Valuing Invisible Work: Economic and Social Impacts of Recognizing and Compensating Unpaid Labor

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Abstract

This study proposes a randomized controlled trial (RCT) to evaluate the economic, behavioral, and health impacts of recognizing and compensating unpaid labor in rural India. Despite its crucial role in household and community life, unpaid labor remains undervalued, disproportionately borne by women, and excluded from conventional economic measures. By introducing two interventions – formal recognition of unpaid work and conditional cash transfers tied to the performance of unpaid tasks – the study will examine how these interventions impact household decision-making, labor supply, and health-related outcomes. The focus will be on improvements in mental and physical health, women's agency, alongside changes in household productivity and income. This research aims to redefine well-being by including unpaid labor as a central factor in health and economic outcomes.

1 Introduction

Unpaid labor—such as caregiving, household chores, and informal community contributions—forms a backbone of economic activity but remains invisible in traditional economic frameworks (Elson, 1999; UN Women, 2018). Women, who disproportionately shoulder the burden of unpaid labor through, are often confined to roles that limit their participation in formal labor markets, reinforcing gender inequalities that persist within households and communities. By neglecting the value of unpaid labor, current economic models fail to capture the true scope of individuals' contributions, especially the often invisible labor performed by women (Folbre, 2006; UN Women, 2018). This study proposes an innovative intervention to address this gap by explicitly recognizing and compensating unpaid labor in rural India. Central to the intervention is a focus on health-related outcomes such as mental and physical health, as well as women's agency, which are critical for understanding the broader implications of unpaid work.

Our hypothesis posits that recognizing and compensating unpaid labor will significantly enhance health and well-being, particularly for women, who disproportionately bear the burden of such work. We anticipate that formal recognition will not only reshape household decision-making dynamics—fostering a more equitable division of labor—but also yield substantial improvements in women's mental health by alleviating the psychological toll of undervaluation. Additionally, compensating unpaid labor is expected to mitigate the physical strain associated with caregiving and household production, empower women to assert greater autonomy in both household and community decision-making, and potentially increase their engagement in formal labor markets. Beyond these individual-level effects, this research will explore broader behavioral outcomes, including changes in physical health and the transformation of social relationships within communities, shedding light on the systemic impacts of these interventions.

2 Theoretical Framework

This study is informed by two main theoretical frameworks. First, from a labor economics perspective, unpaid work is a key input in the household production function. Yet, its exclusion from formal economic valuation distorts resource allocation and household decision-making processes (Becker, 1965). Recognizing unpaid labor allows for a more accurate accounting of its contribution to overall household productivity, as well as its potential to impact well-being when valued appropriately.

Second, the intervention is grounded in behavioral economics, which suggests that public recognition and financial incentives can alter individuals' perceptions of value and shift their behaviors (Thaler and Sunstein, 2008). Public recognition, by elevating the social status of unpaid laborers, particularly women, and financial compensation, by providing extrinsic incentives, have the potential to reinforce the intrinsic value of unpaid work. This dual approach aims to improve not only the economic conditions of households but also the behavioral aspects of labor supply and well-being, particularly through enhanced mental health and empowerment.

Combining these perspectives, this study hypothesizes that public recognition and financial compensation for unpaid labor will lead to increased investment in these tasks, ultimately resulting in improved household and community outcomes. These outcomes are expected to include shifts in mental and physical health, women's empowerment, and household income generation.

3 Study Design

The study will be conducted in rural villages across two Indian states, Uttar Pradesh and Bihar, randomly assigning them to three treatment arms and one control group. The rural villages of Bihar and Uttar Pradesh are selected due to their significant challenges related to hygiene, sanitation, care inadequacy and gender inequalities (Siddique et al. 2024, Muralidharan and Prakash, 2017), where the recognition and compensation of unpaid labor

can have a transformative impact on household decision-making, women's empowerment, and health outcomes.

In the first treatment arm, called the *Recognition Arm*, participants will receive formal recognition for unpaid labor through public ceremonies and certificates. These recognitions aim to elevate the social status of those performing unpaid work, particularly women, thereby increasing the perceived value of their contributions within the household and the community.

In the second treatment arm, the *Compensation Arm*, individuals will receive conditional cash transfers (CCTs) tied to the performance of unpaid tasks. These tasks may include caregiving, maintaining household hygiene, or resolving community disputes. The goal is to incentivize more active and sustained participation in unpaid labor by providing cash rewards for completing these essential tasks.

The third arm, the *Combined Arm*, will receive both public recognition and financial compensation. This arm allows for an analysis of potential synergistic effects, testing whether the combination of intrinsic and extrinsic motivations leads to greater improvements in health, women's agency, and overall labor market participation.

Finally, the *Control Group* will consist of villages that will not receive any intervention. This group will serve as a baseline for comparison, allowing us to observe the natural state of household dynamics, labor allocation, and community cohesion without the influence of the interventions. Randomization will ensure balance across groups with respect to socioeconomic characteristics, gender composition, and baseline levels of unpaid work.

4 Primary Outcomes of Interest

The primary outcomes of interest for this study focus on both health and economic measures. The first category is *Health Outcomes*, which includes improvements in both mental and physical health. Mental health will be assessed using validated scales, such as the WHO-5 Well-Being Index and depression and anxiety scales. Physical health will be measured using biomarkers such as blood pressure, body mass index (BMI), and other relevant health indicators. These outcomes are critical in understanding the direct effects of unpaid labor recognition and compensation on individuals' overall well-being.

Another key outcome category is *Women's Agency*, measured through tools such as the Women's Empowerment in Agriculture Index (WEAI), as well as other decision-making autonomy scales. Changes in decision-making autonomy are expected to reflect shifts in gender dynamics within households, empowering women to exert greater influence over household and community decisions.

The study will also measure a range of *Economic Outcomes*, including changes in time allocation between unpaid and paid labor, household income levels, and savings behavior. These indicators will allow for an understanding of the economic impacts of the interventions, particularly with respect to labor supply shifts and household productivity.

Finally, we will evaluate *Behavioral Outcomes* such as changes in community trust and social capital. These measures will provide insights into how the recognition and compensation of unpaid labor can affect social norms and relationships within the community.

5 Power Calculations

To ensure robust results, power calculations are conducted for both mental and physical health outcomes. For mental health, we anticipate at least a 0.25 standard deviation (SD) improvement in women's well-being, measured by the WHO-5 Index, based on evidence during the COVID Pandemic from Vlassopoulos et al. (2024), in the context of Uttar Pradesh, where tele-counseling interventions yielded reductions of 0.55 to 0.70 SD in stress and depression outcomes. A 0.25 SD improvement is considered both realistic and clinically significant for mental health interventions in resource-constrained settings (Cuijpers et al., 2010; Patel et al., 2016). For physical health, outcomes such as BMI and blood pressure are informed by evidence from the meta-analysis by Naci et al. (2014), which demonstrated significant reductions in systolic (7.70 mmHg) and diastolic (3.60 mmHg) blood pressure from physical activity interventions, including low- and middle-income countries. Using a cluster-randomized design and accounting for an intra-cluster correlation (ICC) of 0.03, at least 1,000 households per group are required to detect a 0.25 SD effect size with 80% power at the 5% significance level. Adjustments will address multiple hypothesis testing, using corrections like Benjamini-Hochberg, ensuring robustness and statistical validity.

6 Outcome Measurement and Data Collection

Data collection will involve a combination of quantitative and qualitative methods. Household surveys will be conducted to collect baseline and endline data on economic and social outcomes, including time-use diaries to measure unpaid labor. Health outcomes will be assessed using validated scales such as the WHO-5 Well-Being Index for mental health and biomarkers like BMI and blood pressure for physical health. Women's agency will be captured through the WEAI and related decision-making tools. In addition to these surveys, community interviews will be conducted to gauge shifts in perceptions of unpaid labor and its value, providing deeper understanding of the social and behavioral impacts of the intervention.

7 Anticipated Challenges and Mitigation Strategies

Anticipated challenges include potential resistance to the formal acknowledgment of unpaid labor, especially in these patriarchal contexts. To mitigate this, early engagement with local community leaders will be crucial for building trust and ensuring that the intervention is culturally sensitive and locally accepted. Additionally, measuring informal and often invisible labor poses challenges. To address this, triangulation of data will be used, combining surveys, time-use diaries, and qualitative interviews. Collaborations with local governments and NGOs will also be essential in ensuring the long-term sustainability of the intervention.

8 Policy Implications and Conclusion

This study holds significant policy implications, particularly in terms of recognizing unpaid labor within national economic accounting systems. By valuing unpaid work, this research challenges traditional economic measures and proposes a more inclusive framework for evaluating well-being. The findings could inform policies aimed at integrating unpaid labor into national accounts, leading to more equitable resource allocation. Furthermore, this study provides insights into how to design scalable interventions that promote gender equity by empowering women and increasing their participation in the formal labor market.

Anticipated Budget

The proposed study will require direct costs totaling approximately $200,000. The breakdown of the budget is as follows:

Table 1: Anticipated Budget Breakdown

Budget Category	**Amount ($)**	**Description**
Personnel Costs	75,000	Salaries for research assistants and field staff.
Participant Incentives	40,000	Cash transfers and survey participation incentives.
Intervention Costs	25,000	Recognition ceremonies and related expenses.
Health Assessments	20,000	Health assessments including WHO-5 and biomarkers.
Research Tools	15,000	Development of time-use diaries, surveys, and interviews.
Logistical Costs	25,000	Travel, fieldwork, and administrative expenses.
Total	200,000	

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