

Can Workfare Keep Women Working During a Crisis? The Long-Term Effects of Female-Centered MGNREGS Reform During COVID-19

June 6, 2022

1 Introduction

While the Covid-19 pandemic and its associated containment measures had far-reaching socioeconomic consequences, women have been disproportionately affected (Alon et al. 2021). Evidence suggests that in India, as in the rest of the world, women have been impacted by the pandemic in terms of reduced employment, additional housework and childcare responsibilities, increased mental distress, and domestic violence (Deshpande 2020; CMIE 2021; Chauhan 2020; Bau et al. 2022). Girls are more likely to have dropped out of school during the pandemic, and child marriages have increased as households coped through the pandemic and its associated downturns (Flor et al. 2022; Yukich et al. 2021). There are also concerns that conservative gender norms defining women’s role as primary caregivers may have tightened alongside a decrease in paid female work (Danzer et al. 2021; Chaudhuri 2021).

Prior to the pandemic, India had made significant progress towards financial inclusion of women through efforts like the Pradhan Mantri Jan Dhan Yojana (PMJDY), a program that aimed to open bank accounts for all citizens, in part to ensure government-sourced cash transfers were paid into individually-held bank accounts. Pandemic-induced lockdowns created an urgent need to expand social protection to alleviate large economy-wide shocks (Dhingra and Machin 2020). Existing studies have shown that India’s employment guarantee scheme for the rural poor, MGNREGS¹, played a vital role in shielding rural areas and women therein against job losses during the crisis (Afridi, Mahajan, and Sangwan 2021). Therefore, it is important to understand the extent to which pre-pandemic investments in women’s digital financial inclusion shaped women’s experiences during the pandemic, and whether such investments can protect women’s agency during periods of crisis.

The goal of our study is to understand whether gender-targeted social protection policies designed to support women’s work and economic empowerment can preserve access to employment

1. Short for the Mahatma Gandhi National Rural Employment Guarantee Scheme

and prevent the regression of gender norms during times of crisis. More generally, through this study, we aim to understand the impact of the Covid-19 pandemic and the subsequent measures on the socioeconomic outcomes of women and their families. To answer these questions, we will conduct a long-term follow-up survey of women and their spouses as a part of a randomized control trial (RCT) conducted in India from 2014-2017 (Field et al. 2021). The study, described in more detail below, found that redirecting women’s MGNREGS wages into their own bank accounts, instead of their husband’s accounts, and training these women to use these accounts (henceforth “direct deposit and training”, or D²T) increased their labor supply, and liberalised their own, as well as their spouse’s beliefs, around women’s work.² The study also found evidence that respondents perceived community members were more accepting of women’s work.

This pre-analysis document details our plans to study the longer-term impacts of direct deposit and training. We will also study how households responded to pandemic-induced economic distress through coping mechanisms. Finally, we aim to assess whether D²T affected coping behavior. Through this work, we aim to provide causal evidence on whether the earlier-observed gains in women’s agency and loosening of gender norms associated with D²T remained in the face of the major economic and social disruptions brought about by the pandemic.

2 Research Design and Data Collection

2.1 Experimental Design

We build on an RCT that began in 2014 across 197 gram panchayats (GPs) in four northern districts of Madhya Pradesh (MP), one of India’s largest and poorest states (Field et al. 2021).³ In the RCT, we focused on the MGNREGS to study the effects of increased control over one’s own earnings on women’s labor supply and gender norms. MGNREGS entitles rural men and women to up to 100 days of unskilled work per year, and includes several features that could empower women, such as close proximity of work to home, equality in wages paid to men and women, and availability of childcare. Wages are paid electronically into beneficiary-owned bank accounts – initially, wages of all household members were often paid into a single account typically owned by the male head. The government mandated payment of women’s wages from MGNREGS into their individually controlled bank accounts in 2012. Nevertheless, this was not always implemented in practice, and in 2013 the status quo in MP was that women’s wages were usually paid in the male household head’s bank account.

The RCT proceeded as follows: we first conducted a short baseline census prior to collect information on the presence of a married couple in the household, whether either spouse had ever

2. While there was some overlap in timing between our intervention and the PMJDY, they are not the same.

3. The four northern districts are Gwalior, Morena, Shivpuri and Sheopur.

worked for MGNREGS, and whether the wife had an individual bank account. Following the census, eligible households (those where the woman was married, unbanked and either spouse had worked for MGNREGS in the past) were enrolled into the study and (when relevant) targeted for treatment. Treatments were assigned at the GP level. The study had the following arms:

- Control (64 GPs): no intervention
- Accounts only (32): eligible women received assistance opening a new, low-cost bank account at the community banking kiosk located in the GP
- Accounts and direct deposit (34 GPs): in addition to account opening assistance, eligible women received assistance in signing their new accounts up for direct deposit of MGNREGS wages
- Accounts and training (33 GPs): in addition to account opening assistance, eligible women were invited to a short group-based training that covered basic banking principles and the “how tos” of operating an account.
- Accounts, direct deposit and training (34 GPs): women in these GPs were offered account opening assistance, direct deposit, and group-based training

We partnered with two public banks that operated in our study area to implement the above-described interventions. Our sample selection and baseline surveys took place during September 2013-January 2014, and the interventions implemented at the GP level took place in February-April 2014.

2.2 Past Data Collection & Results

We conducted two follow up surveys targeting 4,500 women and their husbands, roughly one and three years after the interventions (between August and December 2015, and April and October 2017). In the follow-up surveys, both female and male surveys included modules on bank account ownership, banking activities, and labor market outcomes. The female survey also collected data on proxies of female bargaining power and empowerment, including self-reported decision-making power, mobility, and experiences of gender-based violence. In the survey conducted in 2017, we introduced norms-related survey modules to capture beliefs about whether women should work and perceived community norms.

In Field et al. (2021), we show that relative to the accounts only group, direct deposit and training (D²T), increased women’s labor market engagement in the public and private sectors. The increase in the women’s labor supply in the private sector – where wages and payment modalities were unaffected – suggests that norms costs incurred by women and their husbands inhibited

women from entering the labor market. Consistent with this channel, we find larger treatment effects on the labor supply of women likely to be “constrained” by social norms, proxied by women who had never worked for MGNREGS before. These women had lower bargaining power and agency, were less likely to have ever worked, and their husbands perceived greater social stigma associated with a working wife. Compared with only opening bank accounts, D²T liberalized women’s own work-related beliefs and shifted perceptions regarding community norms among both men and women.

2.3 Proposed Research Activities

We will conduct a third follow up survey of the 4,500 women and their spouses between March 2022 and August 2022 to understand their experience during the Covid-19 pandemic and the subsequent lockdown. Apart from including modules on banking activity, labor market outcomes, norms around women’s work, time use, and other indicators of women’s agency already explored in previous surveys, we will also include questions on households’ experience during the pandemic, and their children’s/grandchildren’s education and marriage outcomes. The additional data will give us the opportunity to understand the long-lasting impacts of our interventions on key household decisions relevant to future welfare (e.g., daughters’ marriages), women’s work, time use, gender norms held by both men and women, and women’s household decision-making power.

Additionally, the 2022 survey will also contain a randomized module that primes respondents to recall Covid-19-related challenges or focuses on a more benign placebo story of two hypothetical villagers (see Appendix A for details). The Covid prime story is followed by questions on the respondent’s experiences through the pandemic and a set of norms and aspiration-related questions to understand whether increasing the salience of pandemic-related challenges—notably its economic downturns, constraints on mobility and education opportunities, and health effects—changes respondents’ views compared with those who are assigned to the placebo story group.

While the Covid prime story is followed by questions related to the respondent’s Covid experiences and norms around women’s work in our survey, the placebo story is followed by the norms questions and then the Covid experiences questions are asked. We do this because our Covid-related questions could play the same role as the Covid prime story by making the pandemic more salient, and thereby influencing the respondent’s answers regarding own and community norms surrounding women’s work.

3 Analysis

3.1 Regression Specification

Our main specification will follow Field et al. (2021):

$$Y_{igt} = \beta_0 + \beta_1 D^2 T_g + \beta_2 D_g^2 + \beta_3 T_g + \beta_4 C_g + \mu_s + \lambda_d + \eta_t + X'_{ig} + \epsilon_{igt} \quad (1)$$

where Y_{igt} is the outcome of interest for individual i in GP g in survey round t . Here, $D^2 T_g$ indicates that GP g was selected to receive accounts, direct deposit, and training; D_g^2 indicates a GP was selected for accounts and direct deposit; T_g indicates GPs selected for accounts and training; C_g indicates a control GP. The omitted group is GPs randomly selected to only receive bank accounts. All regressions will control for strata and district fixed effects (μ_s, λ_d) and survey month \times year fixed effects (η_t). We will also control for the predetermined variables used to assess balance (see online Appendix Table A2 (X'_{ig}) in Field et al. 2021). The error term (ϵ_{igt}) will be clustered at the GP level.

Our primary analyses will focus on the 2022 round of data. We may also formally test whether treatment effects change over time. To do this, we will limit attention to outcomes that are comparable across rounds, stack the 2022 data with earlier rounds, and include a 2022 round dummy and its interactions with the treatment dummies.

3.2 Multiple Hypothesis Tests

Following our previous study (Field et al. 2021), our survey will include modules regarding women’s and their spouse’s labor market engagement, banking usage and agency, empowerment, and norms around women’s work. To address concerns about testing within families of outcomes and multiple hypothesis tests we will take the following steps:

1. To address concerns about testing within families of outcomes, we will aggregate variables into subfamilies, constructing standardized indices following Kling, Liebman, and Katz (2007) and Field et al. (2021). For each family we will average subindices to create a summary index. For example, for the aggregate own norms women’s work index we will construct three sub-indices using responses to the following category of responses: personal beliefs, working women acceptance, and husband’s acceptance of working women.
2. Next, to address concerns related to multiple families of outcomes and multiple hypothesis tests, we will follow our previous analysis in Field et al. (2021). We will report sharpened q-values that control for the expected share of rejections that are Type I errors, or false discovery rate (FDR) for our major hypotheses. We will use the FDR approach outlined in Anderson (2008), based on the methodology in Benjamini, Krieger, and Yekutieli (2006). This procedure converts p-values into q-values, which control the share of rejections that are Type I errors: specifically we expect 5 percent of rejections based on $q \leq 0.05$ to be Type I errors. We will carry out FDR adjustment on summary indices, separately for our primary, secondary, and tertiary outcomes of interest.

4 Research Questions and Hypotheses

4.1 Direct Impacts

4.1.1 *Research Question 1: What are the post-Covid impacts of treatment on labour market outcomes?*

Here, we are interested in testing whether positive impacts of D^2T_g on women's labor market participation sustained through the pandemic. As with our earlier analysis, we will consider an overall summary index of labor supply and separately study impacts on private sector and MGNREGS work. Given MGNREGS' importance during India's Covid recovery, this could be a key channel for supporting women's continued labor market engagement.

As with our earlier work, we will separately study treatment effects on male labor supply.

4.1.2 *Research Question 2: What are the post-Covid impacts of treatment on norms around women's work?*

Field et al. (2021) show that D^2T_g liberalized women's own beliefs, as well as women's and men's perceptions of community beliefs about women's work. We aim to test whether these positive treatment effects endured post-pandemic, or whether they faded out.

4.1.3 *Research Question 3: What are the post-Covid impacts of treatment on banking autonomy and financial activity?*

In Field et al. (2021), we find that D^2T_g increased women's banking usage and financial activity. We will test whether these effects persisted during the pandemic. Here, we note that we no longer have access to administrative data from one of our partner banks, which means our analysis of banking autonomy and financial activity will be limited to self-reported outcomes measured in our survey data.

4.1.4 *Research Question 4: What are the post-Covid impacts of treatment on women's autonomy and intrahousehold bargaining power?*

Beyond labor market engagement and banking autonomy, D^2T_g may have altered other markers of women's agency and empowerment. Consistent with our earlier analysis and surveys, we focus on five domains related to women's empowerment: engagement in making purchases, mobility, self-reported decision-making, and freedom from gender-based violence.

4.1.5 *Research Question 5: What are the post-Covid impacts of treatment on children’s marriage and education?*

D^2T_g could have affected the marriage and education outcomes of children through multiple channels. First, if women and men have different preferences over when children should marry and how long they should study, these outcomes could change through a women’s empowerment effect. Second, if D^2T_g led to sustained impacts on women’s labor market participation, this could impact decision making through a wealth/income channel. To understand these outcomes, we will focus on school dropout rates and age at marriage, overall and by child gender.

Our prior is that the financially empowered group would be less likely to drop their children out of school or marry them before the legal age in order to cope with the financial distress triggered by the pandemic. It could also be the case that better access to Covid support among the D^2T_g group could deter households from turning to child marriage or dropping children out of school as coping mechanisms.

4.1.6 *Research Question 6: What are the impacts of treatment on other outcomes relevant to the pandemic: women’s time use patterns, mental health, and self-reported Covid experiences?*

Existing literature has shown that the Covid-19 pandemic reinforced existing gender roles, which put a disproportionately higher burden of housework on women and reduced their labor supply (Deshpande 2020). We hypothesize that D^2T_g could have altered time use patterns during the Covid-19 pandemic, for example, by increasing women’s time spent on paid work, and thereby, reducing the amount of time they spend on home production and care work.

Next, Field et al. (2021) show that D^2T_g had substantial positive effects on women’s labor force participation and earnings. We hypothesize that the increase in women’s work as a result of D^2T_g could alter their own and their family’s experiences during the Covid-19 pandemic. More specifically, D^2T_g could have mitigated distress compared with the accounts only group.

Finally, we will examine the effects of the pandemic and our main treatment on women’s mental health, which could be affected by changes in women’s labor supply/time use, norms, and Covid-related hardships.

4.2 Outcomes of Interest

We will address the above research questions by examining treatment effects on the following primary, secondary, and tertiary outcomes. Our primary outcomes of interest are:

- Labor market outcomes
 - Women’s labor supply: we will construct a summary index comprised of general, private and public labor supply sub-indices, following Field et al. (2021)

- Men’s labor supply: we will construct a summary index comprised of general, private and public labor supply sub-indices, following Field et al. (2021)
- Norms around women’s work
 - Own norms: we will construct an aggregate own norms index composed of sub-indices following Field et al. (2021).
 - Perceived norms: we will construct an aggregate perceived norms index composed of sub-indices following Field et al. (2021).
 - We will analyze treatment effects on the above-listed outcomes separately by gender

Our secondary outcomes of interest include the following:

- Women’s Empowerment
 - We will construct an aggregate women’s empowerment index composed of the following sub-indices: engagement in making purchases, mobility, self-reported decision making, gender-based violence.
- Banking and financial activity: Following Field et al. (2021) we will construct an aggregate account use index and a banking autonomy index. Our banking autonomy index will depart from Field et al. (2021) in that it will not include indicators for whether the women prefers payment for work into her own account, and whether she prefers not to be paid in her husband’s account since these questions were not asked in our most recent survey. Moreover, we will not construct the bank kiosk knowledge index featured in Field et al. (2021) as these questions were not included in our survey instrument. Finally, note that our long-run analyses related to banking outcomes will not use administrative data, since the data sharing agreement with one of our partner banks is no longer active (administrative outcomes were not included in the main summary indices in our earlier work, but were used in some secondary analyses).
- Children’s wellbeing: marriage, education, and child labor
 - Our marriage index will be constructed for the subset of households that had any children or grandchildren “at risk” for marriage prior to the pandemic (12-25 at the time of interview and unmarried prior to the pandemic). We will construct dummy variables to identify households with (grand)children who got engaged or married between March 2020 and the time of the survey, and households with (grand)children who got engaged or married before the age of 18 during this time period. We will construct summary indices based on these household-level outcomes, exploring robustness to conducting

the analysis at the child level. We will examine treatment effects on an “all child” index as well as indices constructed just for female and male children. These analyses will additionally control for the number of “at risk” male and female children aged 12-17 and 18-25 (this amounts to 4 additional control variables: males 12-17, females 12-17, males 18-25, females 18-25).

- Our schooling index will be constructed for the subset of households who had any (grand)children under 20 at the time of interview who were enrolled in school prior to India’s 2020 Covid lockdown. We will construct dummy variables to identify households with enrolled children who were no longer enrolled in school at the time of the survey. We will construct one variable flagging households with early dropouts (children aged 5-14 at the time of interview) and a separate variable flagging later-state dropouts (aged 15-19). We will study treatment effects on all children, as well as males and females separately, again exploring robustness to conducting the analysis at the child level. This analysis will additionally control for the number of (grand)children aged 5-14 and 15+ (by gender).
- To construct our child labor index we will first limit the sample to unmarried (grand)children ages 10-17 who live in sampled households. We will construct a dummy variable to identify children who worked for pay in the past 30 days, and also calculate total earnings in the past 30 days for these children. As with other child-related outcomes, we will construct averages at the household level and then build indices, assessing robustness to analyzing outcomes at the child level. We will study impacts on overall child labor as well as child labor by gender. We will also control for the number of children aged 10-17 in the household, by gender.

Our tertiary outcomes of interest include the following:

- Women’s time use patterns: We will separately study women’s time spent on- (a) market/paid work; (b) home production including unpaid work; chores and child care; (c) leisure; and (d) sleeping
- Women’s mental health: Our survey included the K6 index. We will study the overall K6 score as a summary measure, and explore treatment effects on the 6 constituent questions to understand impacts on different aspects of mental health.
- Pandemic-related hardship: To study treatment effects on difficulties experienced during the pandemic, we will construct a standardized index that aggregates the following variables:
 - Life during covid: bad vs. good experience
 - General safety concerns during the pandemic

- Worry about financial situation during the pandemic
- Hardship indicators: inability to access healthcare, lost work, lost other sources of income, increased stress/disagreement in household, economic loss
- Consumption indicators: ate less, postponed large purchases, took out money from savings, sold off assets, reduced consumption of essential items, borrowed money
- Food insecurity indicators: worried would run out of food, ate less than normal, went a day without eating
- Change in mobility during pandemic
- Perceived safety in community during pandemic
- Ability to work as much as desired during pandemic
- Did family discourage work during pandemic

4.3 Mechanisms and Heterogeneity

We also plan on conducting supplementary analysis to shed light on mechanisms. Planned tests include the following:

4.3.1 Heterogeneity by baseline MGNREGS work experience

Field et al. (2021) showed that the effects of D^2T_g were the most prominent and persistent for “constrained” women, proxied by never having worked for MGNREGA at the time of the baseline census. We plan on exploring heterogeneity along this dimension in our analysis of 2022 data – here, we hypothesize that protective effects of D^2T_g , if they exist, should be larger for constrained women.

4.3.2 Impact of Covid prime and treatment on MGNREGA demand and social norms around women’s work

Gender norms are a key mediator of D^2T_g ’s post-Covid impact. Specifically, we hypothesize that Covid could have altered attitudes towards female work, in ways that are difficult to predict *ex ante*: pandemic-related factors (job scarcity, disrupted child schooling) could have made norms more conservative, as in Danzer et al. (2021). Alternatively, resource scarcity could have made households more open to female work. We designed the Covid prime to assess whether these mechanisms are operational. We aim to assess the impact of the Covid prime on self-reported demand for MGNREGS work, as well as our norms indices, defined above. We will also test whether the effect of priming varies by treatment arm. Finally, we will assess whether the prime shifted self reports of pandemic severity – if the prime did little to change respondents’ reports of

how difficult the pandemic was, it may be indicative of a poor “first stage”, limiting our ability to test mechanisms this way.

4.3.3 Heterogeneity by severity of local Covid shocks

One difficulty associated with interpreting our long-term effects is that it is not possible to assess how Covid mediated D^2T_g 's impact. One way of directionally determining whether the pandemic amplified or muted long run effects is to assess heterogeneity with respect to severity of the Covid shock. Doing so is complicated by the fact that our treatments could have directly impacted shock severity (if, e.g. D^2T_g mitigated negative shocks felt by women by expanding access to an emergency source of earnings). We therefore aim to identify sources of shocks unlikely to be moved by our treatments by collecting data on deaths of husbands and others in the family. Our ability to conduct this analysis will depend on the frequency of deaths and whether we observe treatment effects on death rates.

We do not rule out the possibility of examining effects on other outcomes of interest or exploring other dimensions of heterogeneity. In the paper, we will specify the tests that were included in this PAP and the ones that were not.

5 Pre-PAP Statistical Analysis

This PAP was drafted after the surveys had been in the field for several weeks. To monitor the progress of the intervention and understand the effectiveness of our Covid prime in making the pandemic more salient, we tracked some outcomes by Covid prime status. These outcomes include:

1. Impact of Covid prime on self-reported individual's experiences, for example, economic loss and mobility.
2. Impact of Covid prime on self-reported coping mechanisms
3. Impact of Covid prime on attitudes towards women's work

At the time of writing, we observed differences in Covid experiences and attitudes that were modest in magnitude and consistent with a small priming effect. Differences in attitudes towards women's work were small, pointing to no impact of the prime.

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A Prime and Placebo Stories

1. Prime: As you may know, India has been battling COVID since March 2020. Do you remember the lockdown announced by PM Modi?

On March 24th 2020, PM Modi announced a nation-wide lockdown for 21 days, as a preventive measure against the spread of COVID-19 infections. The lockdown was further extended multiple times and lasted till 31st May. The lockdown prevented people from moving out of their homes. All transportation services were suspended with the exception of transportation for essential services. Schools, shops, factories and hotels were closed during this time.

Many people have struggled in different ways during the pandemic. Early on, many people lost jobs due to the lockdown and struggled to make ends meet and find food for their families. Some people even had to sell off their personal assets to make ends meet. There were also losses in childrens education because schools were closed, and/or online classes were either not available or children did not have smartphones or laptops to attend these classes. This past spring many people across India fell sick with COVID and a new wave of job losses occurred. You might remember that this time a lot more people fell sick, had to be hospitalized, and in many cases also needed oxygen. Do you remember hearing of this most recent surge in cases?

Please think about the challenges you and your community have faced during COVID. Now I will ask you some questions about those experiences

2. Placebo Story: I am now going to tell you a story about a family living in this district, in a village similar to yours. Geeta and Kailash "Respondent's Subcaste" live in a small house with 2 school going children and Kailashs old father. Kailash works on his own farm during the agricultural season and as a non-farm labour during other times of the year. Geeta looks after the house and the children and also helps out Kailash in their family farm.

A few years ago, the village was facing problems with electricity supply, which caused power outages lasting for hours. As a result of the frequent power cuts, the time spent by their children on studies reduced substantially. The drudgery of household work has increased. The unreliable electricity supply also impacted Kailashs work as he now had to buy expensive diesel in order to power his irrigation pumps. Geeta and Kailash, along with the others in their village, complained to the local leaders about this problem.

To solve the issue, the government set up a solar grid in the cluster of villages facing power outages. The solar grid now provides cheap and reliable electricity to these villages. The new grid meant Kailash no longer had to rely on diesel and could go back to his usual farming practices. The children could also study for longer hours.