

"Pradhan Mantri Matru Vandana Yojana: Assessing Cash Benefits and Health Impacts on Pregnant and Lactating Mothers in Kanpur, India"

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ABSTRACT

Purpose: In Kanpur Nagar, Uttar Pradesh, this study sought to evaluate the impact of the Pradhan Mantri Matru Vandana Yojana (PMMVY), a Conditional Cash Transfer programme, on enhancing maternal health awareness, utilisation patterns, and perceived health benefits among expectant and nursing mothers.

Method: To acquire further in-depth understanding, a mixed-methods approach was used, combining qualitative interviews with 200 beneficiaries and a quantitative survey. Sociodemographic factors, knowledge of PMMVY, benefit use, and satisfaction levels were all included in the study.

Result: There is a substantial information gap about PMMVY (62% ignorant). Although 59% of respondents were satisfied with the plan, the causes of their discontent were also investigated. For many (53%), the monetary benefits had a favourable impact on health outcomes; the money was spent on medications and food.

Conclusion: To close the knowledge gap, the study emphasises the necessity of focused awareness efforts and enhanced communication. Modifying interventions to target needs and fortify family support can improve PMMVY's capacity to improve maternal health.

Keywords: Maternal health, Pradhan Mantri Matru Vandana Yojana, Conditional Cash Transfer Scheme, Awareness and Knowledge Gap, socio-economic.

Significance

Though little research has been done on the Pradhan Mantri Matru Vandana Yojana (PMMVY), it has become clear that this programme is important for improving maternal health in India, particularly in certain socioeconomic circumstances. To close this gap, this study looks at how PMMVY was implemented and how it affected pregnant and nursing mothers in Kanpur, a significant industrial city where a large percentage of women work in the unorganised sector, in terms of awareness, usage habits, and perceived health advantages. Through exploring this understudied population, this work adds important new information to improve PMMVY for better outcomes for maternal health.

1. Introduction

Maternal health is a critical facet of public health, particularly in nations grappling with high rates of under-nutrition and anaemia among women. In the Indian context, where every third woman is undernourished and every second woman is anaemic (Karami et al., 2022), the impact of poor nutrition extends far beyond individual health. The implications are profound, affecting the life cycle and well-being of subsequent generations (Roos et al., 2019), as undernourished mothers often give birth to low-birth-weight babies. This perpetuates a cycle of adverse health outcomes (Yisahak et al., 2023), creating challenges that are not only deeply rooted but also, to a significant extent, irreversible.

The Indian government has implemented several programmes to tackle the complex relationship between maternal health, nutrition, and the socio-economic environment. A prime example of this kind of effort is the Pradhan Mantri Matru Vandana Yojana (PMMVY), a Conditional Cash Transfer (CCT) programme designed to give expectant and nursing mothers financial assistance (Admure, M. A. 2023; Attanasio et al., 2015). A key element of the greater initiative to improve maternal health outcomes in India is PMMVY, which was introduced in January 2017 (Rowley et al., 2023; León, F. R. (2016)).

Despite the laudable efforts, challenges persist, particularly for women working in the unorganized sector. The Maternity Benefit (Amendment) Act, 2017, which extended maternity leave to 26 weeks, primarily benefits those in formal establishments (Das et al., 2023), leaving a substantial portion of women excluded. Approximately 97% of working women in India, constituting 118 million individuals, operate within the unorganized sector (Nagar et al., 2020; Singh, P. 2014), demanding innovative solutions to address their unique needs.

This research delves into the nuanced landscape of PMMVY, with a specific focus on its implementation and impact in Kanpur, a major industrial town in Uttar Pradesh (YoJAnA, V. 2018). Kanpur's socio-economic diversity and its status as an industrial hub make it an ideal microcosm to explore the efficacy of PMMVY in reaching and benefiting pregnant and lactating mothers. By examining the awareness, utilization, and satisfaction levels of beneficiaries, this research aims to contribute insights that can inform and refine maternal health interventions (Nyamtema et al., 2011; Colaci et al., 2016). Through a combination of quantitative and qualitative approaches, we navigate the complexities of PMMVY, seeking to understand its role in supplementing the nutritional needs of women, compensating for wage loss, and fostering improved health-seeking behaviour (Khanna et al., 2023).

1.2 Objectives

The primary objectives of this research are to assess the awareness and knowledge levels of beneficiaries regarding PMMVY, analyze the utilization of cash benefits, evaluate health impacts, and measure overall satisfaction with the scheme.

2. Literature Review

Global public health strategies are based on maternal health efforts, which are designed to address the various issues that expectant and nursing mothers experience. Within this larger context of maternal and child health interventions, the Pradhan Mantri Matru Vandana Yojana (PMMVY) in India is a product of a deliberate attempt to mitigate the negative consequences of undernutrition and anaemia in mothers. This section reviews the body of research on conditional cash transfer programmes, maternal health initiatives, and the particulars of PMMVY.

Research examining the efficaciousness of analogous initiatives, such the Janani Suraksha Yojana (JSY), has emphasised the significance of health service utilisation and perception in enhancing maternal health outcomes (Kumar et al., 2016). The goal of JSY, the programme that preceded PMMVY, was to encourage institutional deliveries. The results of these studies highlighted the importance of awareness-raising and efficient execution.

Studies by Singh et al. (2017) and Johnson et al. (2015), which examined the awareness and use of women's reproductive healthcare programmes, stressed the necessity of raising beneficiary awareness to maximise the use of services offered by government initiatives. The Centre for Budget and Governance Accountability (2017) conducted a resource gap study of maternity benefit programmes, highlighting the importance of financial issues that are critical to the performance of maternal benefit schemes and the requirement for proper funding for programme efficacy.

The benefits of PMMVY for a considerable number of moms were reported by Chandra (2018). To improve the program's effectiveness, the study did highlight the need for raising family support and understanding of prenatal and postnatal care. Assessments of the Maharashtra JSY provided implementation lessons, highlighting the necessity of resolving issues and guaranteeing ongoing oversight (Doke et al., 2015).

Targeted health services are crucial to improving mother and child health outcomes, according to studies on how people use and perceive JSY health services in rural regions (Kumar et al., 2016). Over 17 lakh beneficiaries enlisted under PMMVY, according to a Capital Market (2018) article, which emphasised the need for continuous awareness efforts and monitoring to optimise the program's benefits.

With an emphasis on PMMVY's contribution to better prenatal care and infant development, InsightsIAS (2021) offered insights into the phenomenon. Together, these studies highlight how important it is to raise awareness, deal with implementation issues, guarantee financial stability, and conduct ongoing monitoring to improve the efficacy of maternal benefit programmes like PMMVY. The body of research gives policymakers and programme implementers a solid understanding of the background and difficulties surrounding these kinds of efforts.

2.1 Connecting to Current Research:

The literature currently in publication provides insightful information about how conditional cash transfer programmes could enhance maternal health outcomes. These studies, however, frequently ignore the unique needs of women working in the unorganised sector—a crucial PMMVY target group—or concentrate only on national implementation. The current study explores PMMVY's implementation and effects in Kanpur, a significant industrial town where a large percentage of women work in the unorganised sector. This study intends to contribute to the understanding of PMMVY's success in a particular socioeconomic environment by analysing awareness, utilisation patterns, and reported health benefits.

3. Methodology

Study Area: Kanpur Nagar, a significant industrial town in Uttar Pradesh, India, was the site of the study. Because of its industrial centre status and socioeconomic variety, Kanpur provides a typical environment for analysing the Pradhan Mantri Matru Vandana Yojana's implementation and effects (PMMVY). Convenient purposive sampling was used to choose three development blocks for the study: Bilhaur, Kalyanpur, and Sarsaul.

Aim and Target Population: The study's main goal was to comprehend beneficiaries' knowledge, views, and issues about PMMVY benefits and challenges. All expectant and nursing women registered in the PMMVY programme in the designated Kanpur development blocks between August 2020 and July 2021 made up the target group.

Sample Size and Distribution: The minimum sample size was determined using a scientific technique with a margin of error (ME) of 0.05, heterogeneity ($\hat{\rho}$) of 0.5, and confidence level (Z) of 1.96. 200 homes from each of Kanpur Nagar's three development blocks made up the sample.

Survey Methodology: A mixed-methods approach was used to investigate beneficiaries' answers. A household survey of 120 antenatal moms from certain development blocks was conducted using non-probability convenience sampling. The study created a questionnaire with semi-structured and structured questions using the smartphone

application Kobo Collect.

Data Analysis: Expert validation and test-retest procedures were used to guarantee validity and dependability. To evaluate the degree of knowledge of PMMVY, frequency and percentage calculations were incorporated in the analysis. To display sociodemographic characteristics and the knowledge, satisfaction, and utilisation patterns of the recipients, descriptive findings were produced.

Study Tools: The questionnaire was created using both structured and semi-structured questions, considering the goals of the study. The Kobo Collect mobile application was utilised in the development of the instrument to reduce information bias. Ten percent of the entire sample was used for a pilot study to check for feasibility and resolve any problems.

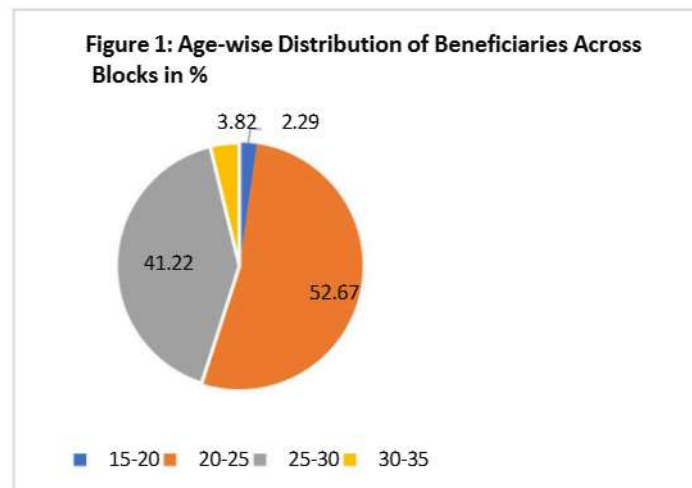
Study Design: Both quantitative and qualitative research designs were used in the study. The sociodemographic and economic profiles of the beneficiaries, their knowledge of PMMVY, the specifics of the scheme, their satisfaction levels, and their patterns of utilisation were all covered in the survey. The qualitative component examined beneficiaries' opinions and experiences with the programme.

Ethical Considerations

Ethical guidelines were strictly adhered to throughout the study. Prior to their participation in the trial, all subjects provided informed consent. The permission form gave participants explicit instructions on the goal of the study, the nature of their voluntary involvement, their right to withdraw at any time, and how their information would be kept confidential. Every participant's data was made anonymous. Names, addresses, and phone numbers were not gathered as identifiers. Only authorised researchers had access to the password-protected devices where the data was safely kept. Participants received guarantees that the information they provided would only be used for study and would not be disclosed to outside parties without their permission.

4. Results

4.1 Socio-demographic and Economic Profiles of Blocks: In the surveyed blocks, the demographic and economic profiles of beneficiaries revealed variations in age distribution, educational status, occupation, and household income are shown in figure 1 and 2.



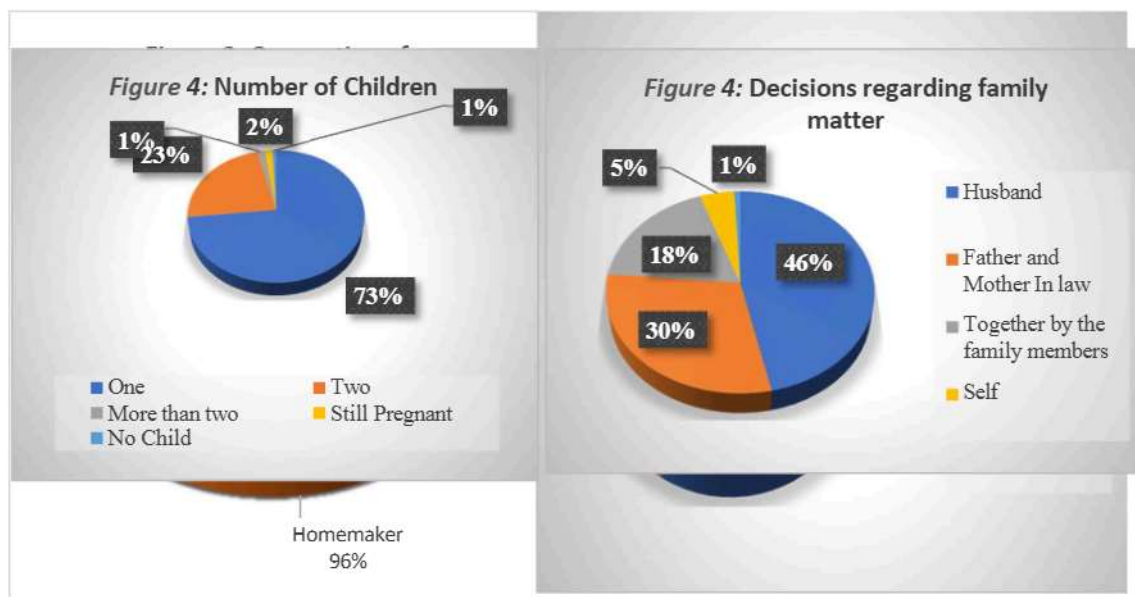
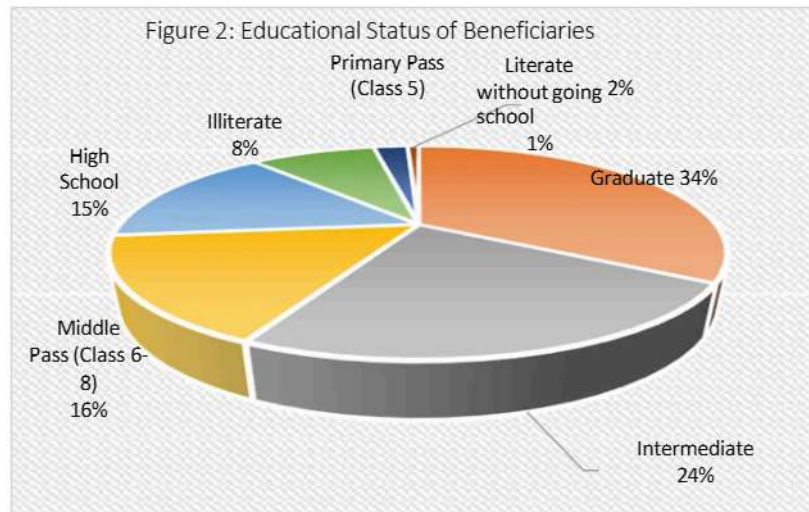
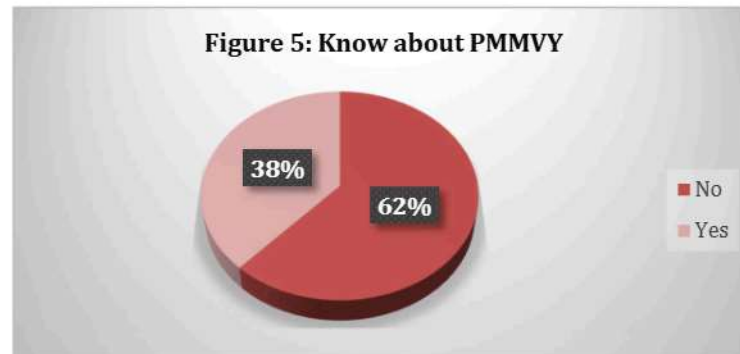


Figure 3 and 4 shown that the among the respondents, 53% fell within the 20-25 age group, with 34% having graduated. The majority of beneficiaries (96%) identified as homemakers, emphasizing the prevalence of this occupation among pregnant and lactating mothers. Additionally, 79% of respondents belonged to joint families, highlighting the importance of considering family dynamics in the context of maternal health programs. Monthly household income exceeded INR 5000 for 58% of participants. Notably, decisions regarding family matters were predominantly made by husbands (46%).

4.2 Knowledge and Awareness of PMMVY

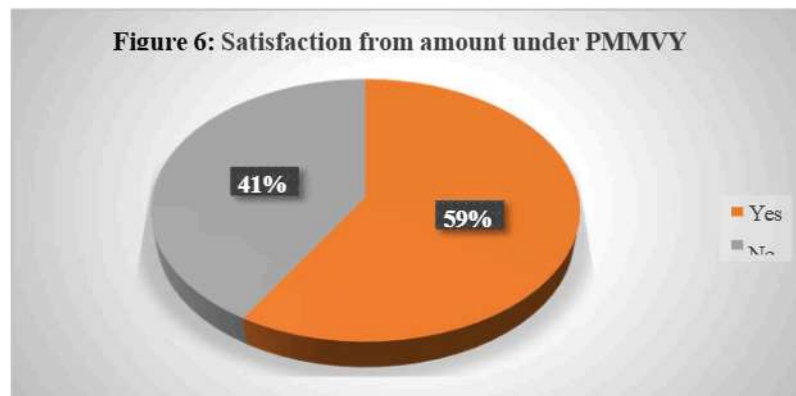
The study identified a significant knowledge gap among beneficiaries regarding the Pradhan Mantri Matru Vandana Yojana (PMMVY). Alarming, 62% of antenatal mothers reported inadequate awareness, indicating a

substantial need for robust awareness campaigns as shown in figure 5. This knowledge deficit may be attributed to ineffective communication channels, emphasizing the importance of leveraging community health workers and media for dissemination. Addressing this gap is critical to ensuring that eligible women are informed about the scheme and can benefit from its provisions. This underscores the need for targeted awareness campaigns.



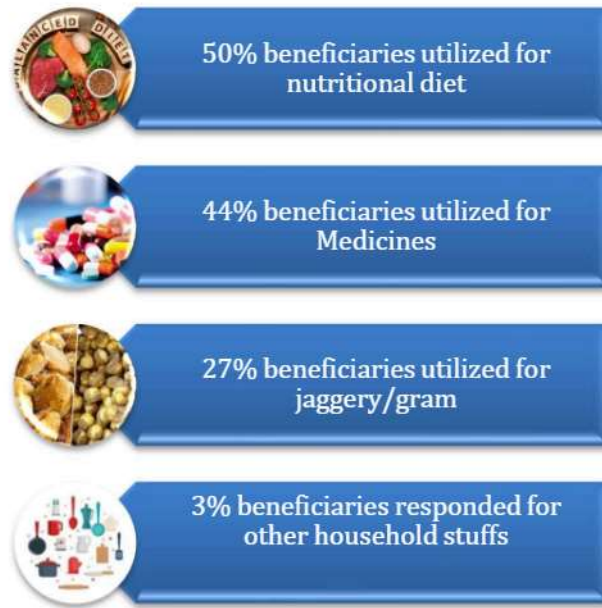
4.3 Utilization of Benefits and Satisfaction Levels

Figure 6 shows that Among beneficiaries, 59% expressed satisfaction with the scheme, while 41% reported dissatisfaction. Common reasons for satisfaction included improved health conditions and access to nutritional diets. The study highlighted the importance of understanding the factors contributing to satisfaction and dissatisfaction. The reasons behind dissatisfaction need thorough examination to identify areas of improvement, ensuring the scheme aligns with the expectations and needs of beneficiaries.



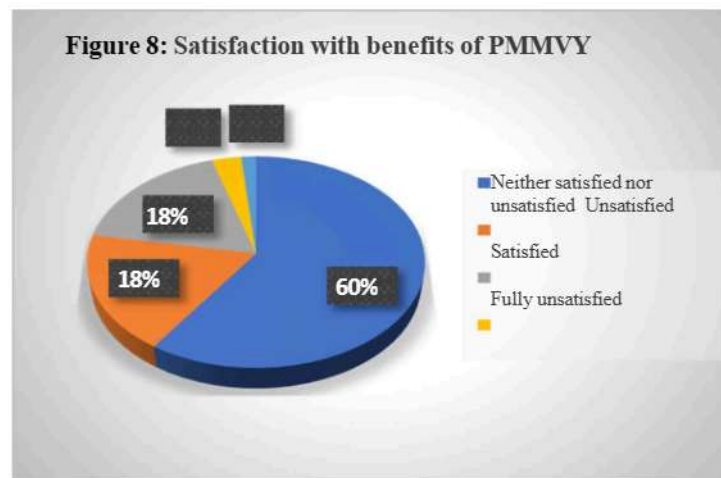
4.4 Health Impacts and Perceived Benefits

In figure 7, A significant proportion (53%) of beneficiaries reported positive health impacts due to the cash benefits received under PMMVY. Some indicated spending the funds on medicines, nutritional diets, and addressing health-related needs. The money received was utilized for nutritional diets (50%), medicines (44%), and jaggery/gram (27%). While these findings are promising, further research is needed to delve into specific health interventions associated with PMMVY that contribute to perceived benefits. Additionally, continuous monitoring and evaluation are crucial to understanding the sustainability of these health impacts.



4.5 Satisfaction with the Scheme

While 60% expressed neutrality, 19% were satisfied, and 21% dissatisfied with the benefits provided under PMMVY as shown in figure 8. The moderate overall satisfaction level suggests that streamlining disbursement processes, improving awareness, and addressing identified knowledge gaps are crucial for enhancing satisfaction. Continuous monitoring and evaluation are recommended to adapt the program to the evolving needs of beneficiaries.



5. DISCUSSION

The research findings provide valuable insights into the implementation and impact of the Pradhan Mantri Matru Vandana Yojana (PMMVY) in Kanpur, with a focus on awareness levels, socio-demographic profiles, scheme utilization, and perceived health benefits among pregnant and lactating mothers.

5.1 Addressing Knowledge Gaps: The identified knowledge gap among beneficiaries underscores the critical need for targeted awareness campaigns. Collaborative efforts with local workers, including Anganwadi and ASHA workers, can play a pivotal role in disseminating accurate and timely information. Moreover, leveraging

digital platforms and community engagement strategies tailored to the diverse socio-demographic profiles of beneficiaries is essential for effective program planning.

5.2 Satisfaction and Dissatisfaction Factors: The study revealed varying satisfaction levels among beneficiaries, emphasizing the need for a nuanced approach in program implementation. Understanding the factors contributing to satisfaction and dissatisfaction is crucial for refining the scheme. Stakeholder feedback, including beneficiary perspectives, should be actively sought to inform program adaptations. Transparency in disbursement processes and ongoing communication can contribute to improved satisfaction levels.

5.3 Health Impacts and Utilization Patterns: Positive health impacts reported by beneficiaries highlight the potential of PMMVY in improving health outcomes. The diverse utilization patterns of funds, including expenditures on nutritional diets and medicines, indicate the multifaceted needs of beneficiaries. Tailoring program components to address these specific needs, such as incorporating targeted nutritional counselling sessions, can enhance the overall impact on maternal and child health.

Recommendations: Based on the study's findings, the recommendation are:

- Strengthen awareness efforts through targeted campaigns and collaboration with local workers for effective grassroots communication.
- Customize communication strategies to address the diverse socio-demographic profiles of beneficiaries. Consider the unique needs and decision-making dynamics within joint family structures for effective program planning.
- Improve transparency in disbursement processes to bridge knowledge gaps and enhance beneficiary understanding.
- Integrate targeted nutritional counselling sessions and educational materials into the program to emphasize the importance of a balanced diet during pregnancy and lactation.
- Establish mechanisms for continuous monitoring and evaluation to assess program effectiveness, identify areas for improvement, and adapt the program to evolving beneficiary needs.
- Conduct longitudinal studies to assess the long-term impact of PMMVY on maternal and child health outcomes.
- Provide flexibility in fund utilization to meet the unique needs of beneficiaries, considering the diverse expenditure patterns observed in the study.
- Implement initiatives to strengthen family support for antenatal and postnatal care, recognizing the influential role of family members in decision-making.
- Emphasize the importance of nutritional education and its role in maternal and child health. Develop educational materials and sessions to empower beneficiaries with knowledge on nutrition.

Funding

There is no funding.

Data Availability

Data will be made available on request.

Conflict of interest

The author declares that there is no conflict of interest.

Competing interest

There is no competing interest.

Ethical approval

The study followed very tight ethical guidelines. With their voluntary involvement, informed consent, and understanding of the study's goal and data confidentiality, all participants gave their approval.

Author Contributions

As the Dean of CSJM University's School of Arts, Humanities, and Social Sciences, Prof. Sandeep Kumar Singh oversaw, led, and provided direction. Assistant Professor Dr. Priyanka Shukla helped with the initial preparation of the manuscript, data analysis, and study design. An important part of the research and validation was done by assistant professor and psychiatrist Dr. Debasish Padhi. Assistant Professor Dr. Pooja Singh concentrated on improving manuscripts and culling data. The assistant professor Dr. Anita Awasthi made contributions to project management and data visualization. As the corresponding author, Prof. Sandeep Kumar Singh oversaw correspondence and made sure all authors approved the final text.

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Figure

Figure 1: Age-wise Distribution of Beneficiaries Across Blocks in %

Figure 2: Educational Status of Beneficiaries

Figure 3: Occupation of Beneficiaries

Figure 3: Occupation of Beneficiaries

Figure 4: Monthly Household Income

Figure 4: Number of Children

Figure 4: Decisions regarding family matter

Figure 5: Know about PMMVY

Figure 6: Satisfaction from amount under PMMVY

Figure 7: Satisfaction from amount under PMMVY

Figure 8: Satisfaction with benefits of PMMVY