

# Mission Motivation and Public Sector Performance: Experimental Evidence from Pakistan

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## Abstract

This paper studies, through a randomized field experiment involving community health workers in Pakistan, if public sector organizations can improve worker performance by investing in their mission motivation. The findings reveal that training aimed at strengthening mission awareness improves workers' performance in their core responsibility of monthly household visits, as well as in various tasks performed during and outside these visits. This holistic improvement in performance also leads to improved health outcomes for children in the communities served by these workers. These results highlight the importance of promoting organizational missions as a strategy to improve public sector performance in low-income countries.

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# 1 Introduction

Many low-income countries face challenges in delivering basic services due to under-performing public sector workers (Chaudhury et al. 2006; Banerjee and Duflo 2006; Callen et al. 2020). While it is widely believed that public sector workers are initially attracted to their jobs by the organization’s mission (Besley and Ghatak 2005; Wilson 1989), their ongoing engagement and performance may also be significantly influenced by how mission-oriented messages are communicated by their managers after they have joined.<sup>1</sup> If this holds true, it raises the question: Can public sector organizations improve worker performance by emphasizing the organization’s mission?

The efficacy of emphasizing the mission as a motivator remains uncertain for several reasons. First, while studies have explored how the mission signals worker-employer alignment, both theoretically (Besley and Ghatak 2005; Prendergast 2008; Cassar and Armouti-Hansen 2019) and in laboratory settings (Banuri and Keefer 2016; Carpenter and Gong 2016), there remains a gap in the literature regarding how such emphasis influences worker effort and prevents mission drift.<sup>2</sup> Second, emphasizing the mission may improve performance in certain areas while neglecting others, comparable to the multitasking challenges seen with performance-linked monetary incentives (Holmstrom and Milgrom 1991). Third, the effectiveness of mission emphasis may be unclear when combined with other performance-enhancing policies, such as performance-linked financial incentives. These considerations motivate the question of whether emphasizing a public sector organization’s mission can improve worker performance.

In this paper, I examine whether public sector organizations can improve worker performance by emphasizing the mission. To do so, I partner with the District Health Officer (DHO) in Haripur, Pakistan, to implement a randomized field experiment. The main intervention involves a mission-strengthening training for community health workers. As part of the treatment, workers watch a video where the DHO emphasizes the mission, followed by facilitated reflection sessions. In these sessions, workers are encouraged to share their thoughts about the mission and share relevant experiences. Notably, the discussion is not

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<sup>1</sup>Indeed, this is one reason why many organizations invest in activities that emphasize the mission to their employees, keeping them motivated about the job with more than just pecuniary returns (Harvard Business Review 2015).

<sup>2</sup>To date, scholars have studied how to motivate workers to exert effort using pay for performance (Lazear 1996; Prendergast 1999; Holmstrom 2017; Khan et al. 2016; Muralidharan and Sundararaman 2011; Glewwe et al. 2010; Lazear 2000), non-financial rewards (Ashraf et al. 2014a;b; Neckermann et al. 2014; Kolstad 2013; Delfgaauw et al. 2013; Gubler et al. 2016; Ager et al. 2022), career concerns (Holmstrom 1999; Dewatripont et al. 1999; Ashraf et al. 2018; Deserranno and León-Ciliotta 2024), and social incentives (Ashraf and Bandiera 2018; Exley 2018; Brock et al. 2016).

a one-off event; instead, the mission treatment is designed as a repeated engagement in the form of three monthly sessions.<sup>3</sup>

To evaluate the effects of financial incentives independently from the mission intervention, the study also includes a standalone financial treatment. This incentive is focused solely on home visits, a task that inherently requires multitasking. Additionally, I explore the impact of combining the mission treatment with the financial incentive treatment. In this combined treatment, workers earn a financial reward based on their performance in visiting more households. This approach aims to observe whether integrating the mission intervention with financial incentives results in greater improvements in performance.<sup>4</sup>

Furthermore, the delivery of the mission treatment is bundled with a skills refresher training for the workers to mimic organic engagement with the Department of Health. This setup allows the inclusion of a placebo treatment in the experiment, specifically one that involves only the skills refresher without any discussion of the mission. Finally, a set of workers continues to operate under the status-quo regime, serving as the pure control group for comparison.

The community health workers of the Department of Health provide several desirable organizational features, making the experimental study of mission-driven motivations possible. First, they are permanent government employees, functioning in non-overlapping communities. Second, their job is fundamentally mission oriented, yet the department does not emphasize the mission during routine operations, which can diminish workers' intrinsic, mission-based motivations. Third, the workers are responsible for outreach activities focused on basic and preventive health services. They are required to visit each household in their community every month, making visits a key measurable metric of performance in what is essentially a multitasking setting. Fourth, activities and tasks carried out during the visits, along with tasks requiring teaming up with other workers outside of visits, provide measures of multitasking in this setting. However, neither the visits nor the associated tasks are monitored by managers, which potentially leads workers to shirk their responsibilities. Last, the performance of these workers can have tangible effects on the public they serve in

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<sup>3</sup>By design, the mission treatment is delivered over three monthly sessions following the example of organizations that frequently use their mission to motivate workers. For instance, Nike constantly emphasizes the mission to its workers by encouraging executives to “work the corporate mission statement into regular conversation” (Lashinsky 2015). Additionally, Teach for America emphasizes its mission of educational equity to motivate its staff—who have already been selected to work for them—through summer training programs (Diamond 2010).

<sup>4</sup>Theory predicts that there can either be a crowding in—where the two motivations are additive (Bowles and Polania-Reyes 2012)—or a crowding out—where the financial considerations diminish intrinsic motivations for the job (Gneezy et al. 2011; Deci et al. 1999; Frey and Jegen 2001; Benabou and Tirole 2003; Gneezy et al. 2011; Bowles and Polania-Reyes 2012; Kamenica 2012; Cassar 2018).

the form of improved health outcomes.

Using home visits and the associated multiple tasks as measures, I examine the efficacy of the mission treatment, both alone and combined with financial incentives. To measure worker performance, I conduct monthly surveys of 10 random households in the community of each worker and ask whether the households were visited during the previous calendar month. In cases where households were visited, I also collect information on the activities performed during the visit, such as examining pregnant women and children, performing antenatal checks, and screening for tuberculosis (TB). These additional data quantify the treatment impact and the corresponding quality of the workers' effort toward the organization's goals. I also collect information from administrative records on the number of immunization camps organized by the worker in their community, which requires working in a team with vaccination technicians.

Analyzing the household survey data, I find that the mission treatment results in a 14.17% increase in household visits by workers compared to the status quo, increasing the probability of a visit by 5.1 percentage points ( $q$ -value = 0.001) over the control group average of 36%. This effect persists after the interventions end: workers in the mission treatment visit households at a rate that is 5.3 percentage points ( $q$ -value = 0.020) higher than the control group workers one month after the end of the sessions.

I next explore the effect of the combined treatment (the mission treatment combined with performance-linked financial incentives). The findings reveal no crowding-out effect, as the mission intervention continues to be effective. Workers receiving the combined treatment increase their probability of performing home visits by 7.1 percentage points ( $q$ -value = 0.001), a 19.7% improvement over the control group during the experiment. However, this is smaller than the effect of the standalone financial incentive by 3.0 percentage points ( $q$ -value = 0.037).

I am able to directly attribute changes in the performance of workers in the mission and combined treatments to the mission intervention. This is evidenced by the fact that the placebo treatment, which includes a skills refresher training and follows the template of the mission intervention, does not result in any significant increase in household visits. The point estimates of the increases from the mission and combined treatments significantly differ from that of the placebo treatment by 3.8 and 5.7 percentage points, respectively, each with a  $q$ -value of 0.001 during the experiment.

Continuing with the household survey data, I examine the effect of the mission treatment on workers' performance on multiple tasks during the home visits. Analyzing the data,

unconditional on visits, I find that the treatment increases the likelihood of workers performing antenatal checks by 8.4 percentage points ( $q$ -value = 0.001), examining children by 6.5 percentage points ( $q$ -value = 0.003), and TB screening by 5.7 percentage points ( $q$ -value = 0.001). Similarly, workers in the combined treatment also perform more multiple tasks, as indicated by increases of 8.1 percentage points ( $q$ -value = 0.001) in performing antenatal checks, 6.3 percentage points ( $q$ -value = 0.010) in examining children, and 7.2 percentage points in TB screening ( $q$ -value = 0.001). These performance effects are also visible when the analysis is conditional on visits, and a bounding exercise reveals that the mission intervention likely has a direct, positive effect and significant effects on these outcomes once corrected for the selection of households into visits in the conditional analysis.

In addition to improvements in visit-related tasks, I also find that workers in the mission treatment perform more non-visit tasks. They organize, on average, nearly an additional half immunization camp in collaboration with trained vaccination technicians ( $q$ -value = 0.062), which represents an increase over the control group's average of 5.7 camps during the three months of the experiment ( $q$ -value = 0.062). They also visit homes that are, on average, two minutes farther from their own residence compared to the status quo ( $q$ -value = 0.027). Similarly, workers in the combined treatment organize nearly half an extra immunization camp ( $q$ -value = 0.107) for the children of their communities.

The performance effects discussed thus far are inputs in the process of improving the health of the community—the ultimate mission of the organization. To explore the community's health outcomes from the changes in workers' performance, I analyze household survey data on the prevalence of diarrhea and vaccination rates during the study period. I find that the mission and combined treatments reduce diarrhea ( $q$ -value = 0.099 and  $q$ -value = 0.100, respectively) and increase vaccination rates ( $q$ -value = 0.12 and  $q$ -value = 0.068, respectively). In comparison, the standalone financial incentive treatment also reduces the prevalence of diarrhea but does not affect vaccination rates, while the placebo treatment does not affect any health outcomes. These results suggest that interventions that improve the performance of community health workers ultimately benefit the communities they serve.

To explore the mechanisms behind these results, I survey workers and find that those in the mission and combined treatments become more intrinsically motivated in three ways. First, workers in both treatments believe the department is committed to the mission and that their own values are more aligned with those of the department, which in turn drives them to feel a stronger attachment to their job. I interpret these beliefs as evidence of intrinsic motivation due to the mission's alignment with the workers' values. Second, one year after the experiment, I find that workers in both treatments are more altruistic toward their

job, which I measure using an incentivized willingness-to-work task. Third, as previously mentioned, the increase in home visits among workers in the mission treatment persists even after the intervention ended.

I rule out three alternative explanations for how the mission treatment works. First, if the mission treatment provided new information about the tasks that the workers need to perform, then I should find that the workers in the placebo group would improve on performance measures related to mother and child health, which was the focus of the skills refresher training. However, I do not find any evidence of effectiveness of the placebo treatment. Second, if the mission treatment made workers concerned about being monitored—and thereby resulted in higher effort—then their perception of being monitored would be different from other workers. However, I find that workers in the mission and combined treatments do not have different beliefs about being monitored compared to those in the other treatments and control group. Third, in addition to being intrinsically motivated by the mission treatment, it is conceivable that workers may be influenced by their peers to perform. Therefore, I randomize workers receiving the mission training into either a group setting or into a private, one-on-one session with the facilitator. I find no difference in the performance of the two sub-treatments and therefore reject the possibility that peer influence may contribute to individual motivation due to the mission.

To the best of my knowledge, this paper provides the first empirical evidence from a field experiment demonstrating that emphasizing an organization’s mission can motivate its workers to perform better. While theoretical literature argues that mission motivation primarily functions on the selection margin (Besley and Ghatak 2005; Prendergast 2007; Cassar and Armouti-Hansen 2019)—i.e., organizations use missions to attract workers with aligned values—it also proposes that mission emphasis helps economize on incentives (Wilson 1989). However, my findings indicate that to sustain motivation among workers who self-select into government roles, organizations must invest in ongoing communication about their mission to prevent this motivation from diminishing over time. With this result, the paper contributes to the literature on organizational economics that explores the drivers of worker effort, such as financial rewards (Lazear 2000; Prendergast 1999; Gibbons 1998) and social incentives (Ashraf and Bandiera 2018; Ellingsen and Johannesonn 2008; Rotemberg 1994). Further, this study extends the literature that workers may get sentimental utility from their organization (Akerlof and Kranton 2005) and empirically establishes that managers can “exploit” such sentimental utility by emphasizing the mission.

The findings also contribute to the literature on multitasking (Holmstrom and Milgrom 1991; Baker 1992; Hart et al. 1997; Giné et al. 2020) and crowding out (Deci et al. 1999;

Frey and Jegen 2001; Gneezy et al. 2011). While I find no evidence of crowding out of intrinsic motivation, I show that the presence of the mission treatment can dilute the effect of financial incentives. This occurs because a commitment to the mission induces effort across a broader range of tasks, helping to counteract the tendency to focus solely on tasks that are financially rewarded.<sup>5</sup>

This paper also contributes to the literature on improving public services in countries with weak institutions that struggle to enforce contracts. I show that in a weak contract environment, emphasizing the mission motivates workers to work harder without changing the contract’s terms. Existing studies have focused on either selecting better workers to join the public sector (Dal Bó et al. 2013; Deserranno 2019; Ashraf et al. 2018) or designing performance-contingent incentives to address under-performance.<sup>6</sup> This paper extends the literature beyond the debate between performance-contingent incentives and selection. It argues that in countries with weak institutions, public sector organizations can leverage their mission to activate the intrinsic motivations of contracted agents, leading to improved performance without a change in incentives.

Last, this paper highlights the importance of clear communication from managers as an important component of managerial practices. By providing clear communication about the mission, managers set expectations about organizational values, which in turn motivates workers to contribute more to the organization. In this sense, the paper relates to the literature on management practices in public organizations (Rasul and Rogger 2016; Bloom et al. 2015; Janke et al. 2019; Fenizia 2022) and firms (Bloom and Van Reenen 2010; Bloom et al. 2013) by proving a causal link between managerial communication and worker performance.

The rest of the paper proceeds as follows. Section 2 describes the experiment’s context and subject population, and Section 3 discusses the experiment’s design and implementation details. Section 4 presents the main analysis and reports the results on household visits and multitasking. Section 5 presents results on health outcomes. Section 6 discusses possible mechanisms, while Section 7 rules out several alternative mechanisms. Section 8 briefly discusses the cost-effectiveness of the mission, and Section 9 concludes.

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<sup>5</sup>See Dewatripont et al. (2000) for a review of other ways to address the multitasking issue.

<sup>6</sup>Performance-contingent incentives studied in the literature are either financial (Khan et al. 2016; Muralidharan and Sundararaman 2011; De Ree et al. 2018; Duflo et al. 2012; Glewwe et al. 2010; Banerjee and Duflo 2006) or non-financial (Ashraf et al. 2014a;b; Khan et al. 2019).

## 2 Context

### 2.1 Community Health Workers

Community health workers play a key role in delivering preventive and basic health care in many countries around the world. According to the World Health Organization’s Global Health Observatory, an estimated 4.5 million community health workers across 97 countries operate within the global healthcare system. Their role has received special attention since the 1970s, as low- and middle-income countries face a shortage of trained health professionals to promote preventive health care aimed at achieving sustainable development goals (Scott et al. 2018).

In Pakistan, community health workers are considered the backbone of the preventive and primary healthcare system, especially in rural areas. These workers, all of whom are women,<sup>7</sup> function as a separate division of the Department of Health, called the Lady Health Workers (LHW) program. Established as a special program in 1993, it now encompasses 96,000 workers across the country (Jalal 2011). Since 2014, they are considered full-time public sector employees with job protections equivalent to those afforded to other members of the state bureaucracy.

The workers are affiliated with a health clinic for reporting purposes but are hired by the Department of Health to live and work in clearly defined communities. Each community is served by only one worker, who does not operate in clinics, thereby minimizing interaction between workers in their routine jobs. This feature of the organization is advantageous for my study as it limits the scope for spillovers and facilitates a clean measurement of performance.

#### 2.1.1 Duties of Community Health Workers

Community health workers are required to visit all the households in their community every month, with the core duty of providing preventive and basic health care to citizens at their doorstep. During these visits, the workers advise women on birth control, provide antenatal checks to monitor the health of expectant mothers, and follow up after the birth to advise on disease prevention and nutrition. Additionally, they perform tasks that are not considered core duties but have been added to their roster of tasks. In this study, I focus on two of these additional tasks: TB screening and organizing community immunization camps in partnership with trained vaccination technicians.

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<sup>7</sup>According to the World Health Organization, women comprise 70% of workers in the health sector in 104 countries (Boniol et al. 2019).



### **2.1.2 Incentives, Promotions, and Transfer Posting**

Workers are hired for specific communities, where they are expected to live, and are rarely transferred out. For example, during this study, I recorded no instances of workers being transferred. During the study period, they received a fixed monthly salary of Rs. 17,500, which was on par with the minimum wage set by the government of Pakistan and higher than salaries in the informal sector for a person with similar education.

Community health workers do not have a direct path for career progression. Theoretically, they can apply for a supervisor role (if there is an opening), but those positions are few and open to competition from the outside. Anecdotally, no one leaves the job, and no one gets fired. There is no objective monitoring system in place, except for a register maintained by the workers that supervisors can check, if needed. This lack of incentives and difficulty in measuring performance creates conditions for potential moral hazard.

## **2.2 Haripur District**

Haripur District lies in the Khyber Pakhtunkhwa province of Pakistan and has a population of around one million people. The district, one of the more economically developed areas of the country, ranks 18th out of 114 districts on the Human Development Index, with an overall score comparable to Lebanon. According to the most recently available statistics, the district has a literacy rate of 60% among women and 82% among men.

The Department of Health in Haripur operates one district hospital and 40 rural clinics. Each rural clinic employs a doctor, a nurse, a pharmacist, and a vaccination technician, who work inside the facility. The department also employs 710 community health workers to serve local communities. Despite a wide public health network, about 58% of households rely on private health care when a child gets sick.

## **3 Experimental Design and Implementation Details**

In this section, I outline the methodology of my experiment conducted between the end of 2018 and mid-2020. It covers the treatments, randomization and sampling procedures, data sources, and checks for randomization balance.

## 3.1 Treatments

### 3.1.1 Mission Treatment

As part of the experimental design, the mission treatment involved a specialized training session pitched to community health workers. Before the start of the experiment, I worked with the DHO to develop and record a short video of the officer describing and emphasizing the mission of the LHW program. In the video, the officer relays the following collaboratively developed message (translated from Urdu):

*Today, I want to give LHWs a message about the LHW Program’s mission and purpose. You are the Department of Health’s vanguard for mother and child health. It is our resolve that we will extend health services to every household through this program so that no mother or child becomes a victim of any disease. The mission of this program is to ensure no mother or child is left without basic health services. And neither should a mother be left without knowledge about her own health and that of her child. I pay my tribute to your services. And I believe you will continue with your good work.*

Representatives of the District of Health Office contacted the workers to invite them to facilitated training sessions, where they were asked to write down what they thought the organizational mission was and then watch the video. Facilitators then guided the workers through discussions of this mission statement, including whether it aligned with their values, how it would influence their work, and its importance to them. The treatment was delivered in a participatory manner such that the facilitators did not “teach” but rather asked questions to direct the discussions and to invite workers to participate by sharing their views.<sup>8</sup>

I randomized the delivery method of the mission treatment to determine whether the peer influence channel affected workers’ behavior. In the private mission treatment, the worker and facilitator met one-on-one in a private setting, whereas in the public mission treatment, they met in a group setting with other workers. The group sizes were between 20 and 30 workers, depending on the logistics of the area. The facilitators maintained similar lines of questions in the private and the public sessions, making sure that every worker had the opportunity to voice their opinion and participate. These efforts were intended to help the workers internalize the mission statement and feel as though they had a stake in the process.

The public treatment group was divided into two sub-treatments to further explore the

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<sup>8</sup>The facilitators, who were hired locally to deliver the treatments, were experienced trainers who had previously worked on projects related to the health sector. They received one day-long training on the treatment before the experiment started, as well as monthly refreshers, and were provided a manual for guidance. The English translation of the manual is available at this [Dropbox link](#).

mechanisms behind the peer learning channel: public non-observable and public observable. In the public non-observable treatment, workers were told that their performance would not be discussed, while in the public observable treatment, they were informed that their performance would be discussed in the third session. Workers in these sub-treatments did not overlap, as strict separation was maintained in the sessions. This variation was introduced to examine the influence of workplace norms and social image concerns among peers.

This mission treatment was followed by a refresher training on the basic skills required for preventive and basic healthcare provisions, using case studies on care for pregnant women and children. Including the skills refresher materials helped make the discussion about the mission appear more organic to the session and also provided a baseline for the placebo treatment to rule out some alternative explanations for the mission-driven motivation. Each session included only workers from one treatment condition at a time, lasted two to four hours, and was repeated monthly for a period of three months. In the subsequent sessions, the mission discussion focused more on sharing experiences from the field and how the workers connected with the organizational mission. Each session included only workers from one treatment.

For the main analysis of this paper, I pool all sub-treatments of the mission-only intervention into one main mission treatment. These sub-treatments are only relevant for exploring peer learning as a mechanism behind the effectiveness of the mission intervention, as described above.

### **3.1.2 Performance-Based Financial Incentive Treatment**

At the start of the experiment, some workers were informed by the Department of Health that they had been selected for a program where they could earn a financial reward based on the number of households they visited every month. The decision to keep the incentive scheme simple by linking it only to house visits was made in consultation with the department. There were two main reasons for this simplicity. First, the senior managers believed that getting workers to the doorstep was the most important task, as they would naturally perform other activities once they visited the house. Second, they were concerned that workers may find complex schemes hard to follow and hence the scheme may not be effective at all (see Khan et al. (2016) for an example of when complex incentive financial schemes do not work well).

The workers in this treatment could earn Rs. 25 for every additional household visited in one month over and above their routine (baseline) visits—for up to 20 additional households. I used the month of November 2018 as a baseline. Through this incentive, workers could earn

a maximum incentive of Rs. 500 (\$3.5) if they visited all 20 additional households in the month or all households assigned to them (i.e., if they ran out of additional households in their assigned area). The maximum incentive therefore totaled 2.9% of their monthly salary. This incentive was provided for three months, though the workers did not know the term limit before the end of the third month.

Mathematically, this treatment can be written as

$$w_{ij} = \begin{cases} 25 * x_{ij} & x_{ij} < 20 \\ 500 & x_{ij} \geq 20 \\ 500 & x_{ij} + h_i = H_i, \end{cases}$$

where  $w_{ij}$  is the amount earned by worker  $i$  in month  $j$  when she visits  $x_{ij}$  households over and above the number of households visited in baseline  $h_i$ , or when she runs out of total assigned households  $H_i$ .

I do not rely on the workers' own reports to decide the bonus amount, and the baseline benchmark and the subsequent incentive payment are based on the data collected in the independent survey of households, described in Section 3.3. The workers were informed that the payment would be estimated based on the household survey. Since I only interviewed 10 households per community, the number of visits used to determine the payment was estimated from this number. If all 10 households reported being visited in the previous calendar month, the workers were paid the full bonus for the month. Otherwise, the number of total visits was estimated by using the percentage of households reporting a visit in the survey and the total number of households in the community. This estimated number of visits for each month was compared with the estimated number of visits at baseline to determine the incentive amount paid. The first incentive payment was made in the second month of the experiment, following the completion of the initial survey round that collected information on visits from the previous calendar month. Each subsequent payment followed this same sequence, and all payments were made privately to workers by the research project's staff.

### 3.1.3 Combined Treatment

In the combined treatment, I integrated the public mission treatment sessions with the financial incentive treatment.<sup>9</sup> The workers selected for this treatment were informed privately that they had been selected for the financial incentive program. They were then invited to

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<sup>9</sup>As described in Section 3.1.1, these public sessions are part of the broader mission treatment framework.

attend the public mission treatment sessions, as described in Section 3.1.1. It is important to note that these sessions only included workers within this treatment group. The reward amount earned by each worker was privately disclosed, and the training sessions did not include any discussion of the financial incentive, which kept the financial rewards portion of the treatment comparable to the standalone financial incentive treatment.

### **3.1.4 Placebos and Control**

To rule out alternative explanations for any results found during this experiment, I include a placebo treatment and a pure control group in the experiment.

During the placebo intervention, a group of community health workers met in a public setting to receive a refresher training on the basic services they were expected to provide to their communities. The training contents were the same as those delivered during the latter half of the mission treatment sessions. I also divided this treatment into sub-groups based on whether an announcement about performance would be made or not, following the methods of the mission treatment where the public mission treatment was divided into two sub-treatments. In one group, workers were told there would be no discussion of their performance related to the refresher training, and in a second group, they were told their performance would be discussed in the third session. This was done to provide a comparison for one of the sub-groups of the public mission treatment, if it emerged that the peer learning channel plays an important role in the effectiveness of the mission. For my analysis, I pool these sub-treatments into one placebo group.

Regarding the pure control, the workers in this group neither participated in the training sessions nor received any financial incentives. In this way, this group continued under the status-quo condition.

## **3.2 Randomization, Sample, and Timeline**

The 710 community health workers were randomized into treatment groups, as shown in Figure A2. The randomization was done at the individual level but block stratified at the clinic level. There was no attrition of workers during the experiment.

As shown in Figure A1, the study began in December 2018 with a baseline survey of households, followed by a worker survey in January 2019. In the last week of January, the Department of Health sent out invitations for the initial training sessions to the selected workers. Concurrently, workers undergoing the financial incentive treatment were informed about the opportunity to earn a performance-based bonus. The first of these training ses-

sions commenced at the beginning of February and were held monthly through April 2019. Post-treatment surveys began on March 1, 2019 and continued until June. In April 2020, a year after the initial treatments, administrative data were collected from each worker, and follow-up interviews were conducted by telephone.

### 3.3 Data Sources

I use data from household surveys, worker surveys, and administrative reports to trace the effects of the treatments on performance.

**Household Surveys.** I surveyed 10 randomly selected households in the target community of each worker during five survey rounds: one baseline survey, three post-treatment session surveys (administered during the month following the training sessions), and one post-experiment survey administered a month after the experiment was complete, resulting in a dataset of 35,499 responses. The households were selected through randomization carried out in the field. If a household refused to participate in the survey, it was replaced by another household selected at random. There was one instance where the enumerators mistakenly did not replace a refusal. Additionally, surveys were administered to female respondents by female enumerators to account for any cultural sensitivities that the respondents may have had.

In December 2018, I administered the baseline survey to households, asking if the health worker visited in the previous calendar month (i.e., November 2018). The post-treatment surveys were administered every month from March to June 2019, beginning at the first of every month. In each survey, households were asked information about the previous completed calendar month—for example, the survey starting March 1 collected information from households about worker activities in February. Households were then re-sampled after the first post-treatment survey; as a result, the household sample in the first post-treatment survey differs from those of the subsequent surveys. The experiment concluded by the end of April 2019, and so the survey in May was the last round to collect information relevant during the experiment. An additional survey round was administered in June 2019 to collect information regarding how many visits were made to households one month after the experiment ended.

In addition to inquiring about the workers' visits, I also collected information on the health of children in the household, their vaccination status, and other activities performed by the worker. However, due to financial constraints and the need to complete a large number of surveys in a limited amount of time, I did not include all the questions in every survey round.

**Worker Surveys.** In January 2019, I administered a baseline survey to workers, collecting data tenure, motivation for public service (using Perry 1996), and scores on Raven’s matrices. An endline survey of workers was administered six months later in June and collected information on workers’ beliefs regarding the department’s mission, its importance, and their identification with the organization. Finally, a post-endline survey was administered a year after the project ended. This survey collected further data on workers’ beliefs and allowed me to administer a lab-in-the-field experiment to study the persistence of the treatment effects. Not all workers participated in the endline and post-endline surveys. As shown in Table A3, the attrition observed in these activities does not correlate with the treatment status.

**Administrative Reports.** To trace the effect of the treatments on the community’s health outcomes, I collected data on the mortality rates of mothers and children within the assigned communities of each worker. For each worker, I also collected body weight data from the administrative reports—generated by the health workers—for five random children, one year after the treatments were administered. While these data are only available for 542 workers, the missing data are not correlated with the treatments, as shown in Table A3.

### 3.4 Summary Statistics and Randomization Balance

Table A1 presents summary statistics for the community workers and households in the experiment. The average worker has 10 years of schooling, which is higher than the national average of 3.8 for women in Pakistan, and 38% have a healthcare-related certification. They are also responsible for serving on average 156 households in their communities. Table A2 reports the balance between the treatments on workers’ individual characteristics, showing that the treatments are balanced on all variables except for worker tenure. Table ?? presents the baseline household data to test for randomization balance, reporting a joint orthogonality test between the treatments and confirming that treatment assignment does not predict performance or community characteristics at baseline. Table ?? also reports randomization balance by sub-treatments.

## 4 Main Analysis and Results

In this section I report the analysis of the data, focusing on whether emphasizing the organizational mission to workers improves their performance. I first describe the estimation strategy and then report the results.

## 4.1 Estimation Equation

$$\begin{aligned}
V_{ijmb} = & \beta_0 + \beta_1 * Mission_{jb} + \\
& \beta_2 * FinancialIncentive_{jb} + \beta_3 * Mission\&FinancialIncentive_{jb} + \\
& \beta_4 * Placebo_{jb} + B_b + M_m + \epsilon_{ijmb}.
\end{aligned} \tag{1}$$

Equation 1 presents the main estimation used to analyze household-level data.  $V_{ijmb}$  is the outcome reported by household  $i$  from the community of worker  $j$  in survey round  $m$ . Since workers are required to visit every home in each calendar month, this variable is coded for monthly visits. That is, it equals one if a household is visited within a calendar month and zero otherwise.  $Mission_{jb}$ ,  $FinancialIncentive_{jb}$ , and  $Mission\&FinancialIncentive_{jb}$  represent treatment dummies for each worker indicated by  $j$  in block  $b$ .  $Placebo_{jb}$  equals one for the placebo treatments and zero otherwise. To absorb block- and survey-month-specific variation in the data,  $B_b$  denotes a vector of the randomization-block controls and  $M_m$  captures survey-month fixed effects.  $\epsilon_{ijmb}$  is an idiosyncratic error term. When a variable is only reported in one survey round, I omit the vector of month dummies. In this estimation, I pool all the mission sub-treatments into the main mission treatment and also pool the two placebo sub-treatments into one. When analyzing only data from one month, I drop survey-month-specific fixed effects.

Additionally, I correct for multiple hypothesis testing by using false discovery rate-sharpened  $q$ -values, following Anderson (2008). The correction is applied to all hypotheses tested within a given table, that is, across outcomes and data sources within a table. I use these sharpened  $q$ -values for adjudicating the statistical significance of hypotheses.

## 4.2 The Effect of the Mission Treatment on Number of Visits

In this section, I study whether emphasizing the organization’s mission motivates workers to improve their performance in terms of visiting more households. I also examine how this emphasis interacts with performance-linked payments in the same environment.

Table 1 presents the main results of estimating Equation 1 using household survey data. In column 1, I use household-survey-round-level data by pooling the three post-treatment session surveys (administered during the month following the training sessions). Since workers are required to visit each household every month, and each survey round collects data for one calendar month, the dependent variable equals one if the household was visited during the target month of the survey, and zero otherwise. The analysis controls for survey-wave



(month) fixed effects, in addition to randomization-block fixed effects. Columns 2–4 use data from each of the three surveys separately, and Column 5 uses data from the post-experiment survey. I have data on 10 households per community in each wave of the post-treatment session survey, but as the communities are different sizes, I weight each point with the inverse probability of being selected for the survey to make the data representative.

As shown in the first row of column 1, the mission treatment increases the probability of a household visit by 5.1 percentage points ( $q$ -value = 0.001) over a control mean of 36%, achieving an increase of 14.1% in the likelihood of a household being visited. In terms of actual visits, this equates to 7.9 additional visits per worker within a month as a direct result of the mission treatment. The intervention appears to be immediately effective, as the positive effects of the mission treatment emerge in the first round of the post-treatment session survey and continues until the third survey round during the experiment.

Next, I explore the effect of the combined treatment (the performance-based financial incentive treatment and the mission treatment) on worker performance. The results, shown in the third row of Table 1, indicate that the effect is large and statistically different from the pure control group. The likelihood of a household visit in this treatment group increases by 7.1 percentage points ( $q$ -value = 0.001) above the control condition (column 2), which is an increase of 19.7% in performance. Similar to the mission treatment, the positive effect of the combined treatment emerges right after the first treatment round and remains largely stable throughout the experiment (columns 2–4).

The preceding analysis used data collected during the experiment. However, this approach may underestimate the effectiveness of the mission intervention if the treatment results in a lasting change in workers’ behavior. At the end of April, the third month of the experiment, workers were informed that there would be no more meetings to discuss the organization’s mission. After this hard stop in the intervention, I collected data on home visits using the post-experiment survey implemented in June. Column 5 of Table 1 reports the analysis using this survey. Focusing on the first row, I find that workers who only participated in the mission treatment continued to perform better by a measure of home visits—an effect of 5.3 percentage points ( $q$ -value = 0.020) compared to the control mean. This indicates that the mission treatment likely had an effect that remained consistent beyond the experimental period, perhaps through a change in workers’ motivation—a possibility I discuss in Section 7.

Last, I check the robustness of the results. Table A4 reports the main analysis without weighting data by the inverse probability weights. The unweighted estimates are largely

Table 1: Effects on the Probability of Household Visits

<i>Dep Var: Household Visit = 1</i>	During the Experiment				After the Experiment
	(1)	(2)	(3)	(4)	(5)
Mission	0.051*** (0.012) [0.001]	0.055*** (0.021) [0.015]	0.055*** (0.020) [0.015]	0.043** (0.019) [0.024]	0.053** (0.021) [0.020]
Mission-plus	0.071*** (0.014) [0.001]	0.068*** (0.026) [0.016]	0.056** (0.023) [0.022]	0.088*** (0.023) [0.001]	0.018 (0.027) [0.217]
Financial Incentive	0.101*** (0.015) [0.001]	0.088*** (0.024) [0.001]	0.092*** (0.026) [0.002]	0.122*** (0.024) [0.001]	0.028 (0.026) [0.140]
Placebo	0.013 (0.012) [0.142]	0.014 (0.022) [0.228]	0.009 (0.022) [0.253]	0.017 (0.020) [0.182]	0.018 (0.023) [0.193]
Control Mean	0.360	0.383	0.372	0.326	0.298
# of Observations	21299	7099	7100	7100	7100
# of Workers	710	710	710	710	710
<i>Linear Combinations of Coefficients</i>					
Mission – Placebo	0.038*** [0.001]	0.041*** [0.015]	0.046*** [0.007]	0.026* [0.062]	0.035** [0.030]
Mission-plus – Placebo	0.057*** [0.001]	0.054** [0.022]	0.047** [0.020]	0.071*** [0.002]	0.000 [0.372]
Mission – Financial Incentive	-0.050*** [0.001]	-0.033* [0.056]	-0.038* [0.056]	-0.079*** [0.001]	0.025 [0.128]
Mission-plus – Financial Incentive	-0.030** [0.037]	-0.020 [0.192]	-0.036 [0.085]	-0.034 [0.088]	-0.010 [0.253]

*Notes:* \* $p < 0.1$ , \*\* $p < 0.05$ , \*\*\* $p < 0.01$ . This table reports the effects of the treatments on the probability of household visits, using a linear probability model. The outcome variable is a home visit, which equals 1 if the household reports having been visited by the worker during the previous calendar month, and 0 otherwise. Column 1 reports the aggregate results by pooling data from 21,299 survey responses across the three survey rounds conducted during the experiment. Columns 2–4 use data from each round separately to estimate the effects on home visits. The first part of the table reports the coefficients on each treatment dummy from running a regression based on Equation 1. Each regression uses randomization-block fixed effects, and column 1 also uses survey-round fixed effects. The second part of the table reports linear combinations of coefficients and tests them against a null of zero difference. Standard errors are clustered at the worker level and reported in parentheses, and false discovery rate-adjusted  $q$ -values are reported in square brackets.

similar to the estimates shown in Table 1. Additionally, the results are robust to trimming the sample by the size of the community and the size of the randomization strata in Table A6. Table 3 reports heterogeneity in results by worker characteristics, showing no significant difference for the mission and combined treatments.

**Comparison to Placebo Treatment and Financial Incentive Treatment** Since the mission treatments were delivered as part of the refresher training sessions, it is possible that the observed effects might stem from the training rather than the treatment itself. The inclusion of the placebo treatment in the study allows me to test this possibility. The coefficients for the placebo treatment, as shown in Table 1, indicate no statistically significant effect of the training alone on the probability of household visits. Further, the second half of the table reports that the effects of the mission and combined treatments are statistically larger from the placebo treatment by 3.8 ( $q$ -value = 0.001) and 5.7 ( $q$ -value = 0.001) percentage points, respectively.

The second row of Table 1 shows that the standalone financial incentive treatment increases the probability of a household visit by 10.1 percentage points ( $q$ -value = 0.001, column 1). However, this effect does not persist after the end of the experiment (column 5) when the incentives end. When compared to the mission and combined treatments, the financial incentive treatment is statistically larger, by 5.0 ( $q$ -value = 0.001) and 3.0 ( $q$ -value = 0.037) percentage points, respectively. The smaller effect of the combined treatment, compared to the standalone financial incentive, suggests that adding the mission intervention to the monetary reward results in a relatively smaller increase in performance. This difference in effects on home visits is due to the mission-treated workers performing more tasks during and outside visits, as discussed in the next section.

### 4.3 The Effects of the Mission Treatment Multiple Tasks and Time Use

I now explore if the mission treatment affects workers' performance on tasks carried out during and outside visits. Some of these tasks—such as antenatal checks and child health exams—are part of the core job of workers, whereas others—such as screening households for TB and organizing immunization camps—are not their core duties but have been assigned to them over time. The mission intervention could lead workers to either decrease performance on these tasks, as a trade-off for increasing home visits, or it could motivate them to enhance their overall job performance by working harder on all tasks. I explore these possibilities by analyzing data on multiple tasks during the visits, the organization of camps in addition to

visits, and workers' time use. Furthermore, I compare outcomes from the mission treatment with those of the combined treatment, standalone financial incentive treatment, and placebo treatment.

#### 4.3.1 Multiple Tasks

**Tasks Performed During the Visits.** I analyze multiple tasks performed during the visits in two steps. First, I study performance unconditional on a visit by re-coding the outcomes as zeros for households not visited. This analysis helps identify the treatment's causal effect on the probability of tasks performed. However, the positive estimated effects may be influenced by workers visiting more households in the treatment conditions, even if the rate at which they perform multiple tasks remains consistent with the status quo. Second, I analyze performance on multiple tasks conditional on a visit to examine if workers exert more effort on the intensive margin, and follow Lee (2009) to estimate bounds for the effects.

Table 2 reports unconditional and conditional analyses of whether the workers perform multiple tasks. The analysis reported in column 1 examines the likelihood of performing antenatal checks unconditionally on a visit, using data from households with a pregnant woman. The mission and combined treatments increase the likelihood of performing antenatal checks by 8.4 ( $q$ -value = 0.001) and 8.1 ( $q$ -value = 0.009) percentage points, respectively. Similarly, column 3 reports that the mission and combined treatments have a positive unconditional effect of 6.5 ( $q$ -value = 0.003) and 6.3 ( $q$ -value = 0.010) percentage points on the probability of examining children if the household has a child under the age of two.

Moving to the analysis that is conditional on a visit, the results in column 2 show positive effects of the mission and combined treatments on antenatal checks: increases of 6.0 percentage points ( $q$ -value = 0.010) and 5.6 percentage points ( $q$ -value = 0.022) in the likelihood of a worker checking a pregnant woman, respectively. Similarly, conditional analysis yields an increase of 3.4 ( $q$ -value = 0.021) and 3.3 ( $q$ -value = 0.034) percentage points in the probability of performing a child examination for the mission and combined treatments, respectively.

While the mission treatment results in workers increasing their time spent across multiple core tasks, it is possible that this increase comes at the cost of non-core tasks. To explore this possibility, I measure workers' performance in screening households for TB, which is not their core job but has been assigned to them. Columns 5 and 6 of Table 2 show that the mission and combined treatments increase the probability of workers conducting TB

screenings during visits by 5.7 (with a  $q$ -value of 0.001) and 7.2 (with a  $q$ -value of 0.001) percentage points, respectively. Conditionally, these increases are 5.0 (with a  $q$ -value of 0.016) and 4.5 (with a  $q$ -value of 0.032) percentage points, respectively.

The conditional analysis suggests that workers increase the rate at which they perform multiple tasks during visits. However, this analysis suffers from differential attrition in the availability of task data due to the treated workers visiting more households than the control group. This attrition in the data can potentially confound the effects of the treatment on multiple tasks with that of selection of households for visits. To address these issues, I follow Lee (2009) to estimate bounds for the effects of the treatment on a sample of households that are always visited irrespective of the treatment status.<sup>10</sup> For the purpose of this study, the lower bound is the most relevant margin as it informs if the mission and combined treatments motivate the workers to increase their effort job by making them perform multiple tasks at a rate higher than the status quo. The procedure requires trimming the treatment sample by the proportion of additional visits observed in the treatment relative to the control. To estimate the lower bound for each outcome, I trim the treatment sample by removing the additional households that received a visit where the workers performed the task in question and estimate the treatment’s effect using this trimmed sample. Conversely, for estimating the upper bound, I remove the additional households visited where the worker did not perform the task.

Appendix Table A8 reports the lower and upper bounds and bootstrapped standard errors. The estimates of bounds for the effects of the mission treatment on the antenatal check, child examination, and TB screening consistently exclude zero, indicating significance. Furthermore, the lower bounds are significantly different from zero. Similarly, the estimated bounds for the effects of the combined treatment on the antenatal check and child examination exclude zero, with lower bounds that are statistically different from zero. This exercise supports the conclusion that the mission treatment, standalone financial incentive treatment, and combined treatment all increase the likelihood that workers perform multiple tasks during visits, thus exerting higher effort than the status quo.

Additionally, I find that the placebo treatment and the standalone financial incentive treatment do not increase worker effort at the intensive margin during the visits. While the placebo treatment has no statistically significant conditional or unconditional effect on any of the three outcomes, the financial incentive treatment has a positive effect on the likelihood

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<sup>10</sup>Estimating Lee (2009) bounds requires a monotonicity assumption, which in this case would mean that no households are visited solely because they are in the control condition, nor are any households excluded from visits because they are in the treatment condition.

of workers performing tasks during home visits if analyzed unconditionally. However, the point estimates become statistically insignificant when conditioned on visits. Further, the estimated lower bounds for the effects of the financial incentive treatment on the likelihood of performing multiple tasks consistently include zero, suggesting that monetary rewards linked to visits do not motivate workers to increase their effort on tasks performed during the visits.

**Non-Visit Tasks.** It is possible that the improvements in performance on tasks during the visits resulting from the mission and combined treatments come at the cost of non-visit tasks. As indicated above, I collect information on the number of immunization camps organized by workers to explore this possibility. Community health workers are not trained to vaccinate children. Instead, children are vaccinated by trained technicians in health facilities. However, to improve coverage rates, community health workers and technicians work together to organize community immunization camps to bring their services closer to families, making it less costly for them to have their children vaccinated. Workers are not paid extra for these activities and can easily shirk some of their responsibilities unless they are motivated by the mission to help improve the health of mothers and children in their communities.

Column 7 of Table 2 reports the effects of the treatments on the number of camps organized in the community. This outcome is not a downstream task from home visits, so the analysis examines the direct causal effects of the treatments on the number of camps organized. The results indicate that workers in the mission and combined treatments increase their effort on this task, as they, on average, organize nearly an additional half camp ( $q$ -values of 0.05 and 0.107, respectively), over a control average of 5.7 camps during the three months of the experiment.

**Multiple Task Index.** Last, I combine the tasks performed during visits and the organization of immunization camps into a multiple task index to obtain a holistic picture of performance besides home visits. Since the household and worker data are at different levels, I first collapse the household-level data to the worker-month level to construct measures of performance for the antenatal check, child examination, and TB check, unconditional and conditional on visits. Then, following Anderson (2008), I weight the data with the variance-covariance matrix and combine them to construct performance indices on multiple tasks. Using these indices as outcomes, columns 8 and 9 of Table 2 show that the mission and combined treatments increase performance on multiple tasks by 0.27 ( $q$ -value = 0.001) and 0.296 ( $q$ -value = 0.001) standard deviations when the analysis is not conditional on visits,

and by 0.188 ( $q$ -value = 0.001) and 0.156 ( $q$ -value = 0.007) standard deviations when the analysis is conditional on visits. Additionally, Appendix Table A9 shows that the results on the multiple task indices are robust to changing the methodology of index construction following Kling et al. (2007).

#### 4.3.2 Time Use

I further explore if the treatments improve workers' time use, using data from the worker endline survey and the household survey. Table A10, column 1 shows that the mission-treated workers increase the self-reported amount of time spent on their job in a day relative to the pure control workers by an 16.8 additional minutes. However, I do not find any statistically significant differences in how this time is spent (columns 2–5). These results should be interpreted with caution as the analysis is based on workers' self-reported time use.

While the workers spend more time working, it is still possible that they reduce the duration of each visit. To ascertain this, I use data from households where the respondents reported in survey rounds 2 and 3 the length of time a worker spent during visits. Column 6 of Table A10 reports that the amount of time spent on an average home visit does not change across the treatment conditions. This result is reassuring as it indicates that workers are not shortening their visits to perform more of them. However, how is the increased length of the work day in the mission treatment accounted for when the length of home visits has not changed? One possibility is that the workers expand their reach, using the extra time by visiting households that are farther from their home.

In the first round of the household survey, I asked the respondents how long the worker takes to walk to their house from her own home. Using this information, I study how far the worker travels on average in the community to perform the visits. The results, shown in in column 7 of Table A10, indicate that in the status quo, workers visit homes that are, on average, a 15.9-minute walk from their place of residence. However, mission-treated workers expand their reach by visiting homes that require an additional two minutes of walking. This result suggests that the mission-treated workers use the extra time, available as a result of a longer work day, to expand their reach by visiting more households in their community.

### 4.4 Discussion

The analysis in this section has shown that the mission intervention effectively motivates workers to perform their jobs more holistically: they visit more households, perform more

tasks during the visits, increase the number of camps they organize, and try to reach households that might otherwise be overlooked in the status quo. Notably, these improvements in performance do not arise at the cost of some aspects of the job.<sup>11</sup>

Further, the combined treatment does not lead to crowding out. However, the effect of the standalone financial incentive treatment on home visits becomes relatively smaller in the combined treatment. When combined with the mission treatment, this loss of effectiveness of financial incentives is due to differences in how both treatments affect how workers allocate effort to tasks. The financial incentive treatment directs worker effort to the contractible task that gets them the most financial reward, while the mission treatment motivates them to allocate effort to all tasks, irrespective of whether they are contractible or not, resulting in them becoming better workers overall.

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<sup>11</sup>While I captured data on multiple tasks from multiple sources to analyze several aspects of the job, I have not found evidence for a trade-off between tasks. However, it is still possible that the increases in the measured outcomes might have come at the cost of outcomes not tracked in this study, particularly for the group receiving financial incentives, as theorized in the literature (Holmstrom and Milgrom 1991).



Table 2: Effects on Multitasking

	<i>Antenatal Check = 1</i>		<i>Children Examined = 1</i>		<i>TB Screening = 1</i>		<i># Camps</i>	<i>Multiple Tasks</i>	
	<i>Uncond.</i>	<i>Cond.</i>	<i>Uncond.</i>	<i>Cond.</i>	<i>Uncond.</i>	<i>Cond.</i>		<i>Uncond.</i>	<i>Cond.</i>
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Mission	0.084*** (0.024) [0.001]	0.060*** (0.022) [0.010]	0.065*** (0.020) [0.003]	0.034** (0.014) [0.021]	0.057*** (0.012) [0.001]	0.050** (0.020) [0.016]	0.468* (0.269) [0.062]	0.270*** (0.047) [0.001]	0.188*** (0.046) [0.001]
Mission-plus	0.081*** (0.029) [0.009]	0.056** (0.024) [0.022]	0.063*** (0.023) [0.010]	0.033** (0.016) [0.034]	0.072*** (0.014) [0.001]	0.045** (0.022) [0.032]	0.476 (0.345) [0.107]	0.296*** (0.059) [0.001]	0.156*** (0.054) [0.007]
Financial Incentive	0.114*** (0.030) [0.001]	0.007 (0.027) [0.321]	0.096*** (0.025) [0.001]	0.025 (0.016) [0.074]	0.078*** (0.015) [0.001]	-0.000 (0.023) [0.381]	0.167 (0.326) [0.260]	0.350*** (0.061) [0.001]	0.011 (0.053) [0.333]
Placebo	0.019 (0.024) [0.204]	-0.035 (0.026) [0.117]	0.007 (0.022) [0.312]	0.012 (0.015) [0.204]	0.012 (0.012) [0.168]	0.011 (0.023) [0.273]	-0.290 (0.292) [0.168]	0.053 (0.051) [0.163]	-0.002 (0.049) [0.375]
Control Mean	0.365	0.924	0.392	0.935	0.278	0.773	5.716	-0.000	0.000
# of Observations	4199	1920	7243	3352	21299	8605	702	710	710
# of Workers	703	646	710	689	710	710	702	710	710
Conditional on Visit	No	Yes	No	Yes	No	Yes	-	No	Yes
Data Source	HH Surveys	HH Surveys	HH Surveys	HH Surveys	HH Surveys	HH Surveys	Worker Survey	-	-
<i>Linear Combinations of Coefficients</i>									
Mission – Placebo	0.065*** [0.001]	0.095*** [0.001]	0.058*** [0.001]	0.021** [0.029]	0.045*** [0.001]	0.039*** [0.010]	0.759*** [0.001]	0.217*** [0.001]	0.190*** [0.001]
Mission-plus – Placebo	0.061** [0.016]	0.091*** [0.001]	0.056*** [0.007]	0.021* [0.064]	0.060*** [0.001]	0.035** [0.030]	0.766** [0.015]	0.244*** [0.001]	0.158*** [0.001]
Mission – Financial Incentive	-0.030 [0.144]	0.053*** [0.005]	-0.031 [0.072]	0.009 [0.196]	-0.021* [0.064]	0.050*** [0.002]	0.301 [0.151]	-0.080 [0.078]	0.177*** [0.001]
Mission-plus – Financial Incentive	-0.033 [0.156]	0.049** [0.014]	-0.033 [0.082]	0.008 [0.231]	-0.005 [0.304]	0.046*** [0.010]	0.309 [0.187]	-0.054 [0.194]	0.145*** [0.003]

*Notes:* \* $p < 0.1$ , \*\* $p < 0.05$ , \*\*\* $p < 0.01$ . This table reports the effects of the treatments on multiple tasks specified in column headers. The first six columns analyze the effects on tasks performed during visits using data from the household surveys, and column 7 analyzes the effect on organizing immunization camps using worker data. Columns 8 and 9 combine the tasks into an index. “Antenatal Check” is defined for households with a pregnant woman, and it is coded as 1 if the worker performed a wellness check on her during the visit and 0 otherwise. “Children Examined” is defined for households with children aged two or younger; it is coded as 1 if the worker examined the child during visit and 0 otherwise. “TB Screening” is coded as 1 if the worker screened households for TB during visits and 0 otherwise. For each outcome (except in column 7), the table reports the analysis unconditional on home visits (Uncond.) and conditional on home visits (Cond.). In unconditional analysis, all instances where a visit did not occur are coded as 0. For conditional analysis, these instances are coded as missing. Each regression controls for randomization-block and, except column 7, survey-wave fixed effects. Standard errors clustered at the worker level are reported in parentheses. The second half of the table reports linear combinations of coefficients on the treatments and tests them against a null of zero difference. False discovery rate-adjusted  $q$ -values are reported in square brackets.

## 5 Health Outcomes

In this section, I study whether the treatments translate into improved health outcomes for children, using two sources of data. First, I rely on data about the prevalence of diarrhea and the vaccination status of the household’s children under the age of two, collected via the household surveys during the experiment. Second, I use administrative data prepared by the workers as part of their routine job to collect information on child and maternal mortality as well as children’s body weight in their area.<sup>12</sup> The analysis reported in this section is based on regression Equation 1; however, I do not use the inverse probability weights as the data are not representative of the population of children or mothers.

Diarrhea is the second most common reason for childhood deaths globally.<sup>13</sup> It is also the most basic preventable disease whose prevalence community health workers can influence via teaching about both prevention—e.g., the importance of sanitation and clean drinking water—and treatment—e.g., how to make and use re-hydration solutions and distribute zinc solution. In the post-experiment survey, I asked households if any child had diarrhea during the previous four months. I use this information to construct a dichotomous variable of diarrhea prevalence that I analyze in this section.

Column 1 of Table 3 reports the effects of the treatments on the prevalence of diarrhea in households with at least one child. Nearly 28.7% of the households in the control group report children getting diarrhea during the study period. However, the main treatments—the mission and combined treatments—substantially reduce diarrhea by 7.3 ( $q$ -value = 0.099) and 7.6 ( $q$ -value = 0.100) percentage points, respectively, indicating that workers’ performance improved on this basic dimension of health outcomes. Interestingly, workers in the placebo treatment—who received the training about health concerns but not the mission training—did not see a change in health outcomes. The effects of this treatment are significantly smaller than those of the mission and combined treatments on this outcome. However, the communities served by workers who received financial incentives do see a significant reduction of 9.7 percentage points ( $q$ -value = 0.068) in the prevalence of diarrhea.

These effects on the prevalence of diarrhea should be considered suggestive despite being comparable with other public health interventions, for two reasons. First, the household

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<sup>12</sup>I had planned to collect anthropometric, vaccination, and mortality information through an independent survey of households designed to be representative of child and mother population. However, the emergence of COVID-19 and the resulting restrictions on social interactions prevented me from doing so.

<sup>13</sup>According to the CDC fact sheet on diarrhea; see <https://www.cdc.gov/healthywater/pdf/global/programs/globaldiarrhea508c.pdf>, accessed on September 3, 2020.

Table 3: **Effects of the Treatments on Health Outcomes**

	<i>Prevalence of Diarrhea</i>	<i>Proportion Timely Vaccinated</i>
	(1)	(2)
Mission	-0.073** (0.035) [0.099]	0.038* (0.022) [0.120]
Mission-plus	-0.076* (0.039) [0.100]	0.056** (0.023) [0.068]
Financial Incentive	-0.097** (0.039) [0.068]	0.022 (0.024) [0.236]
Placebo	-0.002 (0.036) [0.714]	0.025 (0.023) [0.224]
Control Mean	0.287	0.888
# of Observations	2292	2292
# of Workers	686	686
Block Fixed Effects	✓	✓
Data Source	Household Survey	Household Survey
<i>Linear Combinations of Coefficients</i>		
Mission – Placebo	-0.071*** [0.068]	0.014 [0.224]
Mission-plus – Placebo	-0.074** [0.068]	0.031* [0.100]
Mission – Financial Incentive	0.024 [0.258]	0.016 [0.224]
Mission-plus – Financial Incentive	0.021 [0.326]	0.034* [0.114]

*Notes:* \* $p < 0.1$ , \*\* $p < 0.05$ , \*\*\* $p < 0.01$ . This table reports the effects of the treatments on the prevalence of diarrhea and proportion of children timely vaccinated, using data collected from households that had children aged two years or younger. Each regression controls for randomization-block fixed effects, and standard errors are clustered at the worker level and reported in parentheses. The second half of the table reports linear combinations of coefficients on the treatments and tests them against a null hypothesis of zero difference. False discovery rate-adjusted  $q$ -values are reported in square brackets.

survey was not designed to report on the health status of children in the community in a representative manner. Second, the definition of diarrhea used in the survey was different from the one recommended by the World Health Organization.<sup>14</sup> Despite these limitations, the analysis is informative of the reduction in the incidence of sickness in children due to the experimental interventions, and the results are comparable to other public health initiatives.<sup>15</sup>

Next, I track if the workers' efforts translate into increased vaccination rates of children, using vaccination data from the last household survey. In this survey, enumerators asked households about the vaccination status of each child along with their age and used this information to calculate whether the child had received timely vaccinations. The enumerators also noted the number of children who were indeed fully vaccinated as per the prescribed schedule.

I use the proportion of vaccinated children in each household (for households with at least one child) as the main outcome in the analysis reported in column 2 of Table 3. The results indicate that the mission and combined treatments substantially affect the proportion of children who are vaccinated in a timely manner. Children in these treatment groups are 3.8 ( $q$ -value = 0.12) and 5.6 ( $q$ -value = 0.068) percentage points more likely to be vaccinated, respectively. These treatment effects are directly linked to workers' performance on organizing immunization camps, as discussed in Section 4.3.1. In comparison, I cannot reject null hypotheses of no effects of the placebo treatment and the financial incentive treatment on this outcome.

In Appendix Table A11, I use data from administrative registers to further explore the health effects of the treatments. In columns 1 and 2, I report the effects on child and mother mortality, respectively. Given that both events are rare, I do not have enough statistical power to make conclusive claims about the effects. However, the coefficients have signs indicating a decrease in the mortality rates over the year. Column 3 reports the effects on children's body weight. These data are only available for 543 workers—the remaining workers did not have functional scales to measure children's weight, though the availability of these data are balanced across treatments. The main takeaway from this analysis is that the treatment estimates point to improvements compared to the pure control; however, these effects are not statistically significant using  $q$ -values.

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<sup>14</sup>The World Health Organization recommends that a child may be considered sick with diarrhea if they have “3 or more loose or liquid stools per day.” However, my survey directly asked the households if the child had diarrhea instead of asking about 3 or more loose bowel movements.

<sup>15</sup>See Fewtrell et al. (2005) for a meta-study of non-medical interventions aimed at addressing diarrhea.

## 6 Mechanisms

In this section, I explore the mechanisms through which the mission treatment motivates workers to improve their job performance. Specifically, I argue that the treatment changes workers’ beliefs about the organization and activates their values for impure altruism, thereby influencing their behavior. I present two pieces of evidence to make this argument. First, the results from the endline survey indicate that mission-treated workers are more likely to believe that the organizational mission aligns with their values, increasing their motivation to work for their employer. Second, the treatment stimulates altruistic values related to the job, encouraging workers to exert effort without the need for additional financial incentives in a lab-in-the-field activity.

### 6.1 Alignment of Values

Workers may prefer working for an organization where the leaders also believe in the mission and signal it to the employees (Rosen 1986). The mission treatment may therefore act as such a signal from the organizational leaders to the workers. If that is the case, then mission-treated workers should change their beliefs about the organization and perceive a higher alignment between their values and that of the organization.

In the endline survey, workers were asked to rate their agreement with the following statements regarding the centrality of the mission to their organization on a scale of 1 to 7 (with 7 communicating “Very Strongly Agree”):

1. Mission Importance: I like the LHW program more than other departments because of the importance it places on the mission.
2. Mission Alignment: I believe the LHW program’s mission is very similar to my thinking since the beginning of 2019.
3. Mission Dependent Attachment: If the LHW program’s mission was something else, I would not have been as attached to the program.

I combine the responses to these statements into a mission motivation index using the method of Anderson (2008). Column 1 of Table 4 reports the effects of the treatments on the index. Workers in the mission and combined treatments score 0.201 ( $q$ -value = 0.009) and 0.238 ( $q$ -value = 0.007) standard deviations higher on the index compared to the control condition. In comparison, the financial incentive treatment has no statistically significant effect on worker beliefs as reflected by this index. Appendix Table A12 reports the components of this index. The mission and combined treatments have positive and large effects on all worker

beliefs, suggesting an increased sense of alignment between workers and their organization. One limitation of this analysis is that workers' responses may suffer from desirability bias. However, a gap of two months between the intervention and the survey partially alleviates this concern.

## 6.2 Altruistic Values

Scholars have argued that mission motivation can also stimulate pro-social values, such as warm glow or impure altruistic values related to the job among the workers (Andreoni 1990), which further lets organizations economize on incentives (Besley and Ghatak 2005; 2017). I explore if this channel is present in the experiment via a lab-in-the-field activity. The analysis, discussed below, indeed finds that the mission and combined treatments activate these workers' pro-social values, influencing their behavior toward their job relative to workers in the pure control group.

In April 2020, one year after the experiment, I administered an incentivized activity to elicit the willingness of workers to perform a task against a menu of possible compensations, following the Becker-DeGroot-Marschak mechanism. Though the activity was designed to be performed in person, I had to modify the experiment to a phone-based activity due to the COVID-19 pandemic.

As part of this activity, my research team called the workers on the phone and introduced themselves as part of the respective training and/or financial incentives program—or the survey program (for the pure control group)—that the workers had participated in a year ago. The workers were asked whether they would be willing to make a list of households with pregnant women or children in return for some to-be-determined remuneration. Then, after confirming that the workers' responses would be kept confidential and not shared with the Department of Health, the enumerators read out the list of incentive rates one-by-one and asked the workers to inform the research team about whether they would accept such an offer or not. To make their answers incentive compatible, the enumerator made clear that the actual offer would be randomly selected from their decisions.<sup>16</sup> In the menu of compensation offers, I included Rs. 0, asking them if they would do the work for free. The responses to this offer help in understanding if the treated workers were motivated to perform the job without any monetary compensation, hence for warm glow or impure altruism.

Column 2 of Table 4 reports the effects of the treatments on workers' willingness to work

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<sup>16</sup>Unfortunately, the pandemic prevented the final implementation, but at the time of elicitation, both the workers and I believed that the choices would be implemented.

Table 4: **Intrinsic Motivation of Treated Workers**

	<i>Index of Mission Motivation</i>	<i>Willingness to Work for Rs. 0=1</i>
	(1)	(2)
Mission	0.201*** (0.071) [0.009]	0.105* (0.059) [0.050]
Mission-plus	0.238*** (0.079) [0.007]	0.135* (0.070) [0.042]
Financial Incentive	-0.031 (0.090) [0.172]	-0.058 (0.076) [0.106]
Placebo	-0.146* (0.081) [0.050]	0.012 (0.065) [0.191]
Control Mean	0.000	0.614
# of Workers	705	707
<i>Linear Combinations of Coefficients</i>		
Mission – Placebo	0.348*** [0.001]	0.093** [0.037]
Mission-plus – Placebo	0.384*** [0.001]	0.123** [0.036]
Mission – Financial Incentive	0.232*** [0.004]	0.163*** [0.010]
Mission-plus – Financial Incentive	0.269*** [0.004]	0.193*** [0.010]

*Notes:* \* $p < 0.1$ , \*\* $p < 0.05$ , \*\*\* $p < 0.01$ . This table reports the effect of the treatments on two measures of intrinsic motivations. Column 1 reports the treatment's effect on a mission-motivation index that combines workers' responses to three statements: (1) importance, "I like the LHW program more than other departments because of the importance it places on the mission"; (2) alignment, "I believe the LHW program's mission is very similar to my thinking since the beginning of 2019"; and (3) attachment, "If the LHW program's mission was something else, I would not have been as attached to the program." Column 2 reports the treatments' effect on workers' willingness to work for no pay. All regressions control for randomization-block fixed effects, and standard errors are clustered at the worker level. The second panel reports differences between coefficients and tests them against a null hypothesis of zero. False discovery rate-adjusted  $q$ -values are reported in square brackets.

without pay. Workers in the mission and combined treatments are 10.5 ( $q$ -value = 0.050) and 13.5 ( $q$ -value = 0.042) percentage points, respectively, more willing than the control group to perform the extra work without being paid. In comparison, the placebo treatment has no statistically significant effect on the acceptance rate when no compensation is offered, whereas the financial incentive treatment has a marginally negative effect ( $q$ -value = 0.106). The second part of the table reports that the effects of the mission and combined treatments are statistically different from both the placebo treatment and the financial incentive treatments. These results reveal that the mission treatment motivates the workers to be more pro-social about their job by cultivating impure altruism or warm glow.<sup>17</sup> This interpretation is also supported by the fact that workers who participated in the mission treatment continued to perform at a higher rate even after the study had ended, as shown in column 5 of Table 1.

## 7 Ruling Out Alternative Mechanisms

In this section, I study three alternative mechanisms for the effect of the mission treatment on worker performance that are not supported by the data. I first explore if peer influence contributes to the individual motivation of workers to perform, followed by examining if the mission treatment works purely through conveying information about the type of tasks a worker should perform. Last, I evaluate whether the mission treatment activates concerns about being monitored, thereby prompting them to work harder.

### 7.1 The Role of Peers

I explore whether the mission treatment influences the behavior of workers through their peers in addition to individually motivating them. This channel could work in two ways. First, workers' beliefs may change regarding what their peers care about, which in turn may change workers' expectations about their own effort. If workers do not want to appear as behaving differently from their peers, they may change their own behavior (Kandel and Lazear 1992). Second, workers may not care about deviating from the expected effort level per se, but they may learn from their peers what is important while on the job. This learning may also stimulate effort.

The design of the experiment helps to untangle the additional effect of the mission treatment on workers through their peers. As discussed in Section 3.1, the delivery method of the mission treatment was randomized into a private mission treatment and a public mission

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<sup>17</sup>There is no evidence that the treatments changed workers' generalized pro-sociality or pure altruism. I do not find any effect on the amount of money given in a dictator game, and the results are available upon request.



Table 5: **Peer Influence**

	<i>Mission Importance:</i>		<i>Household</i>
	<i>Self</i>	<i>Others</i>	<i>Visit = 1</i>
	(1)	(2)	(3)
Private Treatment	0.333*** (0.126) [0.021]	0.155 (0.128) [0.258]	0.047*** (0.015) [0.006]
Public Treatment	0.256** (0.118) [0.050]	0.212* (0.123) [0.104]	0.053*** (0.012) [0.001]
Control Mean	-0.000	0.000	0.360
# of Observations	705	705	21299
# of Workers	705	705	710
Data Source	Work Survey	Work Survey	Household Survey
<i>Linear Combinations of Coefficients</i>			
Public – Private Treatment	-0.077 [0.319]	0.058 [0.471]	0.006 [0.524]

*Notes:* \* $p < 0.1$ , \*\* $p < 0.05$ , \*\*\* $p < 0.01$ . This table reports the effects of the sub-treatments within the mission treatment and tests if they similarly affect workers' beliefs and performance. Although a full regression is conducted, only the coefficients for the two sub-treatments are reported. Columns 1 and 2 use data from the endline survey to examine whether the treatment's mode of delivery affects workers' beliefs about the mission's importance to themselves and their perceptions of their co-workers' beliefs. *Mission Importance, Self* is captured by whether the workers agree with the statement "Mission-driven motivation is important to me." Similarly, *Mission Importance, Others* is captured by whether workers agree with the statement "Mission-driven motivation is important to my co-workers." Column 3 uses household survey data to examine whether public delivery of the mission training positively affected worker performance beyond the effect of the workers' intrinsic values, captured by the privately delivered treatment. The first half of the table reports selected coefficients from a full regression, as per Equation 2, and the regressions control for randomization-block fixed effects. Column 3 also controls for survey-wave fixed effects. Standard errors clustered at the worker level are reported in parentheses. The second half of the table reports the linear combination of the coefficients and tests them against a null hypothesis of zero difference. False discovery rate-adjusted  $q$ -values are reported in square brackets.

treatment. In the private treatment, workers received the treatment individually through one-on-one interactions with a facilitator. Under this individual treatment, I restricted the worker’s knowledge about others receiving the same treatment.

Under the public treatment, workers received the treatment in a group setting, where the treatment sessions implied that the organizational mission was common knowledge. Thus, I assumed that the treatment’s effect on this group would be through a combination of intrinsic values and the additional effect due to peers. Differencing the effect of the private treatment from the public treatment would thus reveal any additional behavioral changes due to changes in expectations about peers’ effort. I estimate the effect of the two modes of treatment by estimating the following equation on the full sample:

$$\begin{aligned}
V_{ijmb} = & \beta_0 + \beta_1 * PublicMission_{jb} + \beta_2 * PrivateMission_{jb} \\
& + \beta_3 * FinancialIncentive_{jb} + \beta_4 * Mission\&FinancialIncentive_{jb} + \beta_5 * Placebo_{jb} \quad (2) \\
& + B_{jb} + z_{jb} + M_m + \epsilon_{ijmb}.
\end{aligned}$$

Column 1 of Table 5 shows that workers in both treatments have higher reported motivation for the mission, indicating that their intrinsic values are activated in both conditions. However, column 2 shows that the private mission treatment does not have a statistically significant effect on beliefs that coworkers also have higher mission motivation.<sup>18</sup> In comparison, the public mission treatment increases reported beliefs that coworkers have higher mission motivation ( $q$ -value = 0.104). Importantly, column 3 reports that both treatments lead to similarly large effects on workers’ performance as measured through home visits.

The second part of the table reports the result of testing  $\beta_1 - \beta_2 = 0$ . I cannot reject the null hypothesis that the coefficients of the private and public treatments are the same. Even though this result shows that the mission treatment may not stimulate an additional effect via expectations about peers, it should be interpreted with caution. While workers do not interact in their day-to-day job, those in the private treatment may have talked to other workers who were also part of the mission intervention, blurring the difference between the private and public treatments and leading to the emergence of similar effects in both groups. Unfortunately, I do not have data to rule this out, which is why I consider this result to be

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<sup>18</sup>I measure intrinsic values and beliefs about others through survey statements. *Mission Importance*, *Self* is captured by workers’ agreement with the statement “Mission-driven motivation is important for me.” Similarly, *Mission Importance*, *Others* is captured by workers’ agreement with the statement “Mission-driven motivation is important for my co-workers.”

suggestive.

## 7.2 Mission as Information

The second alternative explanation I test is whether the mission treatment acts as an instrument of learning and information transmission for the workers. It is possible that the workers optimize their efforts on certain tasks based on the information they have, maintaining the status quo. However, the mission treatment could alter the set of available information to them by highlighting duties such as antenatal checks and child health. Workers following this new information may re-optimize from other tasks to the performance metrics they received via the treatment.

I test for this mechanism by including a placebo treatment within the experiment. The placebo group receives the refresher training about skills required for performing basic duties, just like the public mission treatment,<sup>19</sup> but does not discuss the mission during the training. If the mission treatment works by channeling information to workers, the placebo treatment should also improve their effort. Additionally, if the mission works through conveying specific topics to the workers, then the workers in the placebo treatment should exert more effort on tasks related to the topics discussed in their refresher training.

I do not find evidence to support this explanation. The placebo treatment does not have a statistically significant effect on household visits, as reported in Table 1, and on the specific tasks related to mother and child health, as reported in Table 2. These results suggest that providing information on the mission is not the main channel through which the mission treatment works.

## 7.3 Monitoring

The third potential channel relates to activated concerns about being monitored. Emphasizing the mission may lead workers to realize that their job is important to the mission, prompting them to expect increased monitoring by managers to ensure good performance. If this channel is activated, workers in the mission treatment group should believe they are being monitored more than those the control group.

During the endline survey, all workers are asked the following question: “Compared to the past, do you think you are being monitored at a higher rate during the last four months?” I plot the mean response and confidence intervals of the responses for all treatment groups in

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<sup>19</sup>As described in Section 3.1.1, the public mission treatment is part of the broader mission treatment framework.

Appendix Figure A3, which shows no visible difference in the workers’ perception of being monitored across treatments. Even if workers exhibit the same level of perceptions about monitoring, it is possible that the mission-treated workers believe they are being monitored by the DHO (as the training featured a video where the DHO emphasized the mission), and hence their perception is more likely to affect their performance. Unfortunately, I do not have data on worker beliefs about the identity of monitors to rule out this explanation. However, the continued effect of the mission treatment beyond the experimental period in terms of higher home visits (Table 1), and accepting tasks without remuneration (Table 4), indicate that such beliefs about the identity of monitors do not explain the behavior.

## 8 Cost-Effectiveness

In the preceding sections, I established that the mission-strengthening interventions effectively motivate public sector workers to improve their performance. Therefore, it is natural to explore the program’s cost-effectiveness, as the interventions are not free. Using only direct expenditures incurred by the research team in delivering the treatment, including payments to facilitators and travel, the mission treatment in this experiment cost Rs. 349 (or \$2.25) per worker per month.<sup>20</sup> This is a conservative cost estimate since it does not include the cost of developing the training, the workers’ time, and facility usage as they were provided by the government partner.

With these costs, the interventions improved children’s health outcomes by reducing the prevalence of diarrhea and increasing vaccination rates. Due to data limitations, I cannot estimate the benefits of these improvements for the sample of communities in this experiment. However, based on previous studies, families may be saving on costs required to treat the diseases prevented. For example, households might be saving approximately \$6.83 in costs to treat diarrhea (Rheingans et al. 2012) due to a reduction in the prevalence of diarrhea during the study period. Savings from vaccine-preventable diseases are expected to be even higher (Haque et al. 2016). For example, a case of measles, which is one of the vaccine-preventable diseases, can cost between \$18 and \$800 depending on the severity and location of treatment (Levin et al. 2023), which is likely saved as children get vaccinated against it in the treated communities.

A comparison of the potential savings with the back-of-the-envelope cost calculation suggests that the mission interventions provide a net benefit to society. It also bears mentioning that

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<sup>20</sup>Using the exchange rate at the time of the study.

the mission treatment imposes a private cost on the worker as they increase their effort on the job without a compensating transfer. However, the potential savings from preventing one severe case of diarrhea and one case of measles per month per worker are large enough that compensating the workers with a \$10 increase in monthly salary and investing in the mission intervention is still cost-effective on net.

## 9 Conclusion

Many organizations use their mission to motivate their workers. However, despite the ubiquitousness of such missions and the substantial theoretical interest, there is a lack of empirical evidence demonstrating whether organizational missions motivate workers and improve their performance. This paper provides empirical evidence from the field showing that promoting an organizational mission indeed motivates workers, which in turn increases performance in core duties and across multiple tasks, translating into better health outcomes for children. The significance of these findings is particularly relevant to settings where performance is not easily observable, such as within public health settings, or cannot be easily enforced through contracts.

The paper also explores the tension between using a mission to intrinsically motivate workers versus using financial incentives. The evidence suggests that if policy goals are measurable and do not require multitasking, managers may prefer high-powered financial incentives. However, for goals that do involve multitasking, which is common in many public services, emphasizing the mission can be a powerful tool to improve performance. In light of these findings, the detailed cost-effectiveness analysis presented in Section 8 further substantiates that the mission-strengthening interventions not only improve performance and health outcomes but also offer a favorable return on investment. This underscores the practical feasibility of integrating such mission-centric strategies into broader organizational policies.

Given the significant number of people in developing countries relying on the state for basic services such as health, education, and sanitation, the findings of this paper take on additional importance. These service providers are crucial in the development chain, yet countries have been spending significant resources on improving outcomes without similar returns on investment. Especially in the context of health service delivery in Pakistan—where this project was implemented—improvements have been slow. Based on this paper’s results, policymakers should consider focusing on motivating workers through better organizational designs that keep the mission central to the operational strategy.

While the experiment benefits from the unique organizational features of community health

workers with non-overlapping areas of responsibility, its findings can inform policy in various settings. With 97 countries employing community health workers for outreach services, these insights are applicable where preventive and basic healthcare are managed by community-based workforces. Additionally, these results also speak to the broader discourse on improving bureaucratic performance. Despite the foundations of modern bureaucratic organizations, as outlined by Weber (1922), being emotionally detached and rule-bound, the nature of public service still strongly appeals to those who are service-oriented. This study demonstrates how bureaucratic organizations can harness the intrinsic motivations of workers to improve service delivery. Nonetheless, the external validity of the study may be limited for two reasons. First, the subjects are all women, who may have different motivational responses than male public sector workers. Second, as noted earlier, Haripur ranks high on the Human Development Index in Pakistan. If this influenced the program's success, then the findings may only be applicable to other settings with a similar baseline level of human capital.

Returning to the immediate implications for Pakistan, the mission treatment meaningfully changed workers' behavior and even improved health outcomes. This raises an important question: why has the Department of Health (and other public service organizations) not already capitalized on this clear opportunity for improvement? While I lack the data to answer this question comprehensively, discussions with policy partners indicate that some managers in the department do informally adopt the strategy. However, the absence of formal institutionalization can be attributed to several factors. For example, the incentives for managers are not aligned with making mission-emphasizing events standard practice within the organization. Such changes require costly arrangements that do not directly benefit the managers as their performance evaluations do not typically account for the effectiveness of worker performance. Understanding why this easily addressable inefficiency continues to persist is an important avenue for future work, not only because it is practically relevant but also because it may reveal deeper causes of institutional failure. Additionally, exploring how employees in public service organizations, such as the Department of Health, respond when there is no clear, overarching mission represents another significant area for future research.

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Figure A1: **Timeline**

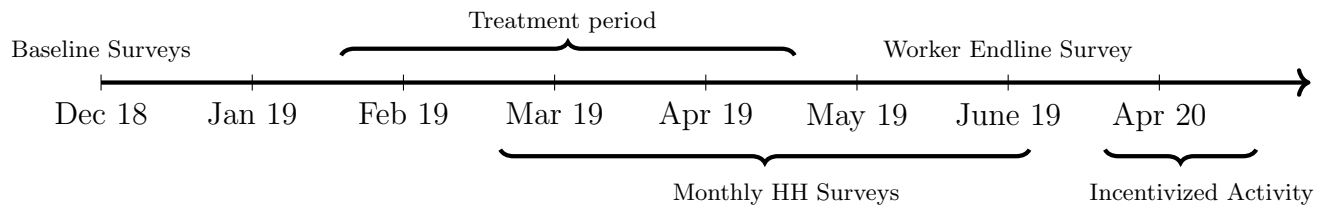


Figure A2: **Design of the Experiment**

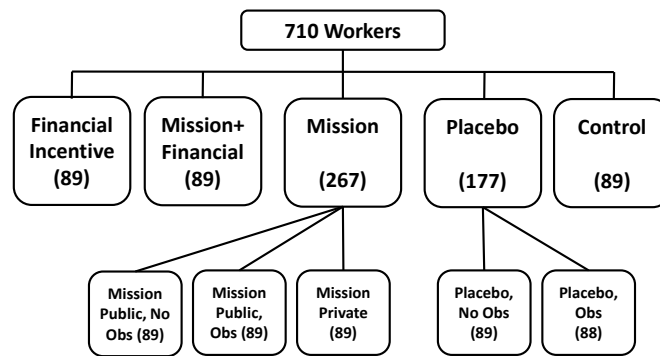


Table A1: **Summary Statistics**

<b>Variable</b>	<b>Mean</b>	<b>Std. Dev.</b>	<b>Min.</b>	<b>Max.</b>	<b>N</b>
# of Households in Community	155.97	34.913	68	232	710
Years of Schooling	10.034	2.405	5	18	707
Healthcare Certificate	0.38	0.486	0	1	707
Tenure in Years	15.299	5.458	1	27	575
Proportion of HHs visited	0.371	0.21	0	1	710
Proportion of HHs with Pregnant Women	0.26	0.17	0	0.9	710
Proportion of HHs with Children	0.397	0.221	0	0.9	710

Table A2: Balance on Pre-Treatment Covariates

	<i>Total HH Assigned</i>	<i>Pregnant Women</i>	<i>Children Under two</i>	<i>LHW Visit</i>	<i>Distance in mins</i>	<i>Years of Schooling</i>	<i>Health Diploma</i>	<i>Tenure in Years</i>	<i>PSM Score</i>	<i>Raven Score</i>
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Mission	0.440 (1.193)	0.001 (0.016)	-0.015 (0.021)	-0.028 (0.022)	0.423 (0.522)	-0.229 (0.285)	0.036 (0.043)	-0.415 (0.746)	-0.016 (0.063)	-0.024 (0.022)
Mission-plus	-0.843 (1.405)	0.027 (0.020)	0.013 (0.028)	0.002 (0.028)	0.027 (0.592)	-0.431 (0.336)	0.062 (0.058)	-0.323 (0.903)	-0.046 (0.082)	-0.043 (0.029)
Financial Incentive	1.170 (1.470)	0.007 (0.021)	0.036 (0.029)	0.014 (0.025)	0.518 (0.560)	0.103 (0.362)	0.100* (0.054)	-2.677*** (0.932)	-0.070 (0.080)	-0.020 (0.027)
Placebo	-1.174 (1.258)	0.009 (0.018)	0.012 (0.023)	-0.005 (0.023)	0.193 (0.515)	-0.248 (0.307)	-0.001 (0.047)	-1.161 (0.779)	-0.092 (0.070)	-0.048** (0.023)
Control Mean	155.62	0.26	0.40	0.39	15.96	10.25	0.35	16.00	3.66	0.60
# of Observations	710	7099	7099	7099	7099	707	707	575	709	710
# of Workers	710	710	710	710	710	707	707	575	709	710

Notes: \* $p < 0.1$ , \*\* $p < 0.05$ , \*\*\* $p < 0.01$ . This table reports balance across pre-treatment covariates mentioned in the column headers. Each regression includes block fixed effects. Standard errors are clustered at the worker level.

Table A3: **Balance Table: Attrition in Datasets**

	<i>Endline Survey</i>	<i>Post-Endline Survey</i>	<i>Administrative Health Data</i>
Mission	0.007 (0.005)	0.000 (0.002)	-0.008 (0.041)
Mission-plus	0.000 (0.003)	0.000 (0.003)	0.032 (0.049)
Financial Incentive	0.011 (0.011)	0.011 (0.011)	0.018 (0.051)
Placebo	0.010 (0.008)	0.011 (0.008)	-0.007 (0.043)
Control Mean	0.00	0.00	0.25
# of Observations	710	710	710

*Notes:*  $*p < 0.1$ ,  $**p < 0.05$ ,  $***p < 0.01$ . This table tests whether attrition in the endline survey, post-endline survey, and administrative health datasets is correlated with the treatments. Each column reports results from a regression that if the missingness is different between the treatments and control. Each regression includes block fixed effects. Standard errors are clustered at the worker level.



Table A4: Effects on the Probability of Household Visits: Unweighted Sample

<i>Dep Var: Household Visit = 1</i>	During the Experiment				After the Experiment
	(1)	(2)	(3)	(4)	(5)
Mission	0.048*** (0.012) [0.001]	0.050** (0.020) [0.020]	0.052*** (0.019) [0.013]	0.041** (0.018) [0.026]	0.051** (0.021) [0.020]
Mission-plus	0.069*** (0.014) [0.001]	0.069*** (0.026) [0.015]	0.054** (0.022) [0.022]	0.085*** (0.022) [0.001]	0.021 (0.025) [0.179]
Financial Incentive	0.102*** (0.015) [0.001]	0.086*** (0.024) [0.001]	0.098*** (0.024) [0.001]	0.121*** (0.023) [0.001]	0.029 (0.025) [0.120]
Placebo	0.012 (0.012) [0.152]	0.009 (0.021) [0.243]	0.011 (0.020) [0.219]	0.016 (0.020) [0.179]	0.015 (0.022) [0.193]
Control Mean	0.360	0.383	0.372	0.326	0.298
# of Observations	21299	7099	7100	7100	7100
# of Workers	710	710	710	710	710
<i>Linear Combinations of Coefficients</i>					
Mission – Placebo	0.036*** [0.001]	0.041*** [0.015]	0.042*** [0.011]	0.024 [0.061]	0.036** [0.026]
Mission-plus – Placebo	0.057*** [0.001]	0.060*** [0.015]	0.043** [0.024]	0.068*** [0.002]	0.006 [0.276]
Mission – Financial Incentive	-0.054*** [0.001]	-0.037* [0.042]	-0.045** [0.024]	-0.080*** [0.001]	0.022 [0.134]
Mission-plus – Financial Incentive	-0.033** [0.026]	-0.018 [0.193]	-0.044* [0.042]	-0.036 [0.072]	-0.008 [0.269]

*Notes:* \* $p < 0.1$ , \*\* $p < 0.05$ , \*\*\* $p < 0.01$ . This table reports the effects of the treatments on the probability of household visits using a linear probability model, without weighting the randomly selected sample using inverse probability of selection. The analysis uses household-level data collected across three survey rounds. Column 1 reports the results aggregated from all rounds, while columns 2–4 report regression results separately for each survey round. The first part of the table reports the coefficients on each treatment dummy. Each regression uses randomization-block fixed effects, and column 1 also uses survey-wave fixed effects. The second part of the table reports linear combinations of coefficients and tests them against a null of zero difference. The analysis uses responses from 21,299 surveys, instead of 21,300, due to one refusal that was not replaced by the field team. Standard errors are clustered at the worker level and reported in parentheses, and false discovery rate-adjusted  $q$ -values are reported in square brackets.

Table A5: Effects on the Probability of Household Visits: With Baseline Controls

<i>Dep Var: Household Visit = 1</i>	During the Experiment				After the Experiment
	(1)	(2)	(3)	(4)	(5)
Mission	0.061*** (0.012) [0.001]	0.071*** (0.010) [0.001]	0.053** (0.022) [0.018]	0.060*** (0.022) [0.008]	0.063*** (0.024) [0.011]
Mission-plus	0.068*** (0.014) [0.001]	0.065*** (0.013) [0.001]	0.046* (0.025) [0.054]	0.094*** (0.026) [0.002]	-0.002 (0.029) [0.293]
Financial Incentive	0.102*** (0.015) [0.001]	0.084*** (0.013) [0.001]	0.085*** (0.029) [0.005]	0.137*** (0.028) [0.001]	0.023 (0.030) [0.210]
Placebo	0.016 (0.013) [0.117]	0.013 (0.012) [0.159]	0.014 (0.023) [0.231]	0.022 (0.023) [0.178]	0.011 (0.025) [0.258]
Control Mean	0.360	0.383	0.372	0.326	0.298
# of Observations	17189	5729	5730	5730	5730
# of Workers	573	573	573	573	573
<i>Linear Combinations of Coefficients</i>					
Mission – Placebo	0.045*** [0.001]	0.058*** [0.001]	0.038** [0.022]	0.038** [0.022]	0.052*** [0.005]
Mission-plus – Placebo	0.052*** [0.001]	0.052*** [0.001]	0.031 [0.088]	0.072*** [0.004]	-0.012 [0.237]
Mission – Financial Incentive	-0.041*** [0.003]	-0.013 [0.107]	-0.032 [0.107]	-0.077*** [0.002]	0.040* [0.062]
Mission-plus – Financial Incentive	-0.034** [0.022]	-0.019 [0.081]	-0.039 [0.096]	-0.043 [0.079]	-0.024 [0.207]

*Notes:* \* $p < 0.1$ , \*\* $p < 0.05$ , \*\*\* $p < 0.01$ . This table reports the effects of the treatments on the probability of household visits using a linear probability model and controlling for baseline the covariates used to test the randomization balance. The analysis uses household-level data collected across three survey rounds. Column 1 reports the results aggregated from all rounds, while columns 2–4 report regression results separately for each survey round. The first part of the table reports the coefficients on each treatment dummy. Each regression uses randomization-block fixed effects, and column 1 also uses survey-wave fixed effects. The second part of the table reports linear combinations of coefficients and tests them against a null of zero difference. The analysis uses responses from 21,299 surveys, instead of 21,300, due to one refusal that was not replaced by the field team. Standard errors are clustered at the worker level and reported in parentheses, and false discovery rate-adjusted  $q$ -values are reported in square brackets.

Table A6: **Robustness of Results by Sample Trimming**

<i>Dep Var: Household Visit = 1</i>	Exclude Sample by			
	Size of the Community	Size of the Strata		
	(1)	(2)	(3)	(4)
Mission	0.046*** (0.012) [0.001]	0.052*** (0.012) [0.001]	0.052*** (0.012) [0.001]	0.047*** (0.012) [0.001]
Mission-plus	0.069*** (0.015) [0.001]	0.070*** (0.015) [0.001]	0.071*** (0.014) [0.001]	0.068*** (0.014) [0.001]
Financial Incentive	0.095*** (0.016) [0.001]	0.100*** (0.016) [0.001]	0.101*** (0.016) [0.001]	0.097*** (0.015) [0.001]
Placebo	0.012 (0.013) [0.074]	0.013 (0.013) [0.067]	0.014 (0.013) [0.067]	0.012 (0.012) [0.068]
# of Observations	20279	20249	20279	20759
# of Workers	676	675	676	692
<i>Linear Combinations of Coefficients</i>				
Mission – Placebo	0.035*** [0.001]	0.039*** [0.001]	0.038*** [0.001]	0.035*** [0.001]
Mission-plus – Placebo	0.057*** [0.001]	0.057*** [0.001]	0.057*** [0.001]	0.056*** [0.001]
Mission – Financial Incentive	-0.049*** [0.001]	-0.048*** [0.001]	-0.049*** [0.001]	-0.050*** [0.001]
Mission-plus – Financial Incentive	-0.026* [0.026]	-0.030* [0.016]	-0.030** [0.016]	-0.029* [0.018]
Excluded Percentile	Above 95th	Below 5th	Above 95th	Below 5th

*Notes:* \* $p < 0.1$ , \*\* $p < 0.05$ , \*\*\* $p < 0.01$ . This table reports the robustness of the results after trimming the sample to exclude workers who are above the 95th percentile or below the 5th percentile, based on the size of the community and the size of the randomization block/strata. Columns 1 and 2 report results after excluding the LHWs that serve communities larger than the 95th percentile and those below the 5th percentile, respectively. Similarly, columns 3 and 4 trim the sample based on the size of the randomization block. The regressions use the exact same specification as in column 1 of Table 1. Each regression uses block and survey-wave fixed effects, and standard errors are clustered at the worker level. False discovery rate-adjusted  $q$ -values are reported in square brackets.

Table A7: Heterogeneity by Baseline Worker Characteristics

Dep. var: Household Visit = 1	<i>Heterogeneity by</i>				
	<i>Health Diploma</i>	<i>Years of Schooling</i>	<i>Tenure</i>	<i>Public Service Motivation</i>	<i>Raven's Score</i>
	(1)	(2)	(3)	(4)	(5)
Mission	0.050*** (0.015) [0.003]	0.051*** (0.012) [0.001]	0.057*** (0.013) [0.001]	0.049*** (0.012) [0.001]	0.051*** (0.012) [0.001]
Mission-plus	0.063*** (0.017) [0.001]	0.069*** (0.014) [0.001]	0.073*** (0.016) [0.001]	0.070*** (0.014) [0.001]	0.070*** (0.014) [0.001]
Financial Incentive	0.106*** (0.020) [0.001]	0.101*** (0.015) [0.001]	0.109*** (0.017) [0.001]	0.100*** (0.015) [0.001]	0.099*** (0.015) [0.001]
Placebo	0.009 (0.016) [0.687]	0.013 (0.012) [0.382]	0.021 (0.014) [0.217]	0.012 (0.012) [0.418]	0.013 (0.012) [0.382]
Interaction Variable	0.009 (0.022) [0.730]	0.013 (0.012) [0.769]	0.021 (0.011) [0.230]	0.012* (0.010) [0.142]	0.013 (0.012) [0.783]
× Mission	0.004 (0.025) [0.767]	0.002 (0.013) [0.767]	0.023* (0.014) [0.143]	0.020* (0.011) [0.131]	-0.006 (0.013) [0.730]
× Mission-plus	0.015 (0.030) [0.730]	-0.005 (0.017) [0.730]	0.030* (0.017) [0.131]	0.006 (0.014) [0.730]	0.000 (0.016) [0.844]
× Financial Incentive	-0.009 (0.031) [0.730]	0.004 (0.015) [0.730]	0.013 (0.016) [0.508]	0.003 (0.016) [0.767]	0.025 (0.018) [0.241]
× Placebo	0.012 (0.026) [0.730]	-0.006 (0.014) [0.730]	0.032** (0.014) [0.042]	0.017 (0.012) [0.241]	0.004 (0.015) [0.730]
Control Mean	0.360	0.360	0.360	0.360	0.360
# of Observations	21209	21209	17249	21269	21299
# of Workers	707	707	575	709	710

Notes: \* $p < 0.1$ , \*\* $p < 0.05$ , \*\*\* $p < 0.01$ . This table reports heterogeneity in performance effects by worker baseline characteristics, using household visits as the dependent variable. Each column presents results from the full regression, where the baseline characteristic specified in the column header is interacted with all treatment conditions. Each regression uses block and survey-wave fixed effects, and standard errors are clustered at the worker level. False discovery rate-adjusted  $q$ -values are reported in square brackets.

Table A8: Lee Bounds on the Effects on Multiple Tasks

<i>Bounds</i>	<i>Antenatal</i> <i>Check = 1</i>		<i>Child</i> <i>Examination = 1</i>		<i>Tuberculosis</i> <i>Check = 1</i>	
	<i>Lower</i>	<i>Upper</i>	<i>Lower</i>	<i>Upper</i>	<i>Lower</i>	<i>Upper</i>
	(1)	(2)	(3)	(4)	(5)	(6)
Mission	0.050** (0.023)	0.071*** (0.017)	0.027* (0.016)	0.066*** (0.013)	0.025* (0.015)	0.163*** (0.016)
Mission-plus	0.056** (0.023)	0.076*** (0.020)	0.032* (0.018)	0.066*** (0.013)	0.011 (0.020)	0.216*** (0.013)
Financial Incentive	-0.863*** (0.053)	0.081*** (0.023)	0.010 (0.018)	0.065*** (0.014)	-0.062*** (0.022)	0.208*** (0.014)
Placebo	-0.044* (0.023)	0.054*** (0.020)	0.011 (0.013)	0.028** (0.013)	0.005 (0.016)	0.037** (0.017)

*Notes:* This table reports upper and lower bounds on the effects of the treatments for multiple tasks performed during the household visit using Lee (2009) bounds. The outcomes are specified in column headers. Bootstrapped standard errors are reported in parentheses.

Table A9: **Robustness of the Multiple Task Index**

	<i>Multiple Task Index</i>	
	Uncond.	Cond.
	(1)	(2)
Mission	0.126*** (0.025) [0.001]	0.123** (0.048) [0.009]
Mission-plus	0.166*** (0.031) [0.001]	0.122** (0.052) [0.013]
Financial Incentive	0.191*** (0.032) [0.001]	0.014 (0.055) [0.270]
Placebo	0.019 (0.026) [0.158]	-0.006 (0.053) [0.296]
Control Mean	0.000	-0.000
# of Observations	21299	8605
# of Workers	710	710
Block & Wave Fixed Effects	✓	✓
Data Source	HH Surveys	HH Surveys
<i>Linear Combinations of Coefficients</i>		
Mission – Placebo	0.107*** [0.001]	0.129*** [0.001]
Mission-plus – Placebo	0.147*** [0.001]	0.128*** [0.002]
Mission – Financial Incentive	-0.065** [0.012]	0.109*** [0.003]
Mission-plus – Financial Incentive	-0.025 [0.158]	0.108*** [0.008]

*Notes:* This table checks the robustness of the effects on the multitasking index by using average standardized effects, following Kling et al. (2007) for index construction. Each regression controls for randomization-block fixed effects and survey-wave fixed effects, and standard errors are clustered at the worker level and reported in parentheses. The second half of the table reports linear combinations of coefficients on the treatments and tests them against a null of zero difference. False discovery rate-adjusted  $q$ -values are reported in square brackets.

Table A10: **Time-Use Analysis (Minutes)**

	<i>Length of Work Day</i>	<i>Mother &amp; Child Visits</i>	<i>Other Visits</i>	<i>Non Visit Activities</i>	<i>Private Practice</i>	<i>Length of a Visit</i>	<i>Avg. Distance Traveled</i>
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Mission	16.9*** (5.9) [0.06]	11.6* (6.0) [0.24]	0.9 (5.8) [1.00]	8.2 (6.6) [0.56]	-2.7 (3.3) [0.75]	0.2 (0.5) [0.87]	2.0*** (0.6) [0.03]
Mission-plus	15.1 (7.5) [0.24]	12.4 (7.6) [0.39]	-1.1 (8.1) [1.00]	7.5 (7.9) [0.68]	-0.5 (4.1) [1.00]	0.4 (0.7) [0.87]	1.5 (0.8) [0.24]
Financial Incentive	15.2* (8.0) [0.24]	-3.3 (7.3) [0.87]	11.4 (7.9) [0.44]	10.9 (8.3) [0.50]	-2.9 (4.1) [0.81]	0.7 (0.7) [0.68]	-0.1 (0.7) [1.00]
Placebo	4.1 (6.3) [0.86]	-5.3 (6.5) [0.75]	3.2 (6.6) [0.87]	10.0 (7.4) [0.49]	-5.1 (3.3) [0.39]	0.6 (0.6) [0.63]	0.4 (0.6) [0.86]
Control Mean	318.4	154.8	139.4	20.5	10.4	18.5	15.9
# of Observations	705	705	705	705	705	5626	2978
# of Workers	705	705	705	705	705	704	699
Survey Source	Worker	Worker	Worker	Worker	Worker	HH 2 & 3	HH 1
<i>Linear Combinations of Coefficients</i>							
Mission – Placebo	12.7** [0.12]	16.9*** [0.03]	-2.4 [0.87]	-1.8 [0.92]	2.4 [0.62]	-0.4 [0.68]	1.6*** [0.06]
Mission-plus – Placebo	11.0 [0.39]	17.7** [0.09]	-4.3 [0.87]	-2.5 [0.92]	4.6 [0.47]	-0.3 [0.87]	1.1 [0.44]
Mission – Financial Incentive	1.6 [1.00]	14.9** [0.12]	-10.5 [0.39]	-2.7 [0.87]	0.2 [1.00]	-0.4 [0.75]	2.2*** [0.02]
Mission-plus – Financial Incentive	-0.1 [1.00]	15.7** [0.24]	-12.5 [0.44]	-3.4 [0.87]	2.4 [0.87]	-0.3 [0.87]	1.6** [0.21]

*Notes:* \* $p < 0.1$ , \*\* $p < 0.05$ , \*\*\* $p < 0.01$ . This table explores if the treatments affect workers' time use in a typical day. Columns 1–5 use data from workers' self-reported time-use survey, and columns 6 and 7 use household survey data. The outcome variables are specified in the column headers, and all the results are reported in minutes. "Length of Work Day" measures the time between when workers start and end their work. "Mother & Child Visits" records time spent during visits to households with pregnant women, new mothers, or children aged two years or younger. "Other Visits" includes time spent during visits to all other types of households. "Non-Visit Activities" measures time spent on activities such as planning, updating records, collecting material from facilities, and meetings. "Private Practice" refers to time spent providing paid services, and "Length of visit" is the reported duration a worker stays in a household during a visit. "Avg. Distance Traveled" is the length of time it takes for the worker to travel to the households. Each regression controls for randomization-block fixed effects, and standard errors are reported in parentheses.

Table A11: **Effects of the Treatments on Additional Health Outcomes**

	<i>Mortality Rate</i>		<i>Weight in</i>
	<i>Children</i>	<i>Mothers</i>	<i>Kg</i>
	(1)	(2)	(3)
Mission	-0.003 (0.002) [1.000]	-0.001 (0.001) [1.000]	0.116 (0.136) [1.000]
Mission-plus	-0.001 (0.003) [1.000]	-0.000 (0.001) [1.000]	0.306* (0.164) [1.000]
Financial Incentive	-0.001 (0.003) [1.000]	0.000 (0.002) [1.000]	0.188 (0.151) [1.000]
Placebo	-0.001 (0.002) [1.000]	-0.001 (0.001) [1.000]	-0.026 (0.144) [1.000]
Control Mean	0.008	0.002	10.648
# of Observations	703	703	2706
# of Workers	703	703	542
<i>Linear Combinations of Coefficients</i>			
Mission – Placebo	-0.001 [1.000]	0.000 [1.000]	0.142 [1.000]
Mission-plus – Placebo	0.000 [1.000]	0.001 [1.000]	0.331** [0.785]
Mission – Financial Incentive	-0.002 [1.000]	-0.001 [1.000]	-0.073 [1.000]
Mission-plus – Financial Incentive	-0.000 [1.000]	-0.001 [1.000]	0.117 [1.000]

*Notes:* \* $p < 0.1$ , \*\* $p < 0.05$ , \*\*\* $p < 0.01$ . This table reports the effects of the treatments on health outcomes specified in the column headers, using administrative data. Each regression controls for randomization-block fixed effects, and standard errors are clustered at the worker level and reported in parentheses. The second half of the table reports linear combinations of coefficients on the treatments and tests them against a null hypothesis of zero difference. False discovery rate-adjusted  $q$ -values are reported in square brackets.

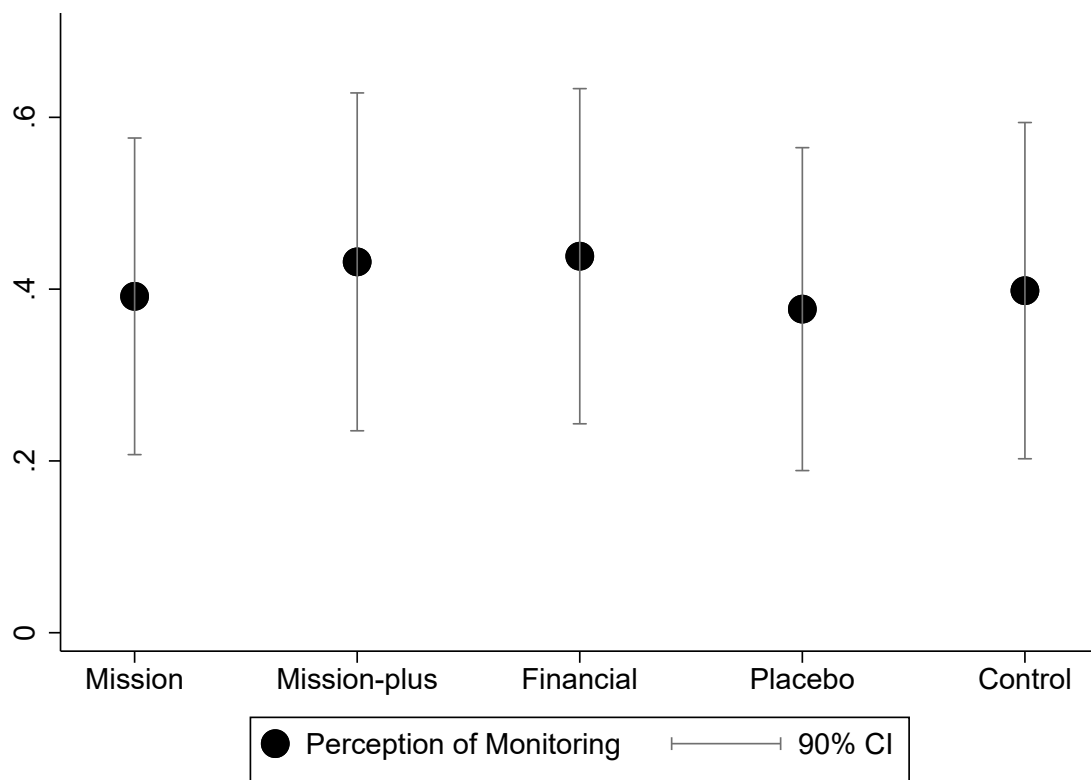


Table A12: **Beliefs About the Role of the Organization's Mission**

	Index of Beliefs	Importance	Mission Alignment	Attachment
	(1)	(2)	(3)	(4)
Mission	0.201*** (0.071) [0.009]	0.217* (0.115) [0.057]	0.175* (0.105) [0.070]	0.216* (0.110) [0.051]
Mission-plus	0.238*** (0.079) [0.007]	0.254** (0.128) [0.051]	0.219* (0.119) [0.057]	0.245** (0.119) [0.044]
Financial Incentive	-0.031 (0.090) [0.169]	0.046 (0.140) [0.169]	-0.161 (0.144) [0.118]	0.024 (0.141) [0.194]
Placebo	-0.146* (0.081) [0.059]	-0.093 (0.130) [0.139]	-0.304** (0.127) [0.021]	-0.043 (0.124) [0.169]
Control Mean	0.072	0.474	0.017	0.725
# of Observations	0.000	-0.000	-0.000	-0.000
# of Workers	705	705	705	705
<i>Linear Combinations of Coefficients</i>				
Mission – Placebo	0.348*** [0.001]	0.310*** [0.004]	0.479*** [0.001]	0.260*** [0.007]
Mission-plus – Placebo	0.384*** [0.001]	0.346*** [0.004]	0.523*** [0.001]	0.288*** [0.007]
Mission – Financial Incentive	0.232*** [0.004]	0.171* [0.070]	0.336*** [0.008]	0.192* [0.063]
Mission-plus – Financial Incentive	0.269*** [0.004]	0.208* [0.062]	0.380*** [0.007]	0.221* [0.057]

*Notes:* \* $p < 0.1$ , \*\* $p < 0.05$ , \*\*\* $p < 0.01$ . This table reports the effects of the treatments on standardized beliefs regarding the organization's mission. Index of beliefs is a composite index of workers' agreement with three statements on a scale of 1 to 7: (1) importance, "I like the LHW program more than other departments because of the importance it places on the mission"; (2) alignment, "I believe the LHW program mission is very similar to my thinking since the beginning of 2019"; and (3) attachment, "If the LHW program mission was something else, I would not have been as attached to the program." The first half of the table reports the coefficients on each treatment. The regressions control for randomization-block fixed effects, and standard errors clustered at the worker level are reported in parentheses. The second part of the table reports linear combinations of coefficients and tests them against a null of zero difference. False discovery rate-adjusted  $q$ -values are reported in square brackets.

Figure A3: **Perception of Workers About Being Monitored**



*Notes:* This figure plots the mean perception of being monitored reported by workers in different treatment groups, using data from the worker survey.