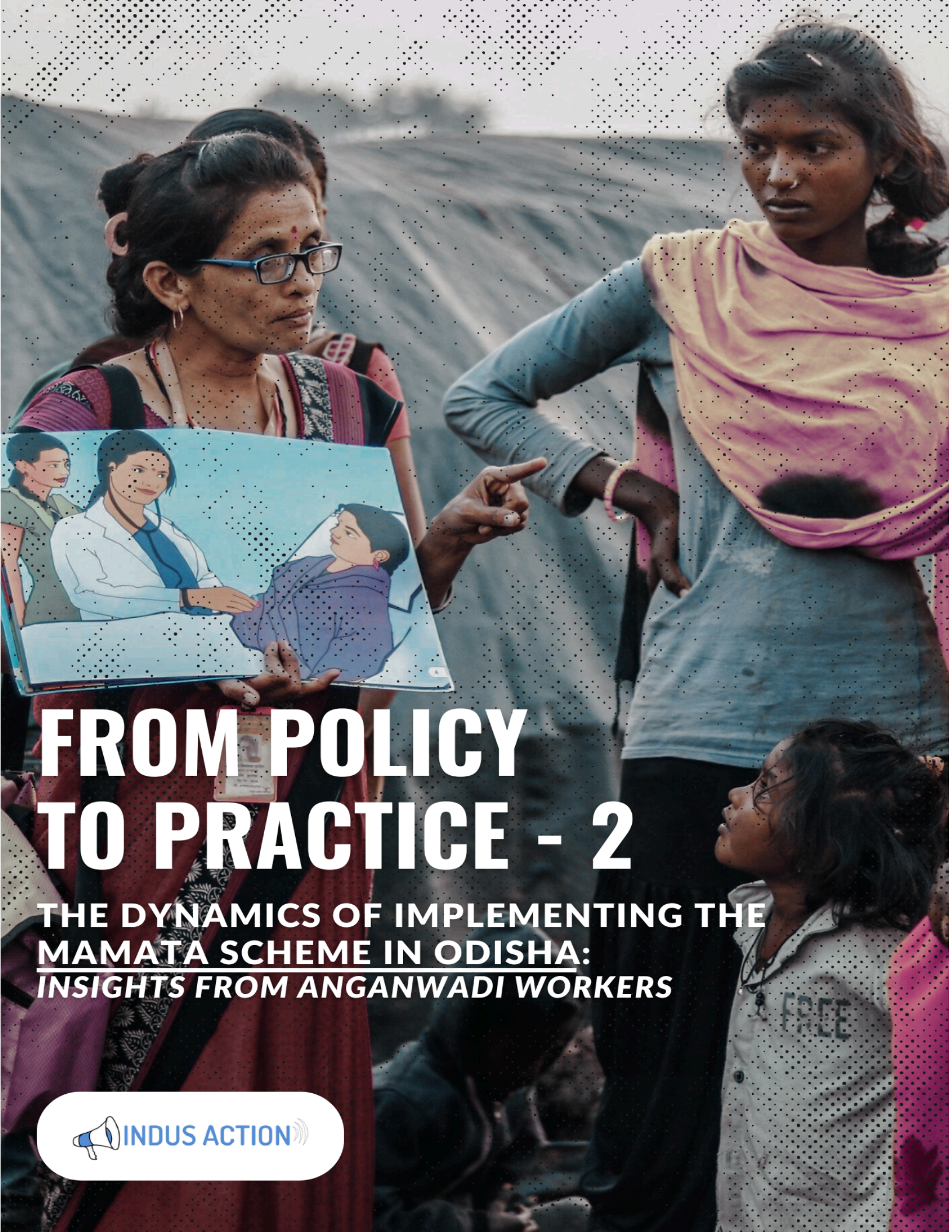

# FROM POLICY TO PRACTICE - 2

## THE DYNAMICS OF IMPLEMENTING THE MAMATA SCHEME IN ODISHA:

### *INSIGHTS FROM ANGANWADI WORKERS*

INDUS ACTION

# About Indus Action

At Indus Action, we are at the frontline in solving the entrenched challenge of poverty and systemic barriers that keep large sections of the Indian population unable to access their welfare entitlements. Our guiding beacon is a simple yet powerful conviction: every family in India, particularly those subsisting on an income of less than Rs. 10,000 ($135) per month, should have unrestricted access to their welfare entitlements, entitlements that grant them a path to quality education, robust health, and secure livelihoods, amongst others.

As we navigate the intricate web of policies and regulations, we are faced with the towering figure of 890 million citizens, a segment that continues to live below the poverty line, trapped in a maze of systemic inefficiencies that hinder access to welfare rights anchored in education, health, and livelihood security. The journey to upliftment is anchored to over 500 schemes, a wide range of opportunities that unfortunately culminate in low-impact delivery, leaving a substantial portion of the populace grappling with poverty.

At the core of our work lies the transformative Portfolio of Welfare and Entitlement Rights (PoWER). It is not just a portfolio but a testament to our unwavering commitment to redefining the boundaries of welfare in India, translating the 500+ fragmented low-impact schemes into a consolidated set of 5-10 high-impact, accessible welfare schemes. Through PoWER, we aspire to unlock welfare benefits across various dimensions, assisting 1,000,000 families and helping them reclaim their entitlements and navigate their way out of poverty by 2025.

Since 2013, our work has contributed towards:

1. Facilitating 611,432 admissions under the Right to Education Act.
2. Empowering 172,446 mothers with maternity benefits under the National Food Security Act.
3. Supporting 137,713 workers to avail entitlements per state-specific labour welfare provisions.

# Acknowledgement

We would like to express our gratitude to the families and front line workers in Dhenkanal district in Odisha, who spared their personal time to be part of the study.

This research was carried out thanks to the support from the Agency Fund, and we appreciate their commitment to improving outcomes for vulnerable mothers and children. Gratitude to the state of Odisha for their focus on ensuring maternity entitlements reach the ground, and for being open to analysing and continuously improving social protection for it's most vulnerable.

Within Indus Action, gratitude to all team members involved in the process.

**Authors:** Dr. Urvashi Bali
**Data Collection and Design:** Dr. Sarbani Chakraborty, Kunirekha Mohanta, Namrita Mishra
**Editors:** Archana Kannan and Madhuri Dhariwal

# Executive Summary

**Introduction**

In 2011, the Government of Odisha launched the Mamata scheme, a conditional cash transfer initiative to reduce maternal and infant malnutrition. Targeting pregnant and lactating women aged 19 and above, the scheme provides financial benefits to support their nutritional needs. Recently, the benefits were doubled from Rs. 5000 to Rs. 10000. This study focuses on the role of Anganwadi Workers (AWWs) in implementing the Mamata scheme in Dhenkanal District, Odisha.

**Methodology**

The study follows a cross-sectional research design, employing structured interviews with 20 AWWs from various Anganwadi Centres (AWCs) in Dhenkanal District. Data collection occurred from February 21st to March 1st, 2024, through interviews lasting approximately 45 minutes each. Five of the participants were Mini Anganwadi workers, while the remaining 15 were Anganwadi workers.

**Key Findings**

1. **Identifying and Registering Beneficiaries:** Each respondent noted that they primarily identify the potential beneficiaries for the Mamata scheme through proactive outreach and community engagement. They engage in regular home visits, interacting with newly married couples and their families, particularly the mother-in-law, to inquire about pregnancies and irregular menstrual cycles. Additionally, they often ask neighbours for information regarding newly married women who have not yet experienced pregnancy. Beneficiaries also play a role, occasionally contacting AWWs or the Accredited Social Health Activist (ASHA) for assistance. Collaboration with ASHA and Auxiliary Nurse Midwives (ANM) further enhances the identification process. Some AWWs emphasised that the promotion of scheme benefits incentivises beneficiaries to seek assistance, motivated by the promise of monetary aid. Age eligibility also posed a significant obstacle, with early marriages prevalent in communities like ST, SC, and OBC, rendering many women ineligible for Mamata benefits. Overall, the AWWs' familiarity with the community and their proactive engagement ensure the effective identification of potential beneficiaries for the Mamata scheme.

2. **AWWs' Engagement with Beneficiaries:** AWWs provide health and nutrition education, counselling on breastfeeding and infant feeding practices, and conduct home visits to support pregnant and lactating mothers. Insights obtained from discussions with AWWs shed light on the complexities involved in implementing health and nutrition counselling within the framework of the Mamata scheme. While most women generally heed and follow the health and nutrition advice provided to them, challenges arise in ensuring universal adherence to counselling suggestions. One significant challenge is the

discontinuation of supplements or medicines due to the occurrence of safe side effects. There are also instances where lactating mothers introduce supplementary foods to their infants based on the advice of other family members without informing the AWWs, potentially affecting the infant's nutritional intake and growth. The study also highlights the wider issues marginalised communities face, such as limited resources and poverty, when it comes to implementing counselling advice, especially concerning nutrition and health.

3. **Utilisation of Mamata Scheme Funds:** AWWs advise lactating beneficiaries to use the allocated funds to purchase weaning foods for the infant after six months, ensuring a smooth transition to solid foods while maintaining proper nutrition. Most AWWs expressed confidence in the beneficiaries' ability to adhere to the scheme's conditions, emphasising the continuous reminders and support provided during home visits. Based on the responses provided by the AWWs, it can be inferred that all households eligible for the Mamata scheme benefit from it, regardless of their economic status. While the scheme benefits all households, poorer ones often use the funds to strengthen their social protection net through savings. In contrast, more well-off households may use it to improve their current health inputs by purchasing fruits and vegetables.
4. **Decision-making on utilisation of Mamata scheme funds:** Most AWWs shared that they do not have complete visibility into how the decision-making on spending the funds occurs. However, they did mention the involvement of the husbands and other family members, like the mother-in-law. This underscores the importance of considering gender dynamics and household decision-making processes when implementing welfare schemes like Mamata.
5. **AWWs roles and struggles:** Most AWWs shared concerns regarding the price discrepancy between government-provided amounts and market rates for items such as eggs. One of the AWWs specifically highlighted, '*Govt. pays Rs. 5 for an egg, but the market price is Rs. 7. The value that Govt. provides is not sufficient when compared to the market value of food items such as eggs, oil, dal etc*'. This will directly lead to either fewer women receiving the required nutrition or a dilution in the quality of the same.

**Conclusion**

The Mamata scheme significantly impacts women's health, agency, and intra-household gender dynamics in Odisha. Anganwadi Workers are pivotal in the scheme's implementation, facing various challenges that need addressing to enhance their effectiveness. Policy recommendations focus on improving support systems for AWWs, enhancing training, and addressing socio-cultural barriers to ensure the scheme's successful implementation and its positive impact on women's health and empowerment. This study underscores the importance of community health workers in implementing welfare schemes and the need for continuous support and improvements to maximise their impact on maternal and child health.

# Table of Contents

**About Indus Action** ..... 1
**Acknowledgements** ..... 2
**Executive Summary** ..... 3
**Table of Contents** ..... 5
**Abbreviations** ..... 6
**Introduction** ..... 8
**Literature Review** ..... 10
**Methodology** ..... 13
**Demographic Profile of the Respondents** ..... 14
**Results and Discussion** ..... 15
1. Identifying and Registering Mamata Beneficiaries: Challenges and Obstacles ..... 15
2. AWWs' Engagement with Mamata Scheme Beneficiaries ..... 16
3. AWWs' Advice and Perceptions on the Scheme Implementation and Beneficiary Behaviours ..... 20
4. Utilisation of Mamata Scheme Funds and Decision-Making Dynamics within Households ..... 22
5. AWWs' Roles and Struggles ..... 23
**Conclusion & Policy Recommendations** ..... 25
**References** ..... 28
**Annexure** ..... 32
ANNEXURE 1: AWW Characteristics ..... 33
ANNEXURE 2: Registration of Mamata Beneficiaries and their interaction ..... 34

# Abbreviations

| | |
|---|---|
| AWC | Anganwadi Centre |
| AWW | Anganwadi Worker |
| AWH | Anganwadi Helper |
| AAY | Antyodaya Anna Yojana |
| ANM | Auxiliary Nurse Midwife |
| ANC | Antenatal Care |
| ASHA | Accredited Social Health Activist |
| BSKY | Biju Swasthya Kalyan Yojana |
| CCT | Conditional Cash Transfer |
| CHC | Community Health Centre |
| GKS | Gaon Kalyan Samiti |
| ICDS | Integrated Child Development Services |
| IFPRI | International Food Policy Research Institute |
| JABS | Jaccha-Baccha Survey |
| MIL | Mother-in-Law |
| MoWCD | Ministry of Women and Child Development |
| NEFT | National Electronic Fund Transfer |
| NFSA | National Food Security Act |
| NITI Aayog | National Institution for Transforming India |
| NTFP | Non- Timber Forest Product |
| OBC | Other Backward Classes |

| | |
|---|---|
| PHC | Primary Health Centre |
| PHH | Priority Household |
| PMSBY | Pradhan Mantri Suraksha Bima Yojana |
| PVTG | Particularly Vulnerable Tribal Groups |
| ST | Scheduled Tribe |
| SC | Scheduled Caste |
| TPDS | Targeted Public Distribution System |
| VHND | Village Health and Nutrition Day |
| WHO | World Health Organisation |

# Introduction

In 2011, the Government of Odisha introduced the Mamata scheme, a conditional cash transfer (CCT) initiative aimed at tackling maternal and infant malnutrition. This scheme targets pregnant and lactating women aged 19 and above throughout the state, providing benefits for their first two live births. Presently, pregnant women enrolled in the Mamata scheme receive Rs 5,000 distributed in two instalments: Rs. 3,000 prior to delivery and Rs. 2,000 ten months post-delivery. Recently, the Odisha government has sanctioned an increase in maternity benefits under Mamata, doubling the amount from Rs. 5,000 to Rs. 10,000. The enhanced assistance will be disbursed in two instalments of Rs. 6,000 and Rs. 4,000, with the initial payment given after six months of pregnancy and the second after the child reaches ten months of age (The Hindu, 2024).

These incentives are transferred directly to the women beneficiaries' bank accounts via NEFT mode to meet their nutritional needs. The scheme is regulated and implemented by the Department of Women and Child Development (MoWCD), Government of Odisha and implemented on the ground at the Anganwadi Centre level (AWC).

Anganwadi Services (erstwhile ICDS scheme) under Saksham Anganwadi and Poshan 2.0 is a Centrally Sponsored Scheme implemented by States/UTs providing a package of six services: Supplementary Nutrition, Preschool non-formal education, Nutrition & Health Education, Immunisation, Health check-up, and Referral services to children in the age group of 0-6 years, pregnant women and lactating mothers through the platform of AWCs across the country (MoWCD, 2023a). These essential services are provided by Anganwadi Workers (AWWs) and Anganwadi Helpers (AWHs), community members volunteering for child care and maternal health. As honorary workers, they receive a monthly honorarium set by the Government. AWCs are established based on population norms, with each centre typically staffed by one AWW and one AWH. Mini Anganwadi centres typically have one AWW sanctioned.

At the heart of the Mamata scheme's implementation lie the AWWs, whose role is pivotal in bringing its benefits to fruition at the grassroots level. Their significance becomes evident as women seeking scheme benefits must register at the nearest AWC or Mini AWC, where AWWs are stationed. Charged with the task of identifying beneficiaries within their designated areas, AWWs shoulder the responsibility of ensuring that the scheme reaches those in need. Their duties extend beyond mere registration. AWWs actively engage in providing crucial health and nutrition education, offering counselling sessions on breastfeeding, and educating mothers on infant and young feeding practices. Recognising the importance of community involvement, AWWs regularly conduct home visits to support the parents, empowering pregnant and lactating mothers with the knowledge needed to foster their child's growth and development, and paying

special attention to newborn care. Through their efforts, AWWs serve as pillars of support for families, enriching communities with their invaluable contributions to maternal and child welfare.

The present study explores the multifaceted role of Anganwadi Workers (AWWs) in implementing the Mamata scheme in the Dhenkanal District of Odisha. It seeks to investigate the specific activities undertaken by AWWs in executing the scheme, their interactions with beneficiaries, and their perceptions regarding the health-seeking behaviours of Mamata scheme beneficiaries.

# Literature Review

In South Asian countries, Community Health Workers (CHWs), predominantly women, form the backbone of Primary Health Care (PHC) systems. These CHWs, as defined by the World Health Organization (WHO), are health workers based in communities (i.e., conducting outreach beyond PHC facilities or based at peripheral health posts that are not staffed by doctors or nurses), who are either paid or volunteer, who are not professionals, and who have fewer than two years training but at least some training, if only for a few hours (WHO, 2018). Their critical role in administering crucial interventions for maternal, child, and adolescent health, as well as nutrition, has been well-established (Haines et al., 2007).

In countries like Bangladesh, Sri Lanka, Pakistan, and Nepal, diverse CHW programmes exist, each tailored to local contexts. For instance, in Bangladesh, the Bangladesh Rural Advancement Committee (BRAC) employs Shasthya Shebika and Shasthya Kormis to deliver essential health services at the community level (Frontline Health Project, 2020). In Sri Lanka, Public Health Midwives take charge of maternal and child healthcare (Abeysakara et al., 2022), while Lady Health Workers and Community Midwives are integral to Pakistan's community health efforts. Similarly, Nepal relies on Auxiliary Nurse Midwives, Auxiliary Health Workers, and Female Community Health Volunteers to address community health needs.

Despite the extensive deployment of CHWs, various studies have highlighted persistent challenges. A UNICEF evaluation study (2020) across seven South Asian countries identified significant variations in CHWs' functions and recommended improvements in funding, integration into primary healthcare systems, and ongoing training to enhance their effectiveness. In India, a comprehensive evaluation of the Integrated Child Development Services (ICDS) scheme by NITI Aayog (2020) revealed that despite receiving consistent training in technical aspects such as nutrition basics, malnutrition, and immunisation, the majority of AWWs lacked essential skills in conducting effective home visits, planning, and time management. This deficiency was particularly noticeable as AWWs had to allocate extensive hours to fulfil reporting obligations, consequently diminishing their effectiveness in delivering care. Another study in Madhya Pradesh (Jain et al., 2020) highlighted the substantial portion of time AWWs spend on administrative tasks, potentially hindering their ability to provide direct care.

Scholars in existing literature have consistently highlighted a range of challenges faced by Anganwadi workers over time. These include their categorisation as honorary workers rather than being treated on par with government employees (Desai et al., 2012; Sinha et al., 2021). Other identified issues encompass insufficient honorarium (Barodia, 2015; Kaur et al., 2016; Borghain and Saikia, 2017; Dash and Priyadarshini, 2018), substandard working conditions, and inadequate infrastructure (Sahoo et al., 2016; Patil and Doibale, 2013; Barodia, 2015; Kaur et al., 2016; Asha, 2014; Kular, 2014). Additionally, concerns have been raised regarding the

psychological stress experienced by these workers (Mannapur et al., 2018), inadequate community support (Barodia, 2015), and insufficient supervision (Patil and Doibale, 2013), among other issues.

Furthermore, studies have revealed the intricate relationship between AWWs knowledge, training, and their ability to effectively address child nutrition. The 2011 Hungama Report highlighted a concerning lack of understanding among AWWs regarding malnutrition, indicating potential gaps in implementing effective nutrition interventions (Nandi Foundation, 2011). This underscores the necessity for comprehensive training and education, as emphasised by Meena and Meena (2018), who stress that malnutrition is not solely attributable to food scarcity but also to insufficient knowledge about appropriate feeding practices such as amounts, frequency, and types of foods. This knowledge gap significantly contributes to the poor nutritional status of children.

Similarly, Parikh and Sharma's (2011) study on AWWs perceptions regarding the promotion of community-based complementary feeding practices in tribal Gujarat revealed their limited understanding of breastfeeding and complementary feeding practices, highlighting the need for enhanced training and support to effectively counsel caregivers on optimal feeding practices. This need for improved training is consistent with the findings of IFPRI's (2015) study in Odisha, which indicated that only 32% of mothers received counselling on complementary feeding during the critical period of 6–24 months after birth (Avula et al., 2015). Additionally, Rochwani and Singh's (2018) study in Punjab underscored the inadequate perceptions and practices among Anganwadi workers concerning complementary feeding, indicating persistent challenges in this area.

Further supporting the necessity for enhanced training, Chaturvedi et al. (2014) study in Gujarat demonstrated that AWWs with better knowledge of infant and young child feeding practices were more effective in counselling caregivers. This highlights the importance of quality interactions between AWWs and caregivers, as stressed in Dutta and Ghosh’s (2016) study in West Bengal, emphasising the need to equip caregivers with adequate information on nutritional awareness and child growth trajectory. Overall, these studies collectively underscore the significance of comprehensive training and support for AWWs to enhance their capabilities in addressing malnutrition and promoting child health effectively.

Effectively addressing undernutrition necessitates a holistic approach that considers various factors, including behavioural, socio-economic, and contextual aspects (NITI Aayog, 2020). Scot et al. (2018) emphasised the importance of developing both technical competencies and socially oriented skills, such as communication and counselling, in training programmes for CHWs, with a focus on maintaining confidentiality.

Similarly, Kok et al. (2015) highlighted the influence of social and cultural norms, values, practices, and beliefs on CHW performance, underlining the significance of societal dynamics in healthcare delivery. This aligns with Mcpherson et al. (2010) observation that healthcare decisions in many societies are primarily influenced by husbands and mothers-in-law, illustrating the influential role of family dynamics in healthcare choices.

Deka's (2014) study in rural Assam further supports these insights by highlighting persistent challenges in maternal health despite state interventions. The study identified unaddressed patriarchal influences and disparities between public services and community knowledge as contributing factors to high maternal mortality rates. These findings underscore the importance of understanding and addressing societal norms and power dynamics in healthcare delivery, as suggested by Kok et al. (2015) and Mcpherson et al. (2010). They emphasise the need to broaden the perspective on reproductive health beyond mere medical considerations to effectively address maternal health challenges in rural settings.

The present study aims to delve into the perspectives of Anganwadi Workers and how they influence the behaviours of pregnant and lactating women toward improved maternal and child outcomes related to the Mamata scheme. The study is conducted in Dhenkanal District, Odisha.

# Methodology

This study follows Phase I, which was a cross-sectional qualitative examination of how welfare funds from the Mamata scheme were used in two villages - Gobindapur and Gengutia - located within Dhenkanal district, Odisha. Phase I also looked into the dynamics of intra-household gender relations and the agency of women within households benefiting from the Mamata scheme. Phase II, the current study, employs a cross-sectional research design to delve into the implementation and perspectives of Anganwadi Workers (AWWs) regarding the Mamata scheme in Dhenkanal District, Odisha.

Data collection occurred through structured interviews conducted by two female researchers from February 21st to March 1st, 2024. A total of 20 AWWs participated in the study, selected randomly from 20 Anganwadi Centres (AWCs) across the district. Among the participants, five were Mini Anganwadi workers, while the remaining 15 were Anganwadi workers. The sample size of 20 was predetermined, considering time and resource constraints.

Each interview session lasted approximately 45 minutes and was conducted at the respective AWCs of the participants. Data collection involved a comprehensive questionnaire tailored to capture diverse perspectives on the Mamata scheme. Although the questionnaire was in English, both researchers were native to Odisha and proficient in Odia, ensuring effective communication with the participants. This linguistic proficiency greatly aided in translating and decoding the responses, facilitating a deeper understanding of the participants' perspectives. Qualitative analysis was employed to analyse the interview data, identifying recurring themes and patterns within the responses. This analytical approach aimed to uncover deeper insights into the experiences and challenges encountered by AWWs in fulfilling their roles within the community.

The study presents its findings across five key sections: Activities undertaken by AWWs in implementing the Mamata Scheme, AWWs' interaction with Mamata Scheme beneficiaries, utilisation of Mamata Scheme funds and decision-making dynamics within Households, AWWs' perceptions of Mamata Scheme beneficiaries' health-seeking behaviors and recommendations for enhancing AWWs working conditions and effectiveness.

Ethical standards were adhered to, with participants being required to provide informed consent prior to their involvement. Confidentiality of respondents' responses was maintained diligently throughout the duration of the study.

# Demographic Profile of the Respondents

The cohort of 20 Anganwadi Workers (AWWs) surveyed presents an average age of 46 years. Educational attainment among them varies, with a majority (nine) having completed secondary education, six holding graduate degrees, and three pursuing higher education. It's noteworthy that the three respondents pursuing graduation are relatively younger, with an average age of 35 years. Additionally, each respondent has attained middle school and senior secondary education levels. Previous research by Gupta et al. (2013) and Asha (2014) has established a positive correlation between the educational attainment of AWWs and their performance, underscoring the significance of improving their educational qualifications to enhance their effectiveness. The revised guidelines outlined in Saksham Anganwadi and Poshan 2.0 (MoWCD, 2022a) mandate that individuals aspiring to join as AWWs/AWH must have completed education up to the 12th standard, with an age requirement of 18 to 35 years for recruitment. This emphasis on recruiting younger candidates may indicate a strategy to attract individuals who can actively engage with and comprehend the communities they serve, with a particular focus on connecting with younger mothers and children.

In terms of religious affiliation, all respondents identify as Hindu. The distribution across different caste categories reveals that ten respondents belong to the General Category (GC), seven to Other Backward Classes (OBC), one to Scheduled Caste (SC), and two to Scheduled Tribe (ST). These caste category distinctions could be significant in household interactions, given the continued prevalence of casteism across India (Avulae et al., 2015). Research by John et al. (2020) in Bihar highlighted caste dynamics within the community as a crucial factor influencing AWW performance. They observed cases where higher caste communities (GC) objected to services provided by lower caste (SC, ST, OBC) AWWs, while AWWs from higher caste backgrounds encountered difficulties in meeting the needs of both lower caste groups and their own caste members. Economically, 17 respondents possess Priority Household (PHH) ration cards, suggesting a certain level of economic stability, while three do not have ration cards, hinting at potentially better economic conditions among this subset. In India, PHH households are part of the Targeted Public Distribution System (TPDS), designed to provide subsidised food grains to vulnerable populations. These households are identified by state governments based on specific criteria. Under the National Food Security Act (NFSA), up to 75% of the rural population and 50% of the urban population are covered, including Antyodaya Anna Yojana (AAY) households and Priority Households. While AAY households, considered the poorest of the poor, receive 35 kg of food grains per family per month, Priority Households are entitled to 5 kg per person per month (Ministry of Consumer Affairs, Food & Public Distribution, 2023)

# Results and Discussion

The results and discussion section has been arranged as follows:

1. Identification of MAMATA beneficiaries
2. Interactions of the AWW with the MAMATA beneficiaries
3. AWW's Advice and the following of that advice relating to health-promoting behaviour
4. Mamata money usage, including the family dynamics
5. AWWs' roles and struggles

## 1. Identifying and Registering Mamata Beneficiaries: Challenges and Obstacles

The AWWs underscored a variety of tasks they undertake to implement the Mamata scheme effectively. These encompass registering Mamata beneficiaries, inputting and uploading beneficiary information onto the e-Mamata app as well as Poshan Tracker for updating supplementary nutrition details, maintaining physical registers, assisting beneficiaries in opening bank accounts, encouraging them for regular health check-ups, distributing dry food as per the Mukhyamantri Sampoorna Pushti Yojana (MSPY), disseminating information on immunisation schedules, and providing counselling to beneficiaries on diverse health and nutrition needs.

One of the primary responsibilities of AWWs is to detect pregnant women within their jurisdiction. Each respondent noted that they primarily identify the potential beneficiaries for the Mamata scheme through proactive outreach and community engagement. They engage in regular home visits, interacting with newly married couples and their families, particularly the mother-in-law, to inquire about pregnancies and irregular menstrual cycles. Additionally, they often ask neighbours for information regarding newly married women who have not yet experienced pregnancy. Beneficiaries also play a role, occasionally contacting AWWs or the Accredited Social Health Activist (ASHA) for assistance. Collaboration with ASHA and Auxiliary Nurse Midwives (ANM) further enhances the identification process. They employ pregnancy testing kits, supplied by ASHA, to confirm suspicions of pregnancy, particularly in cases of irregular menstruation. Some AWWs emphasised that the promotion of scheme benefits incentivises beneficiaries to seek assistance, motivated by the promise of monetary aid. Overall, the AWWs familiarity with the community and their proactive engagement ensure the effective identification of potential beneficiaries for the Mamata scheme.

To qualify for the initial instalment of Mamata funds, pregnant women must meet five specific criteria: registering their pregnancy at the AWC/Mini AWC, undergoing at least two antenatal check-ups (ANC), receiving IFA tablets and at least one TT vaccination, and attending counselling sessions either at the AWC, during Village Health and Nutrition Day (VHND), or during a home visit by the AWW. AWWs emphasised the importance of registering pregnancies

within four months, with earlier registration within two months preferred to allow ample time for document preparation. Late registration results in ineligibility for the first instalment, although beneficiaries remain eligible for subsequent payments.

Two AWWs recounted instances where a beneficiary missed the registration deadline due to Aadhaar details not being updated. Another mentioned that individuals from ST communities often lack awareness about the consequences of late registration or are negligent in keeping track of menstrual dates and months. Additionally, delays occurred due to families' preferences for male offspring, leading to selective abortions upon learning of female pregnancies. Seven AWWs noted such cases where families delayed registration until they were able to determine the sex of the child[1]. In one such case, upon learning of a female pregnancy, the family secretly opted for abortion without informing the AWW. Information about this incident was obtained indirectly from neighbours. Despite sex determination being illegal in India, this practice persists, facilitated informally through elderly women in the community.

Age eligibility also posed a significant obstacle, with early marriages prevalent in communities like ST, SC, and OBC, rendering many women ineligible for Mamata benefits. The Mamata scheme is designed for pregnant and lactating women aged 19 and above. Fourteen AWWs emphasised this concern, noting instances where women marry before turning 18 and consequently become pregnant, making them ineligible for the scheme's benefits. The recent Report of the Task Force on Early Childhood Care and Education (2022) underscored the necessity of adopting a life cycle approach to break the intergenerational cycle of malnutrition. Notably, the prevalence of child marriage remains unacceptably high, with one in four girls being forced into marriage before reaching the age of 18. The report advocates for supporting girls to access secondary education, ensuring their retention in secondary school, and preventing their marriage during childhood. These efforts are not only essential for enabling girls to reach their full potential but also for reducing the risk of early pregnancy and the prevalence of low birth weight among newborns (MoWCD, 2022b).

## 2. AWWs' Engagement with Mamata Scheme Beneficiaries

One of the primary goals of the Mamata scheme is to improve the utilisation of maternal and child health services, especially concerning antenatal and postnatal care, as well as immunisation. It also seeks to improve mother and child care practices, emphasising exclusive breastfeeding and suitable complementary feeding for infants. AWWs play a crucial role in achieving these objectives by offering guidance and counselling to beneficiaries, whether at the

[1] In India, the practice of sex selection or determination is forbidden by the Pre-Conception and Pre-natal Diagnostic Techniques (Prohibition of Sex Selection) Act, 1994 (PC & PNDT Act, 1994). This legislation is enforced nationwide to prohibit sex selection or determination both before and after conception, and to regulate pre-natal diagnostic techniques.

AWC or during home visits. They provide advice and support to both pregnant and lactating women, aiming to foster healthy maternal and child health practices.

AWWs noted that beneficiaries typically visit the AWCs at least twice a month for various purposes. Notably, they participate in the Village Health and Nutrition Day (VHND), commonly known as *'Mamata Divas',* observed on the second Tuesday of each month. During this event, ASHA and ANM workers join the AWCs to aid in beneficiary registration, provide Mother and Child Protection (MCP) cards, conduct weigh-ins for both mother and child, administer tests for haemoglobin and blood pressure, offer advice on maternal and child health, emphasise the importance of timely nutrition, and distribute iron and calcium supplements based on health assessments, especially following haemoglobin test results. Moreover, beneficiaries are encouraged to attend AWCs on Immunisation days. Additionally, beneficiaries receive dry food supplies in the first week of every month. AWWs reported that as of January 2024, beneficiaries receive ten types of food, including *chattua*[2]*, badam ladoo*[3]*, rashi ladoo*[4], dates, puffed rice, *chana buta*[5], and eggs, among others.

When asked about the turnout for scheduled meetings, AWWs noted that most beneficiaries, including pregnant and lactating mothers, attend the centre regularly. However, those nearing their delivery dates are advised against attending and are instead provided counselling during home visits. Furthermore, it was observed that family members often pick up dry food supplies on behalf of the beneficiaries.

During the discussions with AWWs, it emerged that household visits are an integral part of their role. These visits are scheduled, with dates automatically generated in the Poshan app. Typically, AWWs undertake 4-5 official home visits per day, encompassing all households in their area. They also verify whether beneficiaries are consuming food provided by the AWC and assess if any complex cases requiring immediate attention are present in the area. In addition to scheduled visits, they conduct surprise visits to ensure beneficiaries adhere to prescribed medication and dietary regimens.

AWWs provide comprehensive health and nutrition counselling to pregnant women, focusing on various aspects such as dietary habits, engaging in basic physical activity, ensuring adequate rest, and proper medication intake, with a specific emphasis on consuming iron and folic acid tablets to prevent complications like anaemia. They also emphasise the importance of maintaining

---

[2] *Chattua* is a traditional Indian sweet made from roasted gram flour, often flavored with ghee, sugar, and various nuts or spices.
[3] *Badam Ladoo* is a sweet Indian confectionery made from ground peanuts, sugar, and clarified butter (ghee), typically shaped into small balls.
[4] *Rashi Ladoo* is a variety of Indian sweet made from roasted sesame seeds (besan), sugar, and ghee, often flavored with cardamom or other spices.
[5] *Chana Buta* is roasted chickpeas, popularly consumed as a protein-rich snack in many parts of India.

proper hygiene practices, particularly for first-time mothers, and advise on sanitation standards. AWWs stress the significance of consuming fresh green leafy vegetables, fish, and eggs, and having small, frequent meals every 2-3 hours.

In addition to dietary recommendations, AWWs highlight the importance of avoiding activities that may pose risks during pregnancy, such as walking long distances, lifting heavy objects, and late eating habits. They provide specific instructions, such as refraining from lifting heavy objects during the 1st and last trimester and avoiding papaya consumption due to associated risks.

AWWs organise regular health check-ups and arrange visits to government hospitals for thorough evaluations. Regarding hospital preferences, one AWW noted, '*Nowadays, families prefer private hospitals over government ones due to superior facilities, including the consistent availability of doctors and nurses. Additionally, they possess a BSKY card, entitling them to receive free and proper treatment.*' They also inform pregnant women about available government schemes like the Pradhan Mantri Suraksha Bima Yojana (PMSBY) and assist in accessing funds for hospital visits through initiatives like Gaon Kalyan Samiti (GKS). Through their counselling efforts, AWWs aim to empower pregnant women and their families with the knowledge and resources necessary for a healthy pregnancy and safe childbirth.

Furthermore, AWWs provide counselling to lactating women during the crucial breastfeeding period, emphasising the importance of exclusive breastfeeding for the first six months. They advocate for a balanced diet rich in essential nutrients such as green vegetables, fish, eggs, and milk to support optimal milk production and ensure adequate nutrition for the mother and infant. They also provide guidance on maintaining strict hygiene practices to mitigate the risk of infections. They conduct regular weighing sessions to monitor infant growth and identify any potential health concerns, with prompt reporting to ASHA and ANM about any issues. Additionally, AWWs counsel beneficiaries on spacing pregnancies with at least a three-year gap.

Insights obtained from discussions with AWWs shed light on the complexities involved in implementing health and nutrition counselling within the framework of the Mamata scheme. The majority of AWWs (15) noted that Mamata beneficiaries generally heed and follow the health and nutrition advice provided to them. Nonetheless, challenges arise in ensuring universal adherence to counselling suggestions. One significant challenge is the occurrence of side effects from prescribed medicines, like dizziness or black stool from iron and calcium tablets, leading some women to discontinue their medication, which can impact their overall health. Furthermore, there are instances where lactating mothers introduce supplementary foods to their infants without informing the AWWs, potentially affecting the infant's nutritional intake and growth. Our Phase I study highlighted the existence of intergenerational power dynamics and deeply ingrained patriarchal norms within the households of Mamata beneficiaries. Particularly

within joint family arrangements, our findings indicated that decisions regarding food preparation, including meal choices, were mainly influenced by the mother-in-law. This suggests that cultural influences, notably the authority wielded by elderly women like mothers-in-law, exert a significant influence on behaviours related to infant feeding practices within these communities. Additionally, the premature introduction of supplementary foods to infants may occur due to the lack of autonomy often experienced by daughters-in-law in such matters.

There is evidence that healthcare professionals, including CHWs, are the most common source of advice on complementary feeding practices in India, followed by family members, particularly grandmothers or mothers-in-law (Manikam et al., 2018). Cultural influences are cited as the primary barrier at the societal level, indicating a strong influence of elderly women (Craig et al., 2018), such as mothers-in-law, on infant feeding practices. In a separate study, Vyas et al. (2014) investigated weaning practices among infants and toddlers in Uttarakhand. Their findings revealed that lack of knowledge and misconceptions among elderly women, like mothers-in-law, hindered the initiation of complementary feeding at the appropriate age. This highlights the significant impact of traditional family structures and cultural norms on infant feeding practices, emphasising the central role played by elderly women in decision-making. Therefore, interventions aimed at improving infant feeding practices should address these cultural dynamics and involve key family members, such as mothers-in-law, in educational efforts to promote optimal nutritional health for infants.

Additionally, social factors such as alcohol consumption by husbands can hinder the full implementation of counselling suggestions. As one AWW mentioned, '*In some cases, beneficiaries do not follow the instructions because their husband drinks alcohol. So it's difficult for them to follow all the suggestions'*. Moreover, cultural and socio-economic factors also influence the obstacles encountered by marginalised communities, encompassing Scheduled Tribes (ST) and Particularly Vulnerable Tribal Groups (PVTG). Despite the advice by AWWs to avoid heavy lifting, some mothers from these communities engage in physically demanding activities, like collecting Non-Timber Forest Products (NTFP) and fetching water from wells during pregnancy, potentially endangering their health.

These challenges highlight the wider issues faced by marginalised communities, such as limited resources and poverty, when it comes to implementing counselling advice, especially concerning nutrition and health. The JABS survey (2019) offers further insights into the circumstances faced by marginalised communities, highlighting their vulnerability due to poverty and inadequate access to healthcare services. It reveals that pregnant and lactating women from these backgrounds often bear the dual responsibility of unpaid work of managing households and engaging in paid work, often as agriculture or casual labour. They face both economic hardship and physical frailty, indicating their marginalised status within their families and society (Dreze et al., 2021).

Moreover, cultural differences exacerbate these challenges, as evidenced by the struggle of some tribal beneficiaries to adhere to recommendations regarding feeding and hygiene practices, resulting in underweight infants. The NITI Aayog report of 2020 emphasises the disparities in language, cultural beliefs, and customs that hinder the adoption of services in Tribal Anganwadi Centers, further undermining the dissemination of crucial nutrition and health information. Inadequate hygiene in tribal beneficiaries' homes also remains a persistent issue despite efforts by AWCs to promote cleanliness. These findings highlight the complex interplay of social, economic, and cultural factors that contribute to the health disparities faced by marginalised communities.

## 3. AWWs' Advice and Perceptions on the Scheme Implementation and Beneficiary Behaviours

All the surveyed AWWs mentioned that they emphasise the importance of using the Mamata funds exclusively for purchasing healthy and nutritious food items such as fruits, milk, eggs, fish, and green leafy vegetables. They focus on investing in protein-rich foods essential for the well-being of both the mother and the child. Additionally, beneficiaries are encouraged to save a portion of the funds for emergencies during delivery. Six AWWs stated that they also tell the beneficiary that the allocated funds should not be used for household purposes or any other family members. Instead, they advise beneficiaries to prioritise their own health and nutrition needs, ensuring that the funds are solely utilised for purchasing food items that contribute to their well-being.

The advice provided to lactating beneficiaries mirrors that given to pregnant mothers, emphasising continuity in dietary recommendations and health practices throughout the maternal journey. AWWs advise lactating beneficiaries to use the allocated funds to purchase weaning foods for the infant after six months, ensuring a smooth transition to solid foods while maintaining proper nutrition.

Further, the responses gathered from the AWWs provide a comprehensive insight into their perceptions of the Mamata scheme beneficiaries' health-seeking behaviours. A majority of the AWWs expressed confidence in the beneficiaries' ability to adhere to the conditions of the scheme, emphasising the continuous reminders and support provided during home visits. While some instances of forgetfulness were noted, the AWWs believed that their ongoing assistance, along with support from ASHA workers, helped address this issue effectively. Additionally, the general consensus is that both younger and older women are equally likely to follow the conditions of the scheme.

Regarding the impact of education on compliance with the Mamata scheme conditions, opinions among the AWWs were mixed. While a significant number (15) believed that education level does not necessarily dictate adherence, others suggested that it might be a contributing factor, particularly within ST communities. While access to schooling has improved, thus leading to a higher number of girls completing 10th standard, social practices such as early marriages continue to prevail, since they are impacted by a variety of factors apart from education. One AWW mentioned '*People nowadays are educated enough still they choose to marry at an early age'*. Despite education, challenges such as early marriage and cultural norms were cited as influencing factors affecting compliance.

AWWs unanimously agreed that economic status does not influence compliance with the scheme's conditions, asserting that families across all financial backgrounds fulfil the requirements. However, some recognise that women from specific communities, particularly STs, may face difficulties due to early marriages, leading to pregnancies at a young age.

Perceptions of the AWWs indicate that family-imposed restrictions on women's movement have decreased, although two AWWs acknowledged their persistence, particularly in joint family setups. One of them noted, *'Generally women from joint families face such a problem, and usually the account opening process gets delayed'*. While most AWWs (14) did not perceive discrepancies in constraints faced by women due to child-care needs, a few highlighted potential challenges faced by lactating mothers in nuclear families. All AWWs mentioned that travelling to the AWC does not pose a problem for beneficiaries, as the centres are typically located nearby and easily accessible within the villages.

The AWWs surveyed hold varying views on whether women with male children are more inclined to fulfill all the conditions compared to those with female children. While some AWWs believe that both groups of women meet the conditions equally, others propose that mothers with female children may be inclined to conceal subsequent pregnancies in the anticipation of having a male child. Thus, there is no definitive consensus among the AWWs regarding this issue.

Based on the responses provided by the AWWs, it can be inferred that all households eligible for the Mamata scheme benefit from it, regardless of their economic status. However, findings from Phase I study indicate that some households save the Mamata funds for future use rather than utilizing them for their intended purpose. This suggests that while the scheme benefits all households, poorer ones often use the funds to strengthen their social protection net through savings, whereas more well off households may use it to improve their current health inputs by purchasing fruits and vegetables. However, there is a recognition that the extent of benefit may vary depending on how the funds are utilized by the beneficiaries.

Further, each AWW demonstrated a clear understanding of their respective responsibilities in comparison to Anganwadi helpers, ASHA workers, and ANM workers, ensuring effective task execution. While only one AWW acknowledged facing coordination issues with an ASHA worker, stating, '*Yes, they work in coordination with each other. Unless there is coordination they cannot perform any task effectively. But sometimes there are coordination issues with the ASHA'*. However, all AWWs expressed a shared aspiration for improved coordination with their colleagues.

## 4. Utilisation of Mamata Scheme Funds and Decision-Making Dynamics within Households

The experience of AWWs reveals that Mamata beneficiaries commonly utilise their Mamata scheme funds for various expenses, primarily focusing on food items and healthcare-related expenditures. However, they acknowledge that they do not have complete visibility into how beneficiaries utilise the funds once disbursed. Some beneficiaries may adhere to the advice, while others may allocate the funds differently based on their individual circumstances and priorities. One AWW mentioned, '*They ask everyone to utilise the money on food and not to save it. However, the families who are well-to-do tell AWW that they do not need to withdraw the amount as the food they eat is sufficient for them*'. Another stated, *'Some money is used by the beneficiaries's husband on alcohol and household expenditures'*. Yet another stated, '*In some cases, beneficiaries invest some money in HH expenditure, to buy things for herself like bangles, face cream, saree, etc'*.

Further, based on the responses provided by the AWWs, it can be inferred that the decision-making process regarding the spending of Mamata scheme funds within households is varied. Most AWWs (11) indicated that both husband and wife are involved in the decision-making process. On the other hand, five AWWs mentioned that the decision primarily rests with the woman beneficiary. Moreover, the involvement of other family members, like mothers-in-law (MIL), can also impact the decision-making process, as mentioned by one AWW: '*Both husband and wife make decisions, and in some families, mothers-in-law are also involved'*. This aspect of household dynamics becomes more apparent when examining their structure - joint or nuclear.

While the majority of AWWs (14) perceive no significant disparities between joint and nuclear families, others (4) note indirect influences from mothers-in-law in joint family settings, potentially affecting how funds are allocated. One AWW stated, *'In joint families, women have some constraints on how to use money when male members and mother-in-law are present'*. Another AWW mentioned, *'In some cases, beneficiaries share that their mother-in-law tells*

*them to invest the money in household expenditure'*. Yet another stated, '*Yes, in joint families, often the situation is created so that one becomes compelled to use the money for household purposes'*. In one particular instance, the AWW mentioned, '*The mother-in-law gets angry when the Mamata money is not used for household expenditures'*. This observation coincides with the results of the Phase I investigation, where a substantial portion of Mamata beneficiaries revealed a lack of autonomy in financial decision-making regarding the utilisation of Mamata funds. Specifically, eight respondents explicitly mentioned the need to obtain permission before spending Mamata funds, either from their husbands or their mothers-in-law. This triangulation of research findings underscores the constraints faced by women in joint families, particularly in terms of financial independence and decision-making autonomy.

Further, the involvement of husbands in utilising the funds implies that the women beneficiaries may not solely determine financial decisions within households. This underscores the importance of considering gender dynamics and household decision-making processes when implementing welfare schemes like Mamata. Instances where funds are diverted for saving for the future or household expenses highlight the detrimental impact on the health of the beneficiary in the present. This underscores the critical need for robust monitoring mechanisms to ensure that the funds are used for their intended purposes of promoting maternal and child health.

Moreover, AWWs acknowledge a lack of full visibility into how beneficiaries utilise the funds once disbursed. This limited oversight suggests that AWWs may not have complete control over or insight into the spending decisions made by beneficiaries. This sentiment is captured in an AWW's response, '*We advise the beneficiary on how to use the money and not the husband or any other family members. Hence, we expect the mothers to use the money but actually whose decision it is to use the money that we also do not have any idea'*. This also suggests that AWWs should extend their outreach efforts to include husbands and mothers-in-law (MILs) when disseminating information about the health and nutrition of both mothers and children.

## 5. AWWs' Roles and Struggles

In 2021, the Odisha government introduced the e-Mamata mobile application to enhance the efficient transfer of cash benefits for the Mamata scheme to eligible recipients. Simultaneously, MoWCD, Government of India, launched the 'Poshan Tracker' application as a crucial governance tool to monitor all AWCs, AWWs, and beneficiaries using predefined metrics. All AWWs confirmed using both mobile applications. To facilitate this, the government has provided smartphones to the AWWs. They utilise the e-Mamata app for beneficiary registration and manage the application process for initial and subsequent payments. This application enables the direct transfer of maternity benefits to the beneficiary's bank account. It utilises Aadhaar-based authentication to ensure the legitimacy of the registration and claims process. Beneficiaries

receive notifications upon the transfer of maternity benefits to their bank accounts, and automatic incentive calculations are provided for AWWs.

Additionally, all AWWs utilise the Poshan Tracker to record vital information concerning food intake (provided under the Supplementary Nutrition Programme), height, weight, and other crucial metrics for pregnant women, lactating mothers, adolescent boys and girls, and children, encompassing both Mamata and non-Mamata beneficiary categories.

Amidst their efforts to fulfil their duties, AWWs encountered several challenges in utilising government-provided smartphones and accessing the Poshan Tracker application. Fifteen AWWs expressed difficulties in operating the smartphones provided by the government. Among these, six respondents resorted to using their personal phones due to issues such as low storage capacity and frequent hanging with the Android phones provided by the government. Two respondents cited internet connectivity problems as hindrances.

Moreover, one respondent highlighted that the one-day training programme conducted by the government for mobile app usage was insufficient, especially for older AWWs. In addition to these operational challenges, there was confusion among respondents regarding the payment for internet connection. Fourteen respondents mentioned personally paying for internet charges and being unaware of any government coverage. Two respondents claimed that the government provides Rs. 250 per month for internet charges, but they were uncertain if it was credited, so they independently recharged. However, according to the MoWCD, each AWW is provided Rs. 2000 annually for internet connectivity to facilitate real-time data capture in the Poshan Tracker application (MoWCD, 2024). This inconsistency between respondents' awareness and the actual government provision for internet charges highlights a significant challenge faced by AWWs in effectively carrying out their responsibilities.

Furthermore, the responses from AWWs indicate that many of them routinely work beyond their usual hours. The most common reason for extending work hours is the maintenance of documents, especially registers. They must maintain five physical registers for the Mamata scheme despite the introduction of mobile applications for online data entry. These registers cover various aspects, such as the general details of pregnant/lactating mothers, registration records, immunisation records, medication and dietary tracking, and instalment details. Despite the intended transition towards digitisation and automation through mobile applications, AWWs express dissatisfaction with this system, citing that maintaining physical registers alongside updated app data adds unnecessary workload. This finding resonates with existing literature, as observed in studies conducted by Kaur et al. (2016), Jain et al. (2020), Dash and Priyadarshini (2018), and Borgohain and Saikia (2017). Additionally, they find the submission of hard copies of applications to supervisors to be an extra burden.

# Conclusion & Policy Recommendations

The implementation of the Mamata scheme presents a multifaceted landscape marked by significant achievements, persistent challenges, and nuanced insights into beneficiary behaviours and dynamics. Through the lens of Anganwadi Workers (AWWs), this study has elucidated the intricate processes involved in identifying beneficiaries, delivering essential health and nutrition services, and navigating the cultural and socio-economic complexities that shape maternal and child health outcomes.

The findings shed light on the diverse array of obstacles encountered in the identification and registration of Mamata beneficiaries, including age eligibility criteria, early marriages, and the persistence of gender-based preferences leading to selective abortions. AWWs play a crucial role in advising Mamata scheme beneficiaries on the appropriate utilisation of funds for purchasing nutritious food items and prioritising maternal and child health. However, limited visibility into how beneficiaries ultimately utilise the funds, along with varying spending patterns observed, poses challenges.

Furthermore, cultural factors, such as intergenerational power dynamics and patriarchal norms, shape health-seeking behaviours and household decision-making. This impacts the utilisation of Mamata funds and adherence to counselling recommendations, especially in joint family settings where mothers-in-law significantly influence spending decisions, as also observed in our Phase I study. Robust monitoring mechanisms are crucial to ensure the effective use of Mamata scheme funds, necessitating broader outreach efforts to include all relevant family members in the decision-making process.

The perceptions of AWWs regarding Mamata scheme beneficiaries' health-seeking behaviours offer invaluable insights into the myriad factors influencing compliance and cooperation. AWWs express confidence in beneficiaries' capacity to adhere to scheme conditions, attributing their ongoing support and reminders during home visits as contributory factors. Mixed views abound concerning the impact of education and economic status on compliance, with cultural norms and early marriages flagged as significant hurdles. Although constraints on women's mobility are perceived to have diminished, challenges persist, particularly in joint family settings. Opinions on whether mothers with male children are more inclined to fulfil scheme conditions are divided.

The responses from the AWWs present a nuanced perspective on how beneficiaries perceive and value their services. While many AWWs noted that beneficiaries generally respect and appreciate their guidance, there were also instances of challenges and lack of cooperation. Some AWWs highlighted difficulties during home visits, particularly in households with alcoholic husbands, where disrespect or impatience towards the AWW's presence was observed. One AWW

mentioned, *'Usually beneficiaries directly do not disrespect. It is mostly seen during home visits: if she wants to talk with the beneficiaries for some moment, other family members would call and ask how long it will take, complete quickly and get back to cooking etc'.* Additionally, issues such as delays in submitting required documents were mentioned.

The recommendations provided by AWWs offer valuable insights into enhancing their working conditions and effectiveness in fulfilling their responsibilities. The challenges faced due to the lack of a helper, mismatch in salary and workload, poor infrastructure including lack of proper drinking water facilities, electricity, data management, have a direct impact on the support the AWWs can provide to the pregnant women and lactating mothers, and overall nutritional well-being of their communities.

Important to note was the discrepancy in prices between government-provided amounts and market-rates for items such as eggs. One of the AWWs specifically highlighted, '*Govt. pays Rs. 5 for an egg, but the market price is Rs. 7. The value that Govt. provides is not sufficient when compared to the market value of food items such as egg, oil, dal etc'.* This will directly lead to either fewer women receiving the required nutrition or a dilution in the quality of the same.

Despite AWWs' dedication, ensuring universal adherence to counselling recommendations remains a challenge. Comprehensive interventions addressing socio-cultural and economic determinants of health, coupled with community engagement and multi-sectoral partnerships, are vital for enhancing counselling effectiveness and improving maternal and child health outcomes under the Mamata scheme.
Based on the findings and discussions in the research paper, several policy recommendations can be proposed:

1. **Community Sensitisation and Engagement:** Targeted efforts are needed to raise awareness about the Mamata scheme and its benefits, especially among marginalised communities and vulnerable populations. Community engagement initiatives should utilise existing social structures and networks to disseminate information and promote behavioural change. These efforts should address the cons of early marriage, emphasise the importance of rest during pregnancy, and educate husbands and mothers-in-law about the nutritional requirements of pregnant and lactating women. Additionally, families should be sensitised to use the Mamata funds exclusively for the beneficiaries' health rather than on general household expenditures.
2. **Financial guidance and utilisation support:** Anganwadi Workers (AWWs) should provide comprehensive guidance to Mamata beneficiaries on how to effectively utilise the Mamata scheme funds. This includes offering a detailed breakdown of the financial support provided and discussing the current market rates of essential products such as milk, fruits, vegetables, and animal products. By doing so, AWWs can help beneficiaries

make informed decisions when purchasing nutritious food items. Additionally, AWWs can provide budgeting tips and recommend cost-effective, nutrient-rich food options to ensure optimal use of the funds for maternal and child health. As respected figures in their communities, AWWs' advice is often valued and can significantly influence spending decisions. Regular follow-up sessions should be conducted to address any challenges beneficiaries face in managing the funds and to reinforce the importance of prioritising health-related expenditures.

3. **Gender-sensitive Approaches**: Recognising the influence of gender dynamics on decision-making within households, interventions should adopt a gender-sensitive approach that empowers women to exercise autonomy over Mamata funds and health-related decisions. Engaging husbands and mothers-in-law in counselling sessions and awareness campaigns can facilitate greater buy-in and support for maternal and child health practices.

4. **Enhanced Training Programs:** Develop and implement advanced training modules focused specifically on practical skills such as effective home visit techniques, strategic planning, and time management. These modules should include hands-on workshops and real-life scenario simulations to reinforce learning.

5. **Technical Training and Support for AWWs**: Addressing the operational challenges faced by AWWs in utilising digital platforms requires comprehensive training programs tailored to their needs, with a focus on technical proficiency and troubleshooting skills. Additionally, ongoing support and mentorship should be provided to ensure continuous learning and adaptation to evolving technologies.

6. **Streamlining Documentation Processes:** To alleviate the burden of maintaining physical registers alongside digital records, efforts should be made to streamline documentation processes and transition towards fully digitalised data management systems. This includes exploring options for real-time data synchronisation and minimising redundant paperwork so that AWWs can dedicate more time to direct care activities.

# References

Here are the references alphabetized according to APA style:

Abeysekara, C., Perera, A. H. U., Ranawaka, N., Nanayakara, R. (2022). The Factors which Impact the Performance of Public Health Midwives of the Medical Officer of Health Areas in Nuwara Eliya District. *Sri Lanka Journal of Management Studies, 4*(1), 87. DOI: 10.4038/sljms.v4i1.89

Asha, K. P. (2014). Efficiency of Anganwadi Centres–A Study in Thiruvananthapuram District, Kerala. *Journal of Academia and Industrial Research (JAIR), 3*(3), August 2014.

Avula, R., Kim, S. S., Chakrabarti, S., Tyagi, P., Kohli, N., Kadiyala, S., & Menon, P. (2015). Delivering for Nutrition in Odisha: Insights from a Study on the State of Essential Nutrition Interventions. *POSHAN Report No 7*. New Delhi: International Food Policy Research Institute.

Barodia, S. R. (2015). Job satisfaction and problems faced by Anganwadi workers. *International Journal of Research in Commerce, IT and Management, 5*(9), 69-70. ISSN 2231-5756.

Borgohain, H., & Saikia, J. P. (2017). Job Satisfaction of Anganwadi Workers: A study in Sivasagar District of Assam. *International Journal of Innovative Research in Science, Engineering and Technology, 6*(9), 19372-81. DOI: 10.15680/IJIRSET.2017.0609110

Chaturvedi, A., Nakkeeran, N., Doshi, M., Patel, R., & Bhagwat, S. (2014). Capacity of frontline ICDS functionaries to support caregivers on infant and young child feeding (IYCF) practices in Gujarat, India. *Asia Pac J Clin Nutr, 23* Suppl 1, S29-37. doi: 10.6133/apjcn.2014.23.s1.04.

Craig, H. C., Jeyanthi, R., Pelto, G., Willford, A. C., & Stoltzfus, R. J. (2018). Using a cultural-ecological framework to explore dietary beliefs and practices during pregnancy and lactation among women in Adivasi communities in the Nilgiris Biosphere Reserve, India. *Ecol Food Nutr, 57*(3), 165-186. doi: 10.1080/03670244.2018.1445088.

Dash, L., & Priyadarshini, V. A. (2018). Study on job satisfaction of Anganwadi workers in Bargarh district, Odisha. *International Journal of Applied Social Science, 5*(10), 1634-1641. ISSN : 2394-1405.

Deka, A. (2014). Dangerous Motherhood. *Economic and Political Weekly, 49*(33), 16 Aug, 2014.

Desai, G., Pandit, N., & Sharma, D. (2012). Changing role of Anganwadi workers: A study conducted in Vadodara district. *Healthline, 3*(1), 41-44. ISSN 2229-337X. Retrieved from https://www.iapsmgc.org/index_pdf/11.pdf

Dreze, J., Khera, R., & Somanchi, A. (2021). Maternity Entitlements- Women's Rights Derailed. *Economic & Political Weekly, 56*(47). Sameeksha Trust, Mumbai.

Dutta, A., & Ghosh, S. (2016). Impact of integrated child development scheme on child malnutrition in West Bengal, India. *Matern Child Nutr, 13*(4), e12385. doi: 10.1111/mcn.12385.

Frontline Health Project. (2020). The Community Health System in Bangladesh: Overview. Washington, D.C.: Population Council.

Gupta, A., Gupta, S. K., & Baridalyne, N. (2013). Integrated Child Development Scheme: A journey of 37 years. *Indian Journal of Community Health, 25*(1).

Haines, A., Sanders, D., Lehmann, U., Rowe, A. K., Lawn, J. E., Jan, S., et al. (2007). Achieving child survival goals: Potential contribution of community health workers. *The Lancet, 369*(9579), 2121–2131. doi: 10.1016/S0140-6736(07)60325-0.

John, A., Nisbett, N., Barnett, I., Avula, R., & Menon, P. (2020). Factors influencing the performance of community health workers: A qualitative study of Anganwadi Workers from Bihar, India. *Plos One, 15*(11), 1-17. https://doi.org/10.1371/journal.pone.0242460

Kaur, D., Thakur, M., Singh, A., & Saini, S. K. (2016). Workload and perceived constraints of Anganwadi workers. *Nursing Midwifery Research Journal, 12*(1), 18-24.

Kok, M. C., Kane, S. S., Tulloch, O., Ormel, H., Theobald, S., Dieleman, M., ... de Koning, K. A. (2015). How does context influence performance of community health workers in low- and middle-income countries? Evidence from the literature. *Health Res Policy Syst, 13*, 13. doi: 10.1186/s12961-015-0001-3.

Kular, S. S. A. (2014). Study on Anganwadi Workers in Rural ICDS Blocks of Punjab. *International Journal of Humanities and Social Science Invention, 3*(9), 1-4. Retrieved from http://www.ijhssi.org/papers/v3(9)/Version-2/A03920104.pdf

Manikam, L., Prasad, A., Dharmaratnam, A., Moen, C., Robinson, A., Light, A., ... Lakhanpaul, M. (2018). Systematic review of infant and young child complementary feeding practices in South Asian families: The India perspective. *Public Health Nutr, 21*(4), 637-654. doi: 10.1017/S136898001700297X.

Mannapur, B. S., Dorle, A. S., Ghattargi, C. H., Ramadurg, U. Y., Kulkarni, K. R., & Selvan, V. (2019). Psychological Stress among Grassroot Level Workers in a PHC of Bagalkot District. *Annals of Community Health, 6*(4), 8-11. Retrieved from http://www.annalsofcommunityhealth.in/ojs/index.php/AoCH/article/view/200

McPherson, R. A., Tamang, J., Hodgins, S., Pathak, L. R., Silwal, R. C., Baqui, A. H., ... et al. (2010). Process evaluation of a community-based intervention promoting multiple maternal and neonatal care practices in rural Nepal. *BMC Pregnancy Childbirth, 10*, 31. doi: 10.1186/1471-2393-10-31.

Meena, & Meena. (2018). Effect of nutrition education intervention on under nutrition among under five children in urban and rural areas of Bhopal district, Madhya Pradesh. *International Journal of Community Medicine and Public Health, 5*(10), 4536-4542.

Ministry of Consumer Affairs, Food & Public Distribution. (2023). National Food Security Act, 2013 (NFSA) provides coverage of 75% rural and 50% urban population (PIB Press release). Retrieved from https://pib.gov.in/PressReleaseIframePage.aspx?PRID=1897933

Nandi Foundation. (2011). Hungama: Fighting Hunger and Malnutrition, The Hungama Survey Report 2011. Available at http://www.hungamaforchange.org/

NITI Aayog. (2020). Evaluation of ICDS Scheme of India. Government of India, New Delhi. Retrieved from https://www.niti.gov.in/sites/default/files/2023-03/Evaluation%20of%20ICDS%20Scheme%20of%20India.pdf

Patil, S. B., & Doibale, M. K. (2013). Study of profile, knowledge and problems of Anganwadi workers in ICDS blocks: A cross sectional study. *Online Journal of Health and Allied Sciences, 12*(2 (1)), 1-3.

Parikh, P., & Sharma, K. (2011). Knowledge & Perceptions of ICDS Anganwadi workers with reference to promotion of community based complementary feeding practices in semi tribal Gujarat. *National Journal of Community Medicine, 2*(3), Oct-Dec 2011.

Rochwani, R., & Singh, A. D. (2018). Perception and practices regarding complementary feeding

among anganwadi workers in Punjab, India. *International Journal Of Community Medicine And Public Health, 5*(12), 5205–5211. https://doi.org/10.18203/2394-6040.ijcmph20184791

Scott, K., Beckham, S. W., Gross, M., Pariyo, G., Rao, K. D., Cometto, G., & Perry, H. B. (2018). What do we know about community-based health worker programs? A systematic review of existing reviews on community health workers. *Hum Resour Health, 16*(1), 39. doi: 10.1186/s12960-018-0304-x.

Sinha, D., Gupta, M., & Shriyan, D. (2021). High Risk without Recognition: Challenges Faced by Female Front-line Workers. *Economic and Political Weekly, 56*(19), 08 May, 2021. Sameeksha Trust, Mumbai.

The Hindu. (2024). Ahead of elections, Odisha doubles allowance for pregnant women under the popular Mamata scheme. Retrieved from https://www.thehindu.com/news/national/other-states/ahead-of-elections-odisha-doubles-allowance-for-pregnant-women-under-the-popular-mamata-scheme/article67842097.ece

UNICEF. (2022). Evaluation of South Asia's Current Community Health Worker Policies and System Support and their Readiness for Community Health Workers' Expanding Roles and Responsibilities within Post-Astana National Health Care Strengthening Plans. Regional Brief. Retrieved from https://www.unicef.org/rosa/media/18146/file/South%20Asia%20Regional%20Brief.pdf

Vyas, S., Kandpal, S. D., Semwal, J., Chauhan, S., & Nautiyal, V. (2014). Trends in Weaning Practices among Infants and Toddlers in a Hilly Terrain of a Newly Formed State of India. *Int J Prev Med, 5*(6), 741-748. PMID: 25013694; PMCID: PMC4085927.

WHO. (2018). Guideline on health policy and system support to optimize community health worker programs. Retrieved from https://apps.who.int/iris/bitstream/handle/10665/275474/9789241550369-eng.pdf?ua=1

This should give you a properly alphabetized list of references in APA style.

# Annexure

ANNEXURE 1: AWW Characteristics

| Sr. No. | Gram Panchayat Name | Age | Caste | Grade passed | Type of AWC |
|---|---|---|---|---|---|
| 1 | Gobindapur | 35 | General | 12th | Mini |

| | | | | | |
|---|---|---|---|---|---|
| 2 | Gobindapur | 35 | OBC | Graduation | Additional |
| 3 | Gobindapur | 50 | OBC | Graduation | Additional |
| 4 | Gengutia | 56 | General | 10th | Additional |
| 5 | Gengutia | 52 | OBC | 10th | Additional |
| 6 | Gengutia | 51 | General | Graduation | Additional |
| 7 | Sankulei | 51 | General | Graduation | Additional |
| 8 | Sankulei | 52 | OBC | 10th | Additional |
| 9 | Sankulei | 36 | SC | Graduation | Additional |
| 10 | Kankadapala | 49 | General | Graduation | Additional |
| 11 | Gobindapur | 37 | General | Graduation | Mini |
| 12 | Baladiabanda | 54 | General | 10th | Additional |
| 13 | Baladiabanda | 40 | ST | 10th | Mini |
| 14 | Baladiabanda | 41 | ST | 8th | Mini |
| 15 | Gobindapur | 45 | OBC | 10th | Mini |
| 16 | Kaimati | 61 | OBC | Graduation | Additional |
| 17 | Baladiabanda | 41 | General | 10th | Additional |
| 18 | Baladiabanda | 48 | Hindu | 10th | Additional |
| 19 | Baladiabanda | 32 | General | 12th | Additional |
| 20 | Nadiali | 48 | OBC | 10th | Additional |

## ANNEXURE 2: Registration of Mamata Beneficiaries and their interaction

| | Timely Registration of Beneficiaries | | Meeting with Beneficiaries | | |
|---|---|---|---|---|---|
| S.no | Within how many months of becoming | Reasons for some women not enrolling within | How frequently do they conduct home | How frequently do the | Prominent communities in the area |

| | pregnant should women in the area register with the AWC? | this specified time limit | visits for beneficiaries? | beneficiaries need to visit the AWC? | |
|---|---|---|---|---|---|
| 1 | 4 months | People belonging to ST communities are not aware of the consequences | 4-5 HHs per day | 1-2 times a month | SC, ST, OBC |
| 2 | 4 months | No such cases | Once a month to each beneficiary | 3 times a month | ST |
| 3 | 1.5-4 months | No such cases | 4-5 HHs per day | 1-2 times a month | SC, ST, OBC |
| 4 | 2- 4 months | Few cases where families preferred a male child came for registration late after confirmation of gender of the child. | Once a month to each beneficiary | 2 times a month | OBC |
| 5 | 4 months | People already having a female child, hide their pregnancy and do not inform on time | Once in every 2-3 days for each beneficiary | 2-3 times a month | SC, ST |
| 6 | 1.5-4 months | People belonging to SC/ST communities hide their 2nd and 3rd pregnancy in the hope of a male child | 4-5 HHs per day | 2-3 times a month | SC, ST |
| 7 | 2-4 months | No such cases | Once a month to each beneficiary | 2 times a month | General, ST |

| | | | | | |
|---|---|---|---|---|---|
| 8 | 3.5 months | Some people wait and hide their pregnancy (for preference of a male child) | 4-5HHs visits per day | 1-2 times a month | SC, ST, OBC |
| 9 | 2.5 months | No such cases | Once a month to each beneficiary | 2 times a month | SC, ST, OBC |
| 10 | 2-4 months | Some women hide their 2nd and 3rd pregnancy | 4-5 HHs visit per day | 1-2 times a month | OBC |
| 11 | 3 months | One beneficiary could not be registered due to mistake in Aadhar card | Schedule for each beneficiary get auto updated in the App | Once a month | SC, ST, General, Muslim |
| 12 | 4-5 months | No such cases | 4-5 HHs visit per day | 1-2 times a month | SC, ST, OBC |
| 13 | 4 months | No such cases | Schedule for each beneficiary get auto updated in the App | Twice a month | ST |
| 14 | 2.5-4 months | When women have more than one child, they feel shy sharing it to the AWW. | Once a month | 2-3 times a month | ST, PVTG, OBC |
| 15 | 3-4 months | No such cases | Usually conduct Home visits daily | 1-2 times a month | SC, ST, PVTG, OBC |
| 16 | 2.5-3 months | Some people wait and hide their pregnancy (for preference of a male child) | Schedule for each beneficiary get auto updated in the App | 2 times a month | SC,ST, PVTG, OBC, General |

| | | | | | |
|---|---|---|---|---|---|
| 17 | 4 months | One beneficiary could not be registered due to mistake in Aadhar card | Schedule for each beneficiary get auto updated in the App | Once a month | SC, ST, OBC |
| 18 | 3-4 months | No such cases | 4-5 HHs visit per day | 2-3 times a month | SC, General (Muslim, Christian, Hindu) |
| 19 | 3 months | No such cases | Schedule for each beneficiary get auto updated in the App | 3 times a month | OBC |
| 20 | 2-4 months | No such cases | 4-5 HHs visit per day | 2 times a month | General, OBC |