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IFPRI Discussion Paper 02315

December 2024

**Can Role Models and Skills Training Increase
Women's Voice in Asset Selection?**

Experimental Evidence from Odisha, India

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INTERNATIONAL FOOD POLICY RESEARCH INSTITUTE

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Abstract

We explore the impacts of exposing women to female role models and providing skills training on outcomes related to women's aspirations and engagement in demanding assets under India's Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA)—the largest public works program in the world, which solicits citizen input on which assets to build and where. While the role model treatment exposes women to a video with stories of female role models from neighboring districts who successfully demanded assets, the skills training shows women how to identify individual and group needs for assets, frame their demands, and articulate them to public functionaries. In a randomized controlled trial spanning 94 villages and involving approximately 2,600 women, we find that exposure to role models alone has limited impacts, but when combined with skills training, there are strong positive impacts on women's aspirations and engagement in demanding assets. This reveals that even a light-touch training can significantly benefit women's voice and agency in village decision-making.

Keywords: Women's empowerment, women's voice and agency, rural infrastructure, training interventions, civic engagement, participatory planning, deliberation, gender, civil society, India

Acknowledgments

We are very grateful to Naureen Karachiwalla for valuable contributions to this project, and to Pabitra Chowdhury for research assistance. We thank CORD-Libtech for providing data for sampling. This work was undertaken as part of the CGIAR Research Initiatives on Gender Equality and National Policies and Strategies, as well as the Gender Impact Platform. We would like to thank all funders who supported this research through their contributions to the CGIAR Trust Fund: <https://www.cgiar.org/funders/>. This study received ethical approval from the International Food Policy Research Institute (IFPRI)'s Institutional Review Board on December 18, 2022, prior to the start of the baseline survey. An amendment was made to add information on the planned interventions; this was approved on October 31, 2023, prior to the roll-out of the interventions. Local ethical approval was obtained from the Academy of Management Sciences, Lucknow, Uttar Pradesh. The study was pre-registered on the AEA RCT registry (RCT ID AEARCTR-0012350) and a pre-analysis plan (PAP) uploaded on April 19, 2024, before the endline data had been received by the research team. The analysis described in this paper follows that PAP. Where we deviate from the PAP to engage in more exploratory analysis we state so clearly.

1 Introduction

In contrast to top-down and technocratic approaches in which decisions about whom to target with government programs and what to provide are made centrally, community-based approaches are increasingly emphasized as a means of utilizing local informational advantages, democratizing decision-making, strengthening citizen's rights, and improving program functioning. Yet, a key concern with transferring decision-making to the local level is that the outcomes of participatory processes are shaped by local norms, culture, politics, and social and economic inequalities, which can vary widely across space and exclude many groups from decision-making (Bardhan and Mookherjee, 2000; Dasgupta and Beard, 2007; Mansuri and Rao, 2013). Women in particular are often underrepresented in local governance, raising concerns that decentralization could disproportionately benefit men in contexts where women face higher barriers to contacting local officials (Kosec, Song and Zhao, 2021). Additionally, local decisions are often taken by small groups of powerful local elites, making community-based approaches vulnerable to entrenched social and gender norms and elite capture (Bardhan and Mookherjee, 2000).

This paper experimentally assesses prospects for increasing women's voice and agency in community decision-making through exposure to female role models and skills training related to identifying priorities, framing demands, and articulating them to public functionaries. It does so in the eastern state of Odisha in India and in the context of the Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA) public works program, which entails a decentralized planning process to build assets that explicitly solicits citizen input on what to build and where. In this setting, there are large gender disparities in claiming public resources and in speaking up in community meetings (Kosec et al., 2024; Kruks-Wisner, 2018; Sanyal and Rao, 2019; Prillaman, 2023), and elite capture of local planning processes is prevalent (Himanshu, Mukhopadhyay and Sharan, 2015; Panda, 2015; Jeong, Shenoy and Zimmermann, 2023). The MGNREGA provided 3.07 billion person-days of work at a guaranteed minimum wage in the 2024 fiscal year alone, and received an allocation of INR 860 billion (over USD 10.4 billion) in the 2024/25 budget, making it the world's largest public works program (Kosec et al., 2024; Mukherjee, 2024). Rolled out in rural areas in three phases between 2006 and 2008, the Act entitles each rural household to a minimum of 100 days of manual labor at stipulated (minimum)

wages based on work performed. In addition, the Act provides beneficiaries the opportunity to select the assets—at an individual, group, or community level—to which workers will contribute labor. The participatory local process through which assets are selected is the central focus of this paper and is similar to many types of participation in local governance, such as selecting and building projects through community-driven development programs, engaging in participatory budgeting processes, supporting targeting processes for social protection programs, and serving on local school monitoring committees—all of which are in theory open fora, but in practice require individuals to attend meetings and express preferences actively in a public setting.

MGNREGA’s participatory process to select assets faces several challenges: in order to demand assets from the program, citizens have to take actions to submit asset suggestions, like contacting a local official, speaking up at a community meeting, and/or filing paperwork in concert with local functionaries. Taking these actions requires knowledge of program rules and processes, political and social networks, and comfort in and ability to speak up in public spaces. It can also require *aspirations* to achieve something through the participatory process, like improving one’s livelihood by obtaining a specific asset. In many contexts, including in India, women are less likely than men to contact local officials or participate in community meetings (Takeshima et al., 2024) and less likely to be knowledgeable about programs (Bleck and Michelitch, 2018). The result can be that participatory approaches ultimately support status quo economic and social relations, which are inequitable for women (Cornwall, 2003). Our paper asks the question: can interventions such as exposure to role models and training on framing and articulating demands serve to increase women’s voice and agency amid these structural barriers?

To answer this question, we conducted a randomized controlled trial in 94 *gram panchayats* (GPs) or villages in four districts of the coastal state of Odisha. In each village, 15 “target” women who had previously requested work through MGNREGA were randomly selected to be part of the study. Each woman was invited to bring three to five adult friends with her to participate in the intervention, at least one of whom had a MGNREGA job card—a key document entitling them to work under the program. Together, this group of target women and friends comprised nearly 8,000 women. In the first treatment arm (T1), a trained facilitator had women watch and discuss a 15-minute video showcasing the stories of women from nearby

communities who had successfully demanded assets under the program, including how they successfully obtained assets and how those assets had benefited them.¹ Women in the second treatment arm (T2) received the same video treatment as T1 and additionally participated in a 1.5 hour participatory skills training module. In this training module, women conducted a social mapping exercise with their friends to help identify assets that could meet individual or community needs, practiced framing their demands for these assets, and participated in a role play exercise to enact how they would articulate their demands to family members and local authorities.

As gathering with friends to watch and discuss a film could enhance women’s social networks, self-confidence, and their informedness about the program, we had women in a third experimental arm, the placebo group, also gather with friends in the presence of a trained facilitator—though in this case they watched and discussed a 15-minute fictional romantic comedy promoting the use of toilets. Gathering the placebo arm women and their friends allows us to net out the effects of gathering socially with friends. Across all three treatment arms, women also received an information leaflet describing the types of assets that can be demanded in MGNREGA, who can demand them, and when and how demands can be placed. Providing information across all treatment arms allows us to net out the effect of role models and the skills training from the effects of increased information on program rules. To ensure the experiment had sufficient power, and because there is already ample (and often null) evidence on the effects of treatments providing information alone, we elected not to have a pure control group (no meetings or information) or a group that received only the information leaflet. Critically, women in all three study arms were recruited using an identical script that indicated the same time commitment of up to “a couple of hours,” ensuring that women selecting into T2 were not only those women who could spare the extra time needed for the skills training.

While T1 was designed primarily to impact women’s *aspirations* to demand assets, T2 was designed to increase both women’s aspirations and, additionally, their *ability* to achieve those aspirations. Together, these treatments address important policy questions about whether

¹MGNREGA maintains a list of pre-approved assets which can be built through the program (currently 262 are pre-approved). While the program allows both individual assets—privately owned and constructed on private land—and community assets—which span both public goods like rural roads and “club goods” for specific groups—the film primarily covered individual assets.

participation in community decision-making can be induced without changing the underlying norms, culture, politics, or social and economic inequalities that shape local decision-making.

We find that T1 (referred to below as the “role model” treatment) has little impact relative to the placebo arm on either women’s aspirations or their behaviors. However, combining the role model video with the practical skills training significantly increases both. Relative to the placebo, women in T2 (referred to below as the “role model + training” treatment) are significantly more likely to aspire to request an asset and to identify closely with hypothetical women who exhibit voice and agency in the MGNREGA asset selection process. They are also significantly more likely to have requested an asset individually or as a group, and to have had a member of their household request an asset in the months between the training and our endline survey. While both the target women and their friends were more likely to request assets, target women were significantly more likely to take additional actions like meeting with an MGNREGA functionary and speaking up at community meetings. Examining mechanisms, we find that women who received the role model + training treatment made tangible improvements in their skills at articulating demands. They were rated more highly both in an independent assessment conducted by the enumerators several months after the training and by their friends on their ability to articulate demands, and also scored higher on a self-reported self-efficacy scale. This suggests that an inspirational role model treatment is not enough to affect either aspirations or behaviors, but when paired with participatory practical training on converting aspirations into tangible demands, it can have significant positive impacts.

This paper builds on several strands of the literature. First, in the long history of public works programs, there has been limited research on what works to ensure women’s voices are included, or how such efforts ultimately affect welfare outcomes for women. MGNREGA is no different. The Act has received much attention for its scale and its role as a safety net for workers ([Imbert and Papp, 2015](#); [Klonner and Oldiges, 2014](#); [Zimmermann, 2024](#)), including during the COVID-19 pandemic ([Narayanan, Oldiges and Saha, 2022](#); [Afridi, Mahajan and Sangwan, 2022](#)). While there has been some research on the effectiveness of different assets constructed under the program ([Aggarwal, Gupta and Kumar, 2012](#); [Muralidharan, Niehaus and Sukhtankar, 2023](#); [Narayanan, 2016](#); [Ranaware et al., 2015](#)) and on the effect of the program on women workers ([Pankaj and Tankha, 2010](#)), evidence on how assets are selected and by

whom remains scarce. Thus, the question of what works to include women in decision-making is largely open.

Second, our paper adds to literature on decentralized participatory local governance. Village-level *gram sabha* meetings², where (at least on paper) decisions about MGNREGA assets are to be discussed, comprise “the largest deliberative institution in human history” (Sanyal and Rao, 2019). Finding effective ways to promote women’s engagement in these settings has implications for social programs beyond MGNREGA and for other local policymaking. Whether and how participation can be induced in these local decision-making fora by marginalized voices is a significant policy question (Mansuri and Rao, 2013; Palaniswamy, Parthasarathy and Rao, 2019).

Despite the growing use of community-driven approaches for development projects and the importance of these local institutions, there is limited evidence on effective ways to increase the role of marginalized groups in owning the process of demanding assets under public works programming or in community-driven development processes more broadly. The current literature has focused largely on the effects of implementing gender quotas in development programming and local governance (Beath, Fotini and Enikolopov, 2013; Clayton, 2015; Van der Windt, Humphreys and de la Sierra, 2018; Beaman et al., 2009). Beath, Fotini and Enikolopov (2013) find that these provisions increase women’s economic activities, but do not find an effect on women’s decision-making power in the household or on gender norms. Van der Windt, Humphreys and de la Sierra (2018) do not find an effect of mandating gender parity in decision-making for a community-driven development project on women’s empowerment or on policy decisions. And Clayton (2015) find that quota-mandated female representatives either do not affect or actually diminish women’s self-reported engagement with local politics. In contrast, Beaman et al. (2009) find that reserving seats for women reduces bias against women candidates in future elections; improving perceptions of female leader effectiveness and weakening stereotypes about gender roles in the public and domestic spheres. Our study contributes by investigating bottom-up approaches to encourage and capacitate women to influence governance—specifically, to bring their demands into the MGNREGA asset selection process—

²*Gram sabhas* are open assemblies which are constitutionally-mandated, have authority to discuss and intervene in issues like selecting beneficiaries of public programs and selecting public goods, and are open to all citizens to bring up a range of concerns about village development and community needs.

without altering the decision-making institutions. This is important for contexts like India which have already reformed institutions to increase women’s representation in local governance yet still see gender gaps in women’s participation.

Finally, our paper speaks to a literature on what works to increase women’s aspirations and the relevance of context for translating aspirations into actions. A rising trend in development initiatives is to focus on nurturing individuals’ aspirations, or goals. These efforts are often based on the idea that a lack of aspirations plays a role in perpetuating poverty and that even small-scale interventions can effectively boost aspirations (Appadurai, 2004; Duflo et al., 2013; Genicot and Ray, 2017; Lybbert and Wydick, 2018; Macours, Premand and Vakis, 2014; Ray, 2006). Individuals with high aspirations often exhibit a forward-looking and entrepreneurial mindset; they are more inclined to save, adopt new technologies with significant potential, run small businesses, and invest in their children’s education (Bernard et al., 2019; Janzen, Magnan and Thompson, 2017; Kosec and Khan, 2016; Dalton, Ghosal and Mani, 2015; Bernard et al., 2014). Such individuals also tend to exhibit greater levels of civic engagement (Kosec and Mo, 2017). As a result, individuals with higher aspirations tend to have higher incomes (Zax and Rees, 2002) and are more likely to hold white-collar jobs and be community leaders (Wydick, Glewwe and Rutledge, 2013).³

Development interventions shown to raise aspirations include international child sponsorship (Wydick, Glewwe and Rutledge, 2013), exposing individuals to role models (Beaman et al., 2012; Bernard et al., 2014; Bernard, Taffesse and Dercon, 2015; Riley and McGuire, 2017), introducing well-paid job opportunities (Jensen, 2012), providing aid after natural disasters (Kosec and Mo, 2017), teaching life skills (Leight et al., 2019), giving bicycles to girls (Prakash and Ghosh, 2020), facilitating business counseling with peers (Field et al., 2016), providing information about labor market opportunities (Jensen, 2012), and increasing interactions with female peers (Dasgupta, Maitra and Pal, 2015; Field et al., 2016).⁴ Most of the impact evaluations of these interventions, however, have been restricted to analyses of aspirations in the economic or educational domains alone. We analyze whether exposing women to relatable female role models

³At the same time, unmet aspirations can lead to frustration that inhibits forward-looking investments (Genicot and Ray, 2017; Janzen et al., 2017) or reduces trust in government (Healy et al., 2017).

⁴In contrast, Edmonds and Leight (2019) find that exposure to a life skills training and mentoring program did not raise adolescent girls’ aspirations around further educational attainment.

combined with practical skills training can raise aspirations related to participating in public-sector decision-making specifically—an under-studied domain in the aspirations literature. We further consider both aspirations and behavioral outcomes in tandem.

2 Experimental context and design

2.1 Demanding assets under the MGNREGA

In addition to providing work on demand and building durable assets to support sustainable rural livelihoods, the MGNREGA is noteworthy in its emphasis on a democratic, bottom-up process of decision-making around the assets to be constructed. The Act enshrines workers' right to participate in village- or revenue-village-level townhall meetings (the *gram sabha* and *palli sabha*, respectively) and decide the works to be taken up in their village (GP) as well as their order of priority. Currently, the MGNREGA guidelines (see Master Circular 2021-22) specify that each GP must hold a village townhall meeting on October 2 each year, where the planning process at the village level is launched via a discussion. Between then and November 30, a special village townhall meeting is to be convened to approve the village level action plan.⁵

Once these village-wide demands are captured, they are conveyed up the echelons of local administration for technical estimates of the labor budget and overall costs based on a blueprint of the work, and subsequent approval by the block, district, and state administrations. The approval process is to be completed by February of the following year, and the approved shelf of works sent back to the GP or the village administration by the end of March, ahead of the new fiscal year. The Gram Rozgar Sewak (GRS) is the relevant MGNREGA worker at the GP level who coordinates these activities and interfaces with politically-elected representatives—notably the GP members and the *sarpanch* (elected head of the village).

Despite the detailed guidance on how to foster grassroots participation and how to conduct the planning process, research has shown that villages vary widely in how assets are selected in practice. In some villages, informal processes for asset selection prevail, ranging from top-down beneficiary selection—in which households are informed that they have been selected for an asset by a village leader—to those that rely on personal connections (Kosec et al.,

⁵While this is the typical timeline, planning meetings at the village level in Odisha in 2023 were delayed until late November/early December due to a state-wide *sarpanch* strike.

2024). In other villages, bottom-up demands may be expressed directly to the GRS, who may assist individuals with their asset demands. Informal and formal claim-making pathways can also coexist. The MGNREGA guidelines allow both individuals and groups to demand assets; individuals interested in doing so can either go through any of these formal and informal pathways on their own or join together with others from their villages to collectively demand assets. For women in particular, raising collective demands along with members of their self-help group (SHG)⁶ is a potential way to demand assets.

In general, however, inclusion in the planning process has been one of the weaker aspects of MGNREGA implementation. Existing field surveys note that a third of asset beneficiaries report playing no role in deciding which works to undertake, and close to half felt that works were decided without the involvement of the village townhalls (Ranaware et al., 2015). The participation of women is likely to be even more limited. It is unclear how successful recent efforts to revive and streamline local participation in planning asset selection have been.⁷

To account for this variation in how the asset selection process within MGNREGA is implemented in practice across villages, we consider a wide range of outcome variables accounting for different actions that women may take to exercise voice within the process. These include women initiating demands by attending and speaking up at a village meeting, enlisting family or SHG members to do so on their behalf, or approaching the local GRS or other functionaries directly.

2.2 Sample

Our study was conducted in select districts of Odisha, a coastal state in the eastern part of India. Odisha is neither a star performer nor a laggard in MGNREGA indicators and has moderate levels of state implementation capacity, high rates of seasonal out-migration, and a relatively high proportion of MGNREGA workers who are women (48.8 percent) or are from marginalized caste and tribe groups (45.67 percent Scheduled Tribe or Scheduled Caste). What sets Odisha apart and makes it a particularly interesting case to study is that the state has

⁶SHGs are microfinance groups of 10–20 women that meet regularly to deposit money in a group-held account and, increasingly, to share information about health, nutrition, and government programs (Kumar et al., 2021).

⁷This is a longstanding concern, ever since the 73rd Constitutional Amendment Act formally recognized the village level bodies as a tier of governance in India (Banerjee, 2013).

implemented several progressive livelihood interventions and innovative policies in the areas of agriculture, social protection, and climate resilience, with an explicit focus on women. These include fledgling efforts to involve women’s SHGs in the management and use of assets created under MGNREGA and the convergence of different government schemes to enable better use of MGNREGA assets. Thus, while there are significant gaps in the participatory planning process, there is also policy interest in making improvements, especially for women.

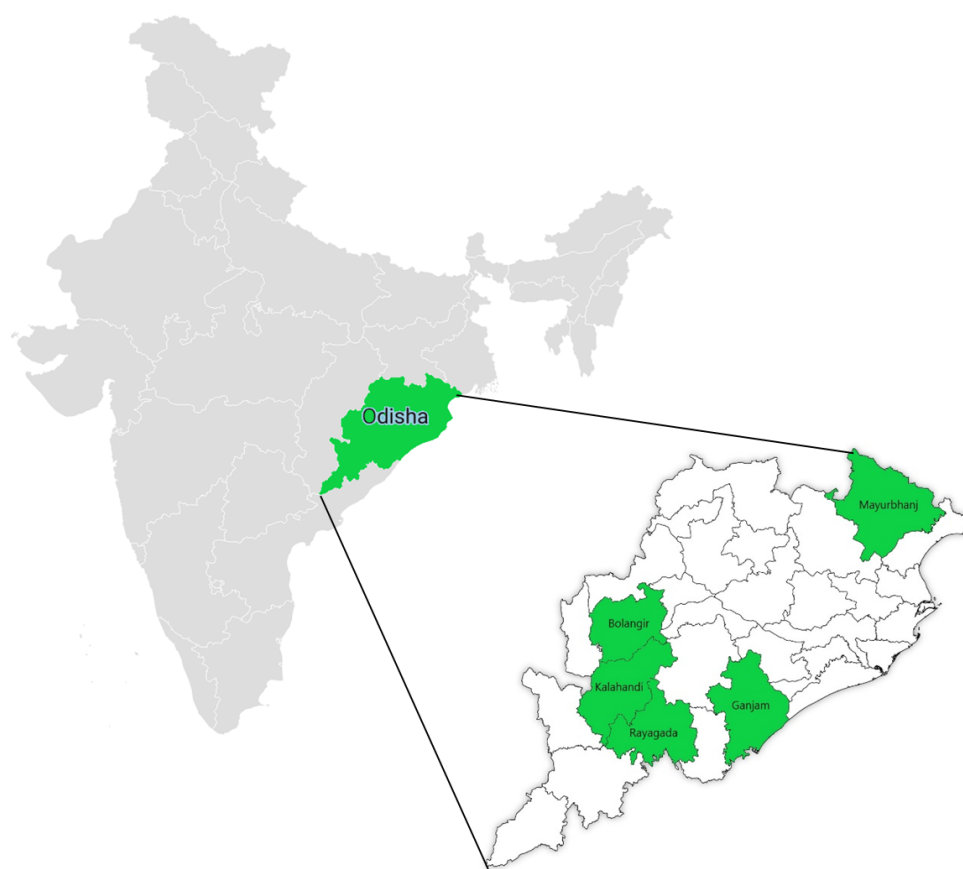
We initially selected five study districts—Bolangir, Ganjam, Kalahandi, Mayurbhanj, and Rayagada (Figure 1)—based upon their proven participation in building MGNREGA assets⁸ and in consultation with the State Government. Selecting districts with higher scales of asset construction in the recent past ensured that the intervention would take place in an area with some demand for the program and for asset construction as well as some implementation capacity.

Within the study districts, we conducted an in-person baseline survey during May–June 2023 with women living in households participating in the construction of assets under MGNREGA (i.e., job card holders). Specifically, we sampled women as follows:

1. For the universe of GPs in the study districts, we obtained the total number of active MGNREGA job cards in the last complete year for which data were available (i.e., 2021/22). An active job card indicates that (1) a household is enrolled in MGNREGA and (2) the household that possesses the job card has worked on the MGNREGA at least once in the preceding three years.
2. We selected 50 GPs at random per district from the full universe of GPs, with probability of selection proportional to the number of active 2021/22 job cards in that GP.
3. Within each of these 250 GPs (50 GPs per district in each of our five districts), we selected 15 households at random from among the list of registered job card holders obtained from the MGNREGA MIS. Within each household, the “target woman” for our intervention was the female respondent who had worked the greatest number of days on MGNREGA over the last five years. Where there was more than one such woman within the selected household, we selected the youngest. If no woman in the household had worked on the

⁸We used the MGNREGA MIS schedule for the period 2017/18 to 2021/22 to determine recent participation by district in MGNREGA asset construction in agriculture and natural resource management.

Figure 1: Map of India with Odisha State



Notes: Map of India with an inset map of Odisha, baseline study districts indicated in green. The district map of Odisha is taken from <https://d-maps.com>.

program over this period, we selected the spouse of the male household member who had worked the greatest number of days.

The baseline survey asked respondent women about socioeconomic and demographic characteristics of their households, their knowledge and practices relating to wage work under MGNREGA and MGNREGA assets, participation in collective organizations, social capital, self-efficacy and aspirations, and aspects of empowerment, including freedom of movement, decision-making and gender perceptions. In total, our baseline aimed to contact 3,750 primary female respondents. However, in the course of conducting the survey, we faced refusals from local officials in 20 GPs in Ganjam and decided to drop this district from the study. This brought our intended set of primary female respondents down to 3,000 across the 200 GPs in the remaining four districts. Ultimately, we were able to interview 2,982 of these women. Naturally, we conducted the experiment in the four study districts we retained.

2.3 Experimental design

Due to budget constraints, we aimed to implement our treatments across 94 of the 200 GPs included in the baseline survey for the study districts. We selected these 94 GPs in consultation with our implementation partner in order to minimize travel time and thus costs. We did not exclude remote GPs from the study; rather, we prioritized dropping those GPs from our sample which would require excessive travel time to reach a single sampled GP. In each selected GP, we included within the study all 15 target women from baseline for a planned intervention sample of 1,410 target women. Overall, we were able to locate a total of 1,324 women in these 94 GPs at the time of intervention (for an attrition rate of 6.1%). Importantly, we could find at least 13 of the 15 women in 90 of the 94 GPs, and in no GP did the number of target women fall below 10.

When arriving in a study GP, a trained facilitator from our implementation partner would aim to locate all 15 target women from the baseline survey and invite them to participate in our study. Each target woman was asked to gather 3–5 other women who she relies on for help and advice and/or who she considers a friend. Women were asked to avoid bringing family members and to choose friends who were long-term residents of the village to increase the chances of locating these friends at endline. They were informed that it would be ideal if

the invited friends were MGNREGA job card holders, but that at least one friend must be. Our motivation for including friends of the target women was based on the findings by [Field et al. \(2016\)](#), where receiving training along with friends was deemed more effective than being trained individually. We also hoped that the company of friends during the training would ensure that the women immediately had a good rapport with each other and felt more at ease than they might have among strangers.

All target women were told that they would be able to invite these friends to watch a movie together and then talk about it afterward. Facilitators explained that this would take around 45 minutes, or the time it takes to have a cup of tea with a friend. All target women were additionally informed that some women would be chosen by lottery to attend a bonus training, which would be participatory and teach valuable skills. This bonus training, the facilitator informed them, could make the full time commitment “a couple of hours”. With this introduction, facilitators asked the target women to identify a time when they and their selected friends would be available. Lunch and refreshments were provided across all treatment arms.

Upon gathering at the agreed upon time and place, the facilitator implemented a 5-minute questionnaire with the first friend to arrive who was a MGNREGA job card holder, asking pre-treatment questions on our primary outcome variables and a small number of background characteristics. We did this to enable us to control for some baseline characteristics of women for whom we did not have a full baseline survey, as we planned to include one friend of each target woman in the endline survey to test effects of the training on a larger overall sample of the women trained. The facilitator then proceeded to take attendance and deliver the planned interventions.

Stratifying by GP to ensure balance on GP characteristics, we randomly assigned target women to three different treatment groups, resulting in roughly 5 women per GP in each treatment arm.⁹

The first exercise conducted by facilitators in *all* treatment arms was to distribute leaflets providing information on allowable assets within MGNREGA, the timing of key planning meetings for asset selection, and information on key local officials charged with implementing MGN-

⁹We used STATA’s *randtreat* command and handled misfits globally.

REGA. Leaflets were printed on high-quality cardstock with images to illustrate key points and to increase the odds that the leaflets would be kept and used, and each woman attending the training received her own copy. The facilitator read out and discussed the leaflet with each group. By providing this information to all study groups, we ensure that it is not just information on how to participate that is driving our results.¹⁰

Additional details of each treatment are as follows:

Placebo: One-third of the women were randomly assigned to a placebo group. After receiving the informational leaflet, women in the placebo arm watched and discussed a 15-minute fictional romantic comedy promoting the use of toilets. Thus, if just the act of pausing a normally busy day to watch and discuss a film with friends lifts a woman’s spirits, changes her attitudes or self-confidence, or affects her social networks, we are able to net this effect out when making inferences about the effects of the treatment arms.

Role model (T1): One-third of the target women were randomly assigned to the role model treatment. In this treatment arm, after receiving the informational leaflet, women watched a 15-minute inspirational video about how women in Odisha have successfully participated in MGNREGA asset selection. The video, produced for this project, featured four women from similar communities in the study districts who had been successful in demanding assets under the program and was screened by a trained facilitator using a portable pico projector. The facilitator paused the video at two pre-identified points to initiate a discussion with the participants. Facilitators were instructed to try to encourage discussion from all participants in the training as equally as possible and to redirect conversation if it veered off topic.

In addition to ideas that women raised organically while watching the film, facilitators guided a discussion on what barriers the role models depicted in the film faced in obtaining their assets and how they overcame those barriers. Women were encouraged to discuss whether

¹⁰We caveat that both treatment groups naturally received greater information and transparency over both formal and informal processes through which MGNREGA assets are selected: by watching women in the film who have been successful within the MGNREGA program in the state of Odisha at obtaining assets, participants acquired information about which types of assets can be obtained through the program and how the decision-making process around asset selection works. Thus, observed effects of the treatments could be attributable to greater information about the program in general rather than by enhanced aspirations and skills. Nonetheless, our provision of an informational leaflet to *all* study arms helps minimize (to the extent possible) the likely role information is playing in driving the effects of the treatments.

they had ever faced any of the same barriers, to discuss specific barriers they think they would face if they were to request MGNREGA assets, and to discuss potential strategies to overcome those barriers. After this discussion, women assigned to the role model treatment were given tea and snacks and released from the training.

Role model + training (T2): One-third of the target women were randomly assigned to the role model + training treatment. In this arm, after receiving the information leaflet and watching and discussing the role model video, facilitators additionally implemented a skills training curriculum called *Planning for Voice*. This enables us to test whether role model interventions must be accompanied by skills training to have the intended impacts. We developed this curriculum in consultation with our implementation partner and a local NGO with expertise in women’s empowerment within Odisha. In designing this custom curriculum, we aimed to meet three key goals: (1) that the training provide practical, hands-on experience with envisioning MGNREGA assets that might benefit women’s land, livelihoods, and/or communities; (2) that the training provide practice articulating demands for those assets; and (3) that the content be concise enough that women with high caregiving loads could reasonably fully engage and participate (approximately 1.5 additional hours beyond the role model video and discussion).

The training had three components. First, women engaged in a social mapping exercise, where the facilitator helped them draw the land surrounding their homes with key features like roads or paths, irrigation-related infrastructure, wells and ponds, and cultivated and fallow land. Women were instructed to focus on a small geographic area surrounding their homes and not on the village as a whole. The objective of the exercise was to help identify gaps that might exist, which MGNREGA assets might be useful in plugging those gaps, and where they should be constructed. Second, the training briefly introduced women to the idea of setting specific, measurable, actionable, relevant, and time-bound (SMART) goals in relation to participating in the MGNREGA asset selection process. For example, rather than a goal to have an asset someday, a SMART goal would lay out precisely which asset would be useful, when they might demand it, who they would approach to do so, and who else (like their husbands, other household members, SHGs, and/or neighbors) they might discuss their ideas with. Third, the training concluded by asking women to “role play” the process of requesting an asset. While one woman

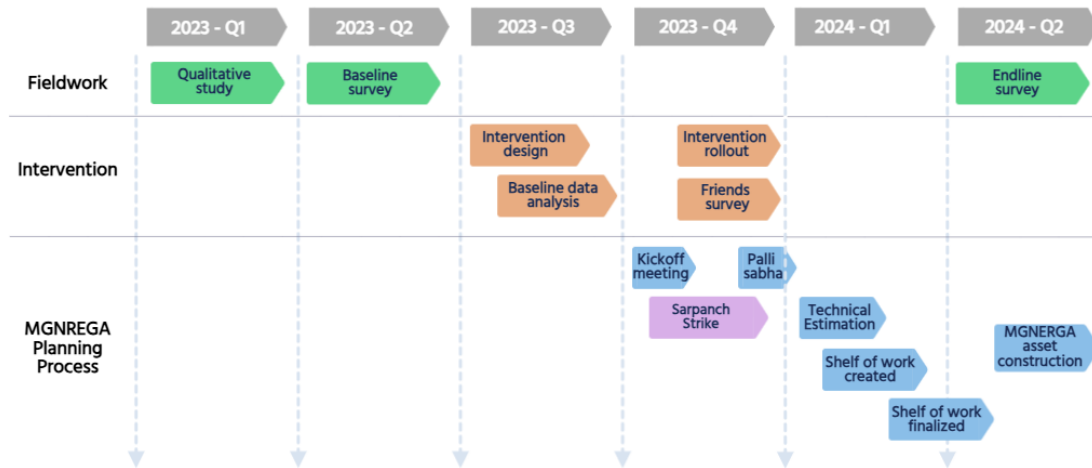
practiced playing herself, other women in the training took on other relevant roles, like the woman’s husband, her friends, and the village *sarpanch* or GRS. Those playing different roles were asked to think about how the person they were playing might respond to the woman’s request. Then the group worked together to strategize how the woman herself could anticipate this response and increase her odds of success (e.g., bringing friends with her to make the request). Rather than suggesting any one strategy, facilitators guided women in playing their assigned roles and asked key questions along the way.

We note two limitations of the study design. First, since all three treatment arms are selected from within the same village, there is a chance of spillovers from one treatment arm to another. We believe the risk of this is small. The relevant geographical unit is not the village but the revenue village where *palli sabha* meetings are held; on average, we had only 2–3 women per revenue village and the mode was 1. The advantage of this approach is that we are able to hold village-level functionaries and their characteristics constant across treatments. However, the reader should note that in the event that there are spillovers from T1 to placebo, or T2 to T1 or placebo, these would serve to bias our impact estimates downward. Second, as mentioned above, our study does not have a “pure control”—that is a group of women from within the same village that did not receive any interventions. This was dictated in part by budgetary considerations and in part by our desire to isolate the effects of role models and skills training.

2.4 Endline survey

We conducted our endline survey in March–April 2024, approximately five months after the intervention and when the planning process for the shelf of works of 2024/25 had formally ended. Our endline target sample was the 1,324 target women from baseline with whom we conducted the interventions, as well as the friend they invited who received the pre-treatment survey—a total of 2,648 target respondents. We were able to interview 2,596 women at endline—1,293 target women and 1,303 of their friends—for an attrition rate of 1.9 percent from the planned endline survey sample. Of the 52 women who could not be interviewed at endline, 35 belonged to households that could not be located due to permanent or temporary migration (19 target women, 16 friends), 19 women were from households that *were* located but the respondent herself was not (10 target women, 3 friends), and 4 were cases where the respondent did not

Figure 2: Project Timeline and MGNREGA Planning Process



Notes: This figure provides a stylized diagram of the project timeline.

grant consent (2 target women, 2 friends).

The endline survey collected data on women’s aspirations regarding MGNREGA assets, their plans and behaviors around demanding assets, their knowledge of the asset process, and both self-reported and external evaluations of confidence in and ability to speak out in public or articulate asset demands, among other information. Some of these outcomes were measured identically in our baseline survey—allowing us to utilize two rounds of data, at least when analyzing only target women (for whom we have a baseline survey)—while others were unique to endline.

Figure 2 provides an overall timeline of the project overlaid with the MGNREGA asset selection timeline described in Section 2.1.

3 Empirical strategy

3.1 Primary outcomes

Between the implementation of the treatments and the endline survey, women had the opportunity to participate in one MGNREGA asset planning cycle. At the time of treatment implementation, villages had just held the inaugural *gram sabha* on Gandhi Jayanti—October 2 each year—officially marking the launch of the MGNREGA asset planning process. Thus, in the months between treatment implementation and our endline survey, women could have taken

a number of actions to exercise voice and agency within the asset selection process, including planning with other household or SHG members which assets they might demand, meeting with the GRS to learn more about the process or discuss their ideas, attending a *palli sabha* to speak up about their own needs, to voice their opinions about the ideas raised by others, or just to listen to the overall discussions about the program. Whereas *gram sabhas* take place at the village level, in Odisha, *palli sabhas* at the revenue village level—a smaller unit than the village—also take place to feed into the village process.

Given the variety of actions that women can take to voice and exercise agency within the asset selection process, we look at six primary outcomes to measure specific actions a woman may have undertaken to increase her chances of getting an asset built. These are:

- Met and discussed MGNREGA assets with an SHG since the intervention: The respondent reports that individual or group-level demands for MGNREGA assets were discussed in SHG meetings the respondent attended since she participated in the intervention, i.e., since November 2023. This is missing if the respondent is not a member of an SHG.
- Met and discussed any issue with an MGNREGA functionary since the intervention: An indicator for the respondent meeting and discussing any issue with an MGNREGA functionary like the GRS, Technical Assistant, or Panchayat Executive Officer since the intervention.
- Any household member requested an asset since the intervention: An indicator for any member of the household (including the respondent) having proactively requested an asset under the MGNREGA program since the intervention. This variable captures both the possibility that women are getting involved directly in any asset requests made by the household or that other household members are handling asset requests. Only available at endline.
- Proactively requested MGNREGA asset since the intervention: An indicator for the female respondent having proactively requested an asset since the intervention, either individually or as part of a group. Only available at endline. As opposed to the former variable, which captures any asset request made by any household member (whether the woman was directly involved or not), this variable captures whether the woman reported being

directly involved in an MGNREGA asset request, either on behalf of her household or as a party of a group like her SHG.

- Attended ward or *palli sabha* meetings to discuss MGNREGA since the intervention: An indicator for the respondent having attended a ward meeting or the *palli sabha* to discuss the list of MGNREGA works since the intervention. Only available at endline.
- Spoke at *palli sabha* meeting since the intervention: An indicator for the respondent having spoken at the most recent *palli sabha* meeting attended since the intervention, coded as 0 if she did not attend any.

Even if women did not take any action in the months following the intervention, they may aspire to make asset claims in future planning cycles. We measure women's aspirations using five primary outcomes, each of which is only available at endline:

- Aspires to request an MGNREGA asset in coming year: An indicator for the respondent reporting that they are likely to request an asset within the next year, either by themselves or as part of a group. A response of "unable to say" is coded as 0.
- Aspires to make improvements to land or acquire assets: An index combining an indicator for the respondent saying they are very likely to pursue improvements to their land, home, or assets in the next year; an indicator for the respondent having identified a specific time period for doing so; and an indicator for the respondent having a clear idea of what improvements she would like to make. We include this since our treatments could raise women's aspirations about making improvements to their land or acquiring assets in a more generalized way regardless of whether they want to do so via the MGNREGA process. For each item in this index, "unable to say" and "don't know" are coded as 0.
- Has a plan to proactively request a MGNREGA asset: An additive index on the extent to which a respondent has a concrete plan to request an asset, composed of the respondent knowing who they plan to approach about the request, when they plan to approach them, and the type of asset they will request. For each item in this index, "unable to say" and "don't know" are coded as missing. This outcome maps directly to the portion of the skills training in which women worked on articulating specific, measurable, achievable, relevant, and time-bound (SMART) demands for assets.

- Identifies with a hypothetical woman who has voice and agency in MGNREGA asset selection: An indicator variable for the woman saying that she is either ‘somewhat like’ or ‘just like’ a hypothetical woman in a vignette who exercised voice and agency within the MGNREGA process. “Unable to say” is coded as 0.¹¹
- Aspires to influence community decision-making around MGNREGA asset selection: A variable that captures the extent to which the respondent aspires to influence the community MGNREGA decision-making process, measured on a scale of 1–10 using a picture of a 10-rung ladder.

Our primary outcomes of interest, therefore, pertain both to actions taken in the period since our intervention as well as aspirations for the following year.

3.2 Mechanisms

To identify mechanisms through which women might achieve improvements in the primary outcomes, we test various pre-specified pathways relating to information and skills (five indicators) and to social support and gender norms (two indicators). The indicators are as follows:

- MGNREGA asset knowledge score: A combination of four questions testing respondent knowledge of eligibility criteria for MGNREGA assets, normalized to a 100-point scale.¹²
- Comfort with speaking in public: The number of situations (out of seven total) where the respondent reports being either very or fairly comfortable speaking up in public.¹³

¹¹The statement was phrased as follows: “Neha attended a training on MGNREGA because she wanted to learn more about the MGNREGA. She found the video and discussion interesting. She convinced her family members and members of her SHG to support her application in the upcoming *palli sabha* meeting. How similar to Neha do you think you are?”, with responses of “I am just like her”, “I am somewhat like her”, “I am not much like her”, “I am not at all like her” and “Unable to say”.

¹²These questions ask about eligibility criteria for receiving assets, restrictions on which wards or groups can receive community assets, who can submit ideas for assets to be constructed under the program, and who to approach to demand an asset.

¹³These situations include contributing to community infrastructure decisions, voicing opinions in community meetings to leaders, addressing public service challenges with frontline workers, advocating for fair wages in public works, publicly protesting the behavior of authorities or elected officials, publicly protesting socially unacceptable behavior, and demanding access to entitlements in government schemes.

- Enumerator’s score of respondent’s ability to demand assets: The enumerator’s score of a ‘public speaking exercise’ within the endline survey, wherein respondents were asked to demonstrate how they might articulate their demand for an MGNREGA asset. Available only at endline.
- Friend’s assessment of improvements in the respondent since the intervention: An additive index of the respondent’s friend’s assessment of the extent to which the target woman benefited from the training in terms of knowledge of MGNREGA guidelines, awareness of how women have obtained assets, ability to identify asset ideas, and ability to express demands for assets in front of community leaders. Measured on a scale of 0–4. Available only at endline.
- Discussed MGNREGA asset ideas with others since the intervention: An index combining an indicator for the respondent having discussed the intervention and their plans to act upon it with the friends who accompanied them, an indicator for having discussed MGNREGA assets with their husband or other household members since training, and an indicator for having discussed MGNREGA asset ideas with anyone outside the household. Measured on a scale of 0–3. In all cases, “don’t know” is coded as 0. Available only at endline.
- Self-efficacy: The number of statements (out of four) where the respondent indicates a high degree of self-efficacy by either agreeing or strongly agreeing with the statement, reverse-coded as appropriate so that higher numbers indicate greater self-efficacy.¹⁴
- Index of agreement with gender-progressive statements: The number of statements (out of eight) where the respondent agreed with the more gender-progressive interpretation of the statement, reverse-coded as appropriate so that higher numbers indicate more progressive gender perceptions.¹⁵

¹⁴These statements pertain to certainty in accomplishing difficult tasks, achieving pre-set goals, overcoming many challenges, and ability to do most tasks well relative to others.

¹⁵The statements include “Male gram saathis are more capable of understanding and completing their tasks than female gram saathis”, “It is better for the development of the village if important development decisions are taken by the men”, “Women should be free to leave the house unaccompanied by men”, “Within the household, men should take women’s preferences into account when making decisions about agriculture or livelihoods”, “Women should not speak out in public” and so on.

Our pre-analysis plan additionally specifies that we will look at potential impacts of the treatment on women’s trust and satisfaction in the asset selection process, as well as potential spillover effects of the treatment on women’s knowledge about how to gain work under MGNREGA and how to receive entitlements from other programs. Future versions of this work will also explore pre-specified heterogeneous effects by the respondent woman’s age, group membership, and prior engagement with the program, and by her perception of the extent to which local elites dominate village affairs.

3.3 Ex-ante power calculations

We used our baseline data to estimate the ex-ante minimum detectable difference for the primary and key secondary outcomes that we collected at baseline: MGNREGA assets were discussed at SHG meetings; met and discussed any issue with an MGNREGA functionary; the respondent proactively requested an asset, the respondent participated in a *palli sabha* where MGNREGA works were discussed; the MGNREGA asset knowledge score; the score on comfort in public speaking; the score on self-efficacy; and the score on gender perceptions.

We used STATA’s inbuilt routines *power twoproportions* for binary and *power twomeans* for continuous outcomes. Assuming a sample size of 1,400 with 933 women in each arm, a cluster size of 1, a 2:1 ratio of treatment to placebo, significance level (alpha) of 0.05, and power 0.8, we are able to detect a change of 25.3–58.8 percent of the placebo arm mean for the binary primary outcomes and 0.16 standard deviations (SD) in the continuous secondary outcomes. With power 0.9, we are able to detect a change of 29.4–68.7 percent of the placebo arm mean for the binary primary outcomes and 0.18 SD in the continuous secondary outcomes. Other parameters unchanged, assuming a sample size of 2,800, a cluster size of 2, and with power 0.9 we are able to detect a change of 28–77 percent of the placebo arm mean for the binary primary outcomes and 0.13–0.18 SD in the continuous secondary outcomes.

3.4 Econometric specification

We analyze the impact of our treatments on outcomes of interest, Y_{igt} , using an ANCOVA specification as follows:

$$Y_{igt} = \beta_0 + \beta_1 T1_{ig} + \beta_2 T2_{ig} + \beta_3 Y_{ig,t-1} + \delta_g + F_{ig} + X_{igt} + \epsilon_{ig} \quad (1)$$

where i indexes women, g indexes GPs, and t indexes time ($t - 1$ is pre-treatment, t is endline). $T1$ is an indicator for assignment to the role model treatment. Of central interest to us is $T2$ —an indicator for assignment to the role model + training treatment. The effects of each treatment are relative to the placebo arm. F is an indicator for being a friend of the target woman, as opposed to the target woman herself. X_{igt} is a vector of control variables. As we stratify on GP, we include GP fixed effects.

Our main specification includes all women (target women plus friends), as pre-specified, and we cluster standard errors at the level of the target woman–friend pair given treatment was assigned at this level. Secondary specifications include only target women or only friends. We also estimate a specification that interacts the treatment indicators with the indicator F to test if we can reject the null hypothesis that the effects of our treatments on outcomes of interest are the same for target women and their friends.

We lack baseline data for some of our outcomes for all women, and for other outcomes, we have baseline data only for target women but not their friends. Where we have a baseline value of an outcome, we control for it.

In our primary specification, our vector of control variables X_{igt} includes only strata fixed effects. However, to increase precision we also estimate specifications which include a vector of the pre-treatment values of several control variables. These include the respondent’s age, marital status, a vector of occupation dummies, household head caste dummies, household head religion dummies, an indicator for someone in the household having migrated in the year prior to the baseline survey, and the number of acres of agricultural land owned.

3.5 Mitigating false positives

Our paper outlines five classes of outcomes: women’s plans and behaviors related to MGN-REGA asset demands (primary); women’s aspirations (primary); pathways to achieving pri-

mary outcomes (secondary); potential unintended consequences of the treatments (secondary); and potential spillover effects. We correct for multiple hypothesis testing (MHT) within each class of outcomes separately, controlling the false discovery rate following [Anderson \(2008\)](#). As our central interest is in the role model + training treatment, we group the conventionally calculated p-values for this treatment together and analyze these separately from those of the role model treatment, T1. We primarily analyze T1 to confirm that providing role models alone is insufficient; the MHT calculations on the p-values from T1 serve as a check on this assumption.

3.6 Summary statistics and experimental validity

Table 1 presents baseline characteristics for the pooled set of women (target women and friends) by treatment arm. Overall, the randomization appears to have worked well. We see some significant differences across arms in respondent age, religion, household size, and whether a household member migrated in the year prior to the survey, but these are generally small in magnitude. Women are well-balanced on education, occupation dummies, caste, and the total agricultural land their household owns. Appendix Tables [A.1](#) and [A.2](#) present the baseline characteristics across arms for the target women and friends samples, respectively. We see few differences across treatment arms for these two sub-samples of women, with good balance on most observable characteristics. We do, however, see several differences between target women and friends: friends are typically younger, more educated, more likely to be married, and less likely to be housewives; they also have larger households on average and are more likely to have had at least one household member migrate in the previous year.

Our primary analysis includes a dummy variable indicating whether the individual is a target woman or a friend to improve efficiency; we additionally pre-specified models including covariate adjustments as a secondary analysis, which will be included in future versions.

4 Impact of role models and skills training interventions

We analyze a number of outcomes in the following sub-sections: those related to women’s voice and agency in the most recent MGNREGA asset planning cycle; women’s aspirations for future asset planning cycles; and potential causal pathways. Unless otherwise noted, we estimate the model specified in Section [3.4](#), and each column in our tables represents a separate

Table 1: Baseline characteristics of the pooled women across arms

Respondents	Mean/Proportion (SD)			Pairwise t-test		
	Placebo (P) (N=859)	Treatment 1 (T1) (N=887)	Treatment 2 (T2) (N=850)	P vs T1	P vs T2	T1 vs T2
Age (years)	42.532 (11.429)	41.448 (11.756)	42.128 (12.180)	-1.084*	-0.404	-0.681
Education (years)	3.042 (3.973)	3.087 (4.000)	2.989 (3.923)	0.045	-0.052	0.097
Married	0.884 (0.321)	0.892 (0.311)	0.882 (0.322)	0.008	-0.001	0.009
Housewife	0.217 (0.412)	0.221 (0.415)	0.199 (0.399)	0.004	-0.018	0.022
Non-ag day laborer	0.281 (0.450)	0.280 (0.449)	0.300 (0.459)	-0.001	0.019	-0.020
<i>Caste</i>						
General	0.073 (0.261)	0.055 (0.229)	0.067 (0.250)	-0.018	-0.006	-0.012
Scheduled Caste	0.183 (0.387)	0.207 (0.406)	0.179 (0.383)	0.025	-0.004	0.029
Scheduled Tribe	0.438 (0.496)	0.418 (0.494)	0.418 (0.493)	-0.019	-0.020	0.001
Other Backward Caste	0.306 (0.461)	0.319 (0.466)	0.334 (0.472)	0.013	0.028	-0.015
<i>Religion</i>						
Hindu	0.986 (0.117)	0.981 (0.137)	0.989 (0.102)	-0.005	0.003	-0.009
Muslim	0.001 (0.034)	0.001 (0.034)	0.002 (0.048)	-0.000	0.001	-0.001
Christian	0.002 (0.048)	0.008 (0.089)	0.005 (0.068)	0.006	0.002	0.003
Sarna	0.010 (0.102)	0.010 (0.100)	0.004 (0.059)	-0.000	-0.007*	0.007*
Household size	4.343 (1.743)	4.538 (1.718)	4.352 (1.715)	0.194**	0.008	0.186**
Household member mi- grated in last year	0.154 (0.362)	0.177 (0.382)	0.138 (0.345)	0.022	-0.017	0.039**
Agricultural land owned (in acres)	1.250 (1.777)	1.211 (2.888)	1.423 (3.548)	-0.039	0.173	-0.211

Source: Authors' calculations based on study data. Respondents in each arm of the experiment received an NREGA information leaflet. In the placebo arm, participants watched a 15-minute general information video. Treatment 1 respondents watched only a role model video, while Treatment 2 respondents watched a role model video and participated in a two-hour skills training session. * $p \leq 0.1$, ** $p \leq 0.05$, *** $p \leq 0.01$

ordinary least squares (OLS) model of the respective outcome on the treatments, with standard errors clustered by woman–friend pair. In all columns of our main tables, the sample includes both target women and friends—though we present appendix tables separately analyzing each sub-sample. We present p-values for our coefficient estimates (in parentheses), which we use to interpret the results of the study, but additionally share sharpened-q-values from correcting for multiple hypothesis testing as described in Section 3.5 (in brackets). While we rely primarily on our p-values, we subsequently discuss the q-values and their implications for our conclusions. The last row of each table provides the p-value of the difference between the impacts of the role model treatment alone and the impacts of the role model + training treatment.

4.1 Voice and agency in recent asset planning cycle

We first look at the set of actions that women may have taken in the most recent asset planning cycle to exercise their voice and agency, reported in Table 2. The role model treatment does not have a significant impact on any of the outcomes, but offering the role model + training treatment increases the likelihood that the respondent proactively requests an asset either individually or as part of a group by 4.6 percentage points (a 16.6 percent increase relative to the placebo arm mean, $p < 0.05$). We also see a positive impact of the role model + training treatment on any household member having requested an MGNREGA asset since intervention, though this is just short of significance at conventional levels. However, despite broadly positive impacts of both treatments for the other outcomes in this table, these are far from significant at conventional levels. Since we find that women are more likely to request assets yet not significantly more likely to engage in any specific claim-making channel captured by our pre-specified outcomes, it is plausible that women are engaging in different claim-making pathways depending on their own comfort, networks, and expectations of success given their local context.

Table 2: Treatment effects on women’s plans and behaviors around MGNREGA asset demands, pooled sample

	Met and discussed MGNREGA assets with SHG since intervention	Met and discussed MGNREGA assets with functionary [#] since intervention	Any household member requested MGNREGA asset since intervention	Proactively requested MGNREGA asset since intervention	Attended ward or <i>palli sabha</i> to discuss MGNREGA assets since intervention	Spoke at <i>palli sabha</i> meeting since intervention
	(1)	(2)	(3)	(4)	(5)	(6)
Role model	-0.002 (0.019) [1.00]	0 (0.022) [1.00]	0.017 (0.021) [1.00]	0.029 (0.02) [1.00]	0.022 (0.022) [1.00]	0.011 (0.019) [1.00]
Role model + training	0.013 (0.02) [0.527]	0.029 (0.022) [0.418]	0.035 (0.022) [0.388]	0.046** (0.021) [0.188]	0.024 (0.023) [0.418]	0.02 (0.02) [0.418]
Difference (p-value)	0.454	0.164	0.44	0.419	0.963	0.635
Placebo arm mean	0.24	0.258	0.331	0.277	0.451	0.208

Source: Authors’ calculations based on study data. Note: [#]MGNREGA functionaries include the Gram Rozgar Sewak (GRS), the Panchayat Executive Officer (PEO), the Technical Assistant (TA) etc. Each column represents a separate OLS regression of the outcome on the two treatment arms for the pooled sample of target women and their friends. “Role model” indicates treatment T1 where respondents watch and discuss a film about women in Odisha who successfully demanded assets. “Role model + training” indicates treatment T2 where respondents watch and discuss the same video and also receive a two-hour skills training on identifying social needs, articulating demands and engaging in role-play. We stratify at the level of the Gram Panchayat. Conventional standard errors in parentheses are clustered at the women-friend pair. Standard errors are reported in () and sharpened q-values are reported in []. * $p \leq 0.1$, ** $p \leq 0.05$, *** $p \leq 0.01$.

We see interesting differences between target women and their friends for these outcomes (Appendix Table A.3). The role model + training treatment had a statistically significant impact on several outcomes for the target women: on whether they met and discussed MGNREGA assets with a functionary since the intervention (7.2 percentage points more likely, a 31.3 percent increase relative to the placebo mean, $p < 0.05$) and on whether they attended the ward or *palli sabhas* to discuss MGNREGA assets (a 6.1 percentage point increase or a 13.6 percent increase relative to the placebo mean, $p < 0.05$). We do not see any statistically significant impacts on these outcomes for friends. Panel C shows that the differential impacts of the role model + training treatment on target women versus friends are indeed significant for two outcomes—meeting and discussing MGNREGA assets with functionaries and attending meetings since the intervention. In both cases, the impacts are stronger for target women. As friends of target women may in general be women who often help and advise the target women, it may be that they are relatively highly knowledgeable already and thus less likely to benefit from the trainings.

4.2 Aspirations for future asset planning cycles

Next, Table 3 presents the results for the primary outcomes related to women’s aspirations around assets. Relative to the placebo arm, the role model treatment (T1) does not have a statistically significant impact on any of the aspirations-related outcomes. However, the combination of role model exposure and training (T2) has a statistically significant and positive impact: it leads to a 3.2 percentage point increase in the likelihood that the respondent woman aspires to request an asset within the next year, either by herself or as part of a group (a 23 percent increase relative to the placebo arm mean, $p < 0.1$), and a 4.3 percentage point increase in the likelihood that the respondent reports she is either ‘somewhat like’ or ‘just like’ a hypothetical woman in a vignette who exercised voice and agency within the MGNREGA asset selection process (a 6.9 percent increase relative to the placebo arm mean, $p < 0.1$). The difference in coefficients between the role model and role model + training treatments is significant at the 0.10 level for the outcome of the respondent aspiring to request an MGNREGA asset in the coming year, though not for any other outcome. On other outcomes, we see little significant impact of either treatment. While there is a positive relationship between receiving

the role model + training treatment (T2) and aspiring to make improvements to land or acquire assets, this relationship is just short of significance at conventional levels. Further, treated women are no more likely to have a plan to proactively request a MGNREGA asset or aspire to influence community decision-making around MGNREGA asset selection. Thus, we see mixed results on this set of outcomes, with some indication that receiving the role model + training treatment could improve aspirations along some domains.

Table 3: Treatment effects on women’s aspirations, pooled sample

	Aspires to request an MGNREGA asset in coming year	Aspires to make improvements to land or acquire assets	Has a plan to proactively request an MGNREGA asset	Identifies with hypothetical woman who has voice and agency in MGNREGA asset selection	Aspires to influence community decision-making around MGNREGA asset selection
	(1)	(2)	(3)	(4)	(5)
Role model	0.000 (0.017) [1.00]	0.038 (0.035) [1.00]	0.012 (0.017) [1.00]	0.02 (0.021) [1.00]	-0.153 (0.108) [1.00]
Role model + training	0.032* (0.018) [0.214]	0.053 (0.036) [0.214]	-0.007 (0.02) [0.397]	0.043* (0.022) [0.214]	-0.113 (0.11) [0.297]
Difference (p-value)	0.079	0.659	0.376	0.297	0.631
Placebo arm mean	0.139	0.173	2.924	0.624	6.012

Source: Authors’ calculations based on study data. Note: Each column represents a separate OLS regression of the outcome on the two treatment arms for the pooled sample of target women and their friends. “Role model” indicates treatment T1 where respondents watch and discuss a film about women in Odisha who successfully demanded assets. “Role model + training” indicates treatment T2 where respondents watch and discuss the same video and also receive a two-hour skills training on identifying social needs, articulating demands and engaging in role-play. We stratify at the level of the Gram Panchayat. Conventional standard errors in parentheses are clustered at the women-friend pair. Standard errors are reported in () and sharpened q-values are reported in []. * $p \leq 0.1$, ** $p \leq 0.05$, *** $p \leq 0.01$.

Appendix Table A.4 reports our secondary specifications analyzing the same set of outcomes separately for target women and their friends. Few of our results are statistically significant, though this is likely a result of reduced power, given that these are smaller samples. Specifically, we find that the role model only treatment had a significant and positive impact on whether the target women identified with a hypothetical woman who has voice and agency in MGNREGA asset selection as well as a significant and negative impact on the likelihood of the friends aspiring to influence community decision-making around MGNREGA asset selection. We identify statistically significantly different impacts on target women compared to friends for only one of the five outcomes listed in this table, namely the indicator for identifying with a hypothetical woman who has voice and agency in the planning process, where, again, impacts are larger for target women.

Overall, the analysis of our primary outcomes suggests that it is the combination of the role model treatment with the practical skills training that is driving the bulk of the impacts. The role model + training treatment has stronger impacts on target women’s plans and behaviors around MGNREGA assets. As noted above, target women are quite different from their friends in ways that could explain this—for example, the friends are younger and more likely to be employed, which means they might not have the time to attend *palli sabha* and ward meetings, or might defer to older women in the discussions even when they do attend. We do flag, however, that our q-values which reflect our adjustments for multiple hypothesis testing reveal lower significance levels than do our conventional p-values. In nearly all regressions, the q-values exceed conventional significance thresholds. However, the intervention’s effects align with our theory of change, and we identify compelling pathways through which the training influenced the observed outcomes.

4.3 Pathways

We next consider the three sets of potential mechanisms or pathways outlined in Section 3.2. Table 4 presents the results for outcomes relating to skills and information (knowledge around assets as well as the confidence and ability to articulate demands) and to social support and gender norms. As before, the role model treatment does not have significant impacts on any of these outcomes. The role model + training treatment, however, has a positive impact on

both externally and self-reported measures of the respondent’s ability to articulate demands. We see a positive impact of the role model + training treatment on the enumerator’s score of the respondent’s ability to demand assets of 0.028 points (3.2 percent relative to placebo mean, $p < 0.1$), and on the friend’s assessment of improvements in the respondent since the intervention of 0.094 points (6.0 percent increase relative to the placebo mean, $p < 0.1$). Interestingly, the respondent’s own assessment of their self-efficacy also improves by 0.136 points as a result of the role model + training treatment (a 4.5 percent increase relative to the placebo mean, $p < 0.05$). We do not see increases in the MGNREGA asset knowledge score, which may not be surprising given all study arms received an information leaflet conveying this information (though the average knowledge score of 49.48 in the placebo arm indicates room for improvement on this front). We don’t see impacts on self-reported comfort in public speaking or on the likelihood of the respondent having discussed a MGNREGA asset idea with others. We also do not see any impact of either treatment on the gender norms index, though it is perhaps not surprising that a light-touch intervention focused mostly on specific knowledge of how to raise voice and agency in a particular forum would not shift gender norms more broadly.

Once again, the pooled sample masks interesting differences between target women and their friends for these pathways outcomes (Table A.5). The impacts of the role model + training treatment on self-efficacy come from both types of women, but the impacts on the enumerator’s score of the respondent’s ability to articulate a demand are driven by friends, while impacts on the respondent having discussed their MGNREGA asset idea with someone since the intervention come only from the target women. Interestingly, and somewhat surprisingly, the role model treatment positively impacts the MGNREGA asset knowledge score for target women only, while negatively affecting the friends’ score on the gender norms index. It is not clear why this would be so. There are significant differential impacts between target women and their friends of the role model only treatment on self-reported comfort in public speaking, whether they discussed the MGNREGA idea with others, and on the gender norms index; in each case the impacts are consistently larger for target women than friends.

Table 4: Treatment effects on indicators for pathways to achieving primary outcomes, pooled sample

	MGNREGA asset knowledge score	Number of situations in which feels comfortable speaking in public #	Enumerator's score of respondent's ability to demand assets	Friend's assessment of improvements in respondent since intervention (out of 4 dimensions)	Self-efficacy	Discuss MGNREGA asset idea with others	Gender norms index
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Role model	1.611 (1.230) [0.886]	-0.122 (0.133) [0.886]	0.020 (0.014) [0.886]	0.022 (0.053) [0.905]	0.069 (0.054) [0.886]	0.013 (0.041) [0.905]	-0.018 (0.083) [0.905]
Role model + training	1.499 (1.238) [0.235]	-0.110 (0.136) [0.385]	0.028* (0.015) [0.195]	0.094* (0.054) [0.195]	0.136** (0.055) [0.102]	0.051 (0.041) [0.235]	-0.015 (0.084) [0.463]
Difference (p-value)	0.977	0.935	0.424	0.162	0.154	0.326	0.899
Placebo arm mean	49.476	4.114	0.879	1.572	3.020	1.801	4.997

Source: Authors' calculations based on study data. Note: #Includes 7 situations in which respondent is comfortable speaking in public to share opinions, discussing challenges in public service delivery, demanding entitlements under government programs, and so on. Enumerator's score was done during an exercise asking respondents to demonstrate how they might articulate their demand for an MGNREGA asset. Friend's assessment of improvements in the respondent considers the extent to which the target woman benefited from the training in terms of knowledge of MGNREGA guidelines, awareness of how women have obtained assets, ability to identify asset ideas, and ability to express demands for assets. Each column represents a separate OLS regression of the outcome on the two treatment arms for the pooled sample of target women and their friends. "Role model" indicates treatment T1 where respondents watch and discuss a film about women in Odisha who successfully demanded assets. "Role model + training" indicates treatment T2 where respondents watch and discuss the same video and also receive a two-hour skills training on identifying social needs, articulating demands and engaging in role-play. We stratify at the level of the Gram Panchayat. Conventional standard errors in parentheses are clustered at the women-friend pair. Standard errors are reported in () and sharpened q-values are reported in []. * $p \leq 0.1$, ** $p \leq 0.05$, *** $p \leq 0.01$.

5 Discussion and conclusion

We report the impacts of a set of interventions that exposed rural Indian women to relatable female role models and combined this exposure with a skills training that equipped women to plan for, frame, and articulate their demands for assets within the large national workfare scheme, MGNREGA. In rural communities in India, light-touch, role model based aspirational interventions might only go so far unless combined with practical skills-based trainings that build women’s capacities to turn their aspirations into reality. This is particularly true for asset-related demands within MGNREGA, which are intended, at least on paper, to be community-driven and democratically deliberated on in the village-level meetings or the *gram sabhas*. Not only are women in India typically underrepresented in positions of influence within local decision-making bodies, they are disadvantaged in their access to information, the quality of their social networks, their mobility, and their comfort in speaking up in public to demand their rights, resulting in lower access than men even to more informal claim-making pathways.

We conducted our field experiment in 94 villages of the eastern coastal state of Odisha, a state with a recent history of targeting women through its government schemes, including supporting women’s SHGs in acquiring use and management rights over select MGNREGA assets. Women enrolled in our study were randomly assigned to one of three arms—placebo, role model, and role model + training. To rule out the possibility of differences in information about the program across arms, all arms were provided with an information leaflet that gave them basic information about the asset selection process under MGNREGA. In addition to the leaflet, the placebo arm watched and discussed a video unrelated to our intervention, while the other two arms watched a video of equal length designed for this study that showcased the stories of women in the same districts in Odisha who had successfully demanded assets under MGNREGA. Finally, the role model + training arm received a facilitated 1.5-hour training on mapping individual and community needs for assets, framing demands, and role-playing articulating those demands to members of their household or SHG and to relevant local officials. The interventions were provided in a group setting, with target women invited to bring three to five of their friends with whom they felt comfortable. We interviewed the target women at baseline and endline, and one friend of each target woman pre-intervention and at endline. Our pooled sample consisted of slightly more than 2,600 women, equally split between target women

and their friends.

As hypothesized, the role model treatment alone had limited impacts on women’s plans and behavior around discussing and requesting these assets, their aspirations regarding MGNREGA assets, or indicators along key pathways to acquiring assets, such as skills and information or those relating to social norms. However, combining the role model treatment with the skills training did have large, positive, and significant impacts on several of these outcomes. Most notably, the outcomes relating to plans and behaviors and pathways that were closely related to the content of the skills training saw significant impacts, such as whether the respondent proactively requested an MGNREGA asset, external (enumerator and friend) reports of their knowledge and abilities, and the respondent’s self-reported self-efficacy. For example, the role model and skills training combined led to a 17% increase in the likelihood that women had proactively requested an MGNREGA asset since the intervention. We see some differences between target women and their friends, with several effects being stronger for the target women, who are older, less likely to be employed, and have a greater engagement with the MGNREGA program.

What do our results mean for programs that aim to improve women’s voice and agency in accessing and demanding their entitlements? Simply raising awareness and aspirations is likely to be insufficient to change tangible outcomes, unless women are also given practical hands-on skills training. That our short, one-time, and relatively light-touch intervention could yield these impacts almost six months later is encouraging and suggests potentially large returns to more regular and consistent engagement with women. In addition, our interventions have the potential for scale: not only are the materials we used (the leaflet, video, and public speaking training) all publicly available and ready for use, the modality we employed—delivering trainings to groups of women who have pre-existing social ties—is one that can be leveraged easily to reach large numbers of women and their households. According to the National Rural Livelihoods Mission, the flagship program of the Ministry of Rural Development that aims to form and strengthen women’s SHGs to improve livelihoods, there are currently 542,510 SHGs in Odisha with 5,451,413 members in total. Assuming each member belongs to a household with at least two adult members who can avail the benefits of MGNREGA, the potential for scaling up these impacts is impressive.

But is a demand-side driven intervention sufficient? In the context of rural India, local institutions are subject to elite capture, and public service delivery may only be targeted to certain sections of the community. Challenging these entrenched power dynamics is complex, and demand-side interventions that do not also aim to transform these norms may fall short of their promise. In future work, we will investigate whether impacts differ by whether the respondent perceives that village affairs are dominated by local elites. Raising aspirations and strengthening the capacity to act upon those aspirations is important—but effects might be especially strong only in those settings where women have the scope and opportunity to do so.

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Online Appendix:

*Can Role Models and Skills Training Increase
Women's Voice in Asset Selection? Experimental
Evidence from Odisha, India*

A Appendix

Table A.1: Baseline characteristics of target women across arms

Respondents	Mean/Proportion (SD)			Pairwise t-test		
	Placebo (P) (N=431)	Treatment 1 (T1) (N=439)	Treatment 2 (T2) (N=423)	P vs T1	P vs T2	T1 vs T2
Age (years)	43.977 (12.584)	43.077 (13.269)	43.799 (13.526)	-0.899	-0.178	-0.722
Education (years)	2.68 (3.931)	3.007 (4.123)	2.579 (3.736)	0.327	-0.101	0.428
Married	0.826 (0.380)	0.856 (0.351)	0.816 (0.388)	0.031	-0.010	0.041
Housewife	0.290 (0.454)	0.298 (0.458)	0.262 (0.440)	0.008	-0.028	0.036
Non-ag day laborer	0.311 (0.463)	0.321 (0.467)	0.359 (0.480)	0.010	0.048	-0.038
<i>Caste</i>						
General	0.070 (0.255)	0.050 (0.218)	0.057 (0.232)	-0.019	-0.013	-0.007
Scheduled Caste	0.155 (0.363)	0.196 (0.397)	0.154 (0.361)	0.040	-0.002	0.042
Scheduled Tribe	0.455 (0.499)	0.412 (0.493)	0.437 (0.497)	-0.042	-0.017	-0.025
Other Backward Caste	0.320 (0.467)	0.342 (0.475)	0.350 (0.477)	0.022	0.030	-0.008
<i>Religion</i>						
Hindu	0.979 (0.143)	0.973 (0.163)	0.993 (0.084)	-0.006	0.014*	-0.020**
Muslim	0.000 (0.000)	0.002 (0.048)	0.002 (0.049)	0.002	0.002	-0.000
Christian	0.005 (0.068)	0.014 (0.116)	0.002 (0.049)	0.009	-0.002	0.011*
Sarna	0.016 (0.127)	0.011 (0.106)	0.002 (0.049)	-0.005	-0.014**	0.009
Household size	4.086 (1.632)	4.431 (1.673)	4.262 (1.755)	0.345***	0.177	0.168
Household member mi- grated in last year	0.100 (0.300)	0.141 (0.349)	0.130 (0.337)	0.041*	0.030	0.011
Agricultural land owned (in acres)	1.262 (1.986)	1.346 (3.873)	1.692 (4.789)	0.084	0.430*	-0.346

Source: Authors' calculations based on study data. Respondents in each arm of the experiment received an NREGA information leaflet. In the placebo arm, participants watched a 15-minute general information video. Treatment 1 respondents watched only a role model video, while Treatment 2 respondents watched a role model video and participated in a two-hour skills training session. * $p \leq 0.1$, ** $p \leq 0.05$, *** $p \leq 0.01$

Table A.2: Baseline characteristics of target women's friend across arms

Respondents	Mean/Proportion (SD)			Pairwise t-test		
	Placebo (P) (N=428)	Treatment 1 (T1) (N=448)	Treatment 2 (T2) (N=427)	P vs T1	P vs T2	T1 vs T2
Age (years)	41.077 (9.939)	39.850 (9.810)	40.473 (10.436)	-1.227*	-0.604	-0.623
Education (years)	3.407 (3.986)	3.165 (3.879)	3.396 (4.063)	-0.241	-0.011	-0.231
Married	0.942 (0.235)	0.926 (0.262)	0.948 (0.221)	-0.015	0.007	-0.022
Housewife	0.143 (0.350)	0.145 (0.353)	0.136 (0.343)	0.003	-0.007	0.009
Non-ag day laborer	0.250 (0.434)	0.239 (0.427)	0.241 (0.428)	-0.011	-0.009	-0.002
<i>Caste</i>						
General	0.077 (0.267)	0.060 (0.238)	0.077 (0.267)	-0.017	0.000	-0.017
Scheduled Caste	0.210 (0.408)	0.219 (0.414)	0.204 (0.403)	0.008	-0.007	0.015
Scheduled Tribe	0.421 (0.494)	0.424 (0.495)	0.398 (0.490)	0.004	-0.022	0.026
Other Backward Caste	0.292 (0.455)	0.297 (0.457)	0.319 (0.466)	0.005	0.026	-0.022
<i>Religion</i>						
Hindu	0.993 (0.084)	0.989 (0.105)	0.986 (0.118)	-0.004	-0.007	0.003
Muslim	0.002 (0.048)	0.000 (0.000)	0.002 (0.048)	-0.002	0.000	-0.002
Christian	0.000 (0.000)	0.002 (0.047)	0.007 (0.084)	0.002	0.007*	-0.005
Sarna	0.005 (0.068)	0.009 (0.094)	0.005 (0.068)	0.004	0.000	0.004
Household size	4.603 (1.812)	4.643 (1.756)	4.440 (1.672)	0.040	-0.163	0.203*
Household member mi- grated in last year	0.210 (0.408)	0.212 (0.409)	0.145 (0.353)	0.002	-0.065**	0.067***
Agricultural land owned (in acres)	1.238 (1.540)	1.079 (1.344)	1.156 (1.493)	-0.159	-0.082	-0.077

Source: Authors' calculations based on study data. Respondents in each arm of the experiment received an NREGA information leaflet. In the placebo arm, participants watched a 15-minute general information video. Treatment 1 respondents watched only a role model video, while Treatment 2 respondents watched a role model video and participated in a two-hour skills training session. * $p \leq 0.1$, ** $p \leq 0.05$, *** $p \leq 0.01$

Table A.3: Treatment effects on women’s plans and behaviors around MGNREGA asset demands, target women and friends

	Met and dis- cussed MGN- REGA assets with SHG since intervention	Met and discussed MGNREGA assets with func- tionary since intervention*	Any household member requested MGNREGA asset since intervention	Proactively re- quested MGN- REGA asset since interven- tion	Attended ward or <i>palli sabha</i> to discuss MGN- REGA assets since interven- tion	Spoke at <i>palli sabha</i> meeting since inter- vention
	(1)	(2)	(3)	(4)	(5)	(6)
Panel A. Target Women (N=1,293)						
Role model	0.008 (0.024)	0.010 (0.026)	0.017 (0.027)	0.035 (0.027)	0.018 (0.028)	0.016 (0.023)
Role model + training	0.034 (0.030)	0.072** (0.033)	0.022 (0.031)	0.045 (0.030)	0.061** (0.029)	0.041 (0.027)
Difference (p-value)	0.383	0.032	0.902	0.865	0.164	0.462
Placebo arm mean	0.209	0.230	0.348	0.290	0.448	0.206
Panel B. Friends (N=1,303)						
Role model	-0.005 (0.025)	-0.006 (0.035)	0.017 (0.031)	0.018 (0.029)	0.028 (0.027)	0.004 (0.023)
Role model + training	-0.008 (0.028)	-0.010 (0.032)	0.045 (0.030)	0.048 (0.030)	-0.010 (0.033)	0.004 (0.026)
Difference (p-value)	0.784	0.898	0.390	0.402	0.233	0.815
Placebo arm mean	0.271	0.287	0.313	0.264	0.453	0.210
Panel C. Target women vs Friends						
Friend × Role model	-0.014 (0.033)	-0.023 (0.039)	-0.009 (0.033)	-0.022 (0.031)	0.017 (0.035)	-0.013 (0.029)
Friend × Role model + training	-0.039 (0.034)	-0.082** (0.040)	0.019 (0.034)	0.000 (0.033)	-0.075** (0.036)	-0.036 (0.031)
<i>Lagged value in baseline</i>						
Target women	Yes	Yes	No	No	No	Yes
Friend	Yes	Yes	No	No	No	Yes

Source: Authors’ calculations based on study data. We stratify at the level of the Gram Panchayat. Conventional standard errors in parentheses. * $p \leq 0.1$, ** $p \leq 0.05$, *** $p \leq 0.01$. See note to Table 2 for more details.

Table A.4: Treatment effects on women's aspirations, target women and friends

	Aspires to request an MGNREGA asset in coming year	Aspires to make improvements to land or acquire assets	Has a plan to proactively request an MGN-REGA asset	Identifies with hypothetical woman who has voice and agency in MGN-REGA asset selection	Aspires to influence community decision-making around MGN-REGA assets selection
	(1)	(2)	(3)	(4)	(5)
Panel A. Target Women (N=1,293)					
Role model	-0.024 (0.022)	0.002 (0.049)	0.023 (0.027)	0.060** (0.029)	-0.061 (0.139)
Role model + training	0.032 (0.024)	0.038 (0.052)	0.002 (0.028)	0.042 (0.029)	-0.130 (0.143)
Difference (p-value)	0.017	0.453	0.534	0.554	0.678
Placebo arm mean	0.135	0.195	2.905	0.626	6.137
Panel B. Friends (N=1,303)					
Role model	0.023 (0.024)	0.074 (0.047)	0.002 (0.021)	-0.020 (0.030)	-0.242* (0.141)
Role model + training	0.032 (0.025)	0.068 (0.048)	-0.016 (0.023)	0.043 (0.031)	-0.096 (0.147)
Difference (p-value)	0.845	0.932	0.477	0.034	0.280
Placebo arm mean	0.143	0.152	2.944	0.621	5.886
Panel C. Target women vs Friends					
Friend × Role model	0.047 (0.031)	0.069 (0.065)	-0.021 (0.033)	-0.076* (0.041)	-0.154 (0.178)
Friend × Role model + training	-0.001 (0.033)	0.025 (0.069)	-0.024 (0.035)	0.002 (0.041)	0.039 (0.189)
<i>Lagged value in baseline</i>					
Target women	No	No	No	No	No
Friend	No	No	No	No	No

Source: Authors' calculations based on study data. We stratify at the level of the Gram Panchayat. Conventional standard errors in parentheses. $*p \leq 0.1$, $**p \leq 0.05$, $***p \leq 0.01$. See note to Table 3 for more details.

Table A.5: Treatment effects on pathways, target women and friends

	MGNREGA asset knowl- edge score	Number of situ- ations in which feels comfortable speaking in public (out of 7)	Enumerator's score of re- spondent's ability to de- mand assets [^]	Friend's assessment of improvements in respondent since in- tervention (out of 4 dimensions)	Self- efficacy	Discuss MGN- REGA asset idea with others	Gender norms index
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Panel A. Target Women (N=1,293)							
Role model	3.548** (1.617)	0.015 (0.173)	0.022 (0.019)	0.018 (0.072)	0.094 (0.072)	0.069 (0.054)	0.135 (0.113)
Role model + training	2.032 (1.627)	-0.001 (0.180)	0.018 (0.019)	0.104 (0.075)	0.130* (0.075)	0.098* (0.055)	0.038 (0.115)
Difference (p-value)	0.376	0.845	0.863	0.151	0.535	0.628	0.373
Placebo arm mean	49.768	3.944	0.877	1.557	3.007	1.760	4.954
Panel B. Friends (N=1,303)							
Role model	-0.456 (1.677)	-0.273 (0.174)	0.015 (0.020)	0.008 (0.066)	0.025 (0.071)	-0.044 (0.055)	-0.174* (0.104)
Role model + training	0.438 (1.637)	-0.242 (0.174)	0.040** (0.020)	0.094 (0.071)	0.136* (0.071)	0.000 (0.054)	-0.062 (0.107)
Difference (p-value)	0.514	0.873	0.186	0.216	0.085	0.389	0.209
Placebo arm mean	49.182	4.285	0.881	1.588	3.033	1.841	5.040
Panel C. Target women vs Friends							
Friend × Role model	-4.794** (2.144)	-0.366* (0.214)	-0.008 (0.027)	-0.023 (0.090)	-0.080 (0.092)	-0.134* (0.070)	-0.293** (0.137)
Friend × Role model + training	-1.012 (2.110)	-0.256 (0.223)	0.019 (0.026)	0.020 (0.098)	-0.011 (0.095)	-0.089 (0.072)	-0.088 (0.143)
<i>Lagged value in baseline</i>							
Target women	Yes	Yes	No	No	Yes	No	Yes
Friend	No	Yes	No	No	No	No	No

Source: Authors' calculations based on study data. We stratify at the level of the Gram Panchayat. Conventional standard errors in parentheses. $*p \leq 0.1$, $**p \leq 0.05$, $***p \leq 0.01$. See note to Table 4 for more details.

Table A.6: Treatment effects on indicators for unintended consequences of the treatments, target women and friends

	Believes that people like them have a voice in the MGN-REGA process	Perceives that village affairs are decided on democratically	Number of local officials exhibits trust in (out of 5)
	(1)	(2)	(3)
Panel A. Target Women (N=1,293)			
Role model	-0.030 (0.059)	-0.013 (0.017)	-0.093 (0.060)
Role model + training	-0.008 (0.061)	-0.023 (0.018)	-0.042 (0.060)
Difference (p-value)	0.743	0.507	0.420
Placebo arm mean	2.173	0.559	2.050
Panel B. Friends (N=1,303)			
Role model	-0.042 (0.063)	-0.002 (0.018)	-0.041 (0.060)
Role model + training	0.052 (0.064)	0.016 (0.019)	-0.049 (0.061)
Difference (p-value)	0.176	0.419	0.848
Placebo arm mean	2.000	0.535	2.033
Panel C. Target women vs Friends			
Friend × Role model	-0.036 (0.075)	0.007 (0.025)	0.031 (0.078)
Friend × Role model + training	0.071 (0.077)	0.034 (0.026)	-0.006 (0.076)
<i>Lagged value in baseline</i>			
Target women	No	Yes	Yes
Friend	No	No	No

Source: Authors' calculations based on study data. We stratify at the level of the Gram Panchayat. Conventional standard errors in parentheses. * $p \leq 0.1$, ** $p \leq 0.05$, *** $p \leq 0.01$. See note to Table ?? for more details.

Table A.7: Treatment effects on spillover outcomes, target women and friends

	MGNREGA work knowledge score (1)	Received entitle- ments from other programs (2)
Panel A. Target Women (N=1,293)		
Role model	2.227** (1.021)	-0.019 (0.090)
Role model + training	1.397 (1.064)	0.099 (0.089)
Difference (p-value)	0.472	0.230
Placebo arm mean	30.991	3.090
Panel B. Friends (N=1,303)		
Role model	0.415 (1.097)	-0.103 (0.091)
Role model + training	-1.631 (1.097)	-0.134 (0.089)
Difference (p-value)	0.071	0.636
Placebo arm mean	32.911	3.329
Panel C. Target women vs Friends		
Friend × Role model	-2.263* (1.347)	-0.104 (0.127)
Friend × Role model + training	-3.267** (1.342)	-0.255** (0.119)
<i>Lagged value in baseline</i>		
Target women	Yes	Yes
Friend	No	No

Source: Authors' calculations based on study data. We stratify at the level of the Gram Panchayat. Conventional standard errors in parentheses. $*p \leq 0.1$, $**p \leq 0.05$, $***p \leq 0.01$. See note to Table ?? for more details.

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