Mission motivation and public sector performance: Experimental evidence from Pakistan

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Abstract

This paper studies how emphasizing the organizational mission affects the performance of workers. In partnership with the Department of Health in Pakistan, I implement a field experiment emphasizing the mission to health workers. The mission treatment improves the performance of workers on multiple metrics– including home visits, antenatal checks, tuberculosis screening, and organizing vaccination camps. In comparison, financial incentives improve performance only on the incentivized task (home visits). The difference in allocation of effort to multiple tasks makes the financial incentives less effective at increasing the home visits when the two treatments are combined. Importantly, mission treatment also results in more improved health outcomes of the children – including the incidence of diarrhea, vaccination, and mortality rates. These results highlight that promoting the mission can be a powerful motivator, especially when contracts are incomplete.

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1 Introduction

Motivating employees is a central challenge for all organizations. Many, especially non-profit and public sector organizations, believe that emphasizing the organizational mission to workers motivates them to perform (Cassar and Meier 2018; Cassar 2018; Gartenberg et al. 2019).[1] However, it is unclear whether mission matters to employees who have already selected to be part of an organization, especially in settings where contract-enforcement is weak. Furthermore, if the mission intrinsically motivates workers, combining it with financial incentives may lead to *crowding-out* of motivations (Deci et al. 1999; Gneezy et al. 2011; Cassar 2018). It is also uncertain whether emphasizing the mission gets workers to improve performance on some dimensions of effort at the expense of others—comparable to the multi-tasking problem of performance linked–monetary incentives (Holmstrom and Milgrom 1991; Holmstrom 1982). Such potentially conflicting considerations makes it important to understand whether and how mission affects performance of workers.

The effect of emphasizing the mission on worker performance has not been addressed in the economic literature.[2] While a few studies have provided insights into mission as a signal to match workers with employers theoretically (Besley and Ghatak 2005; Prendergast 2008) and in laboratory settings (Banuri and Keefer 2016; Carpenter and Gong 2016), none have been able to *quantify the impact of emphasizing the mission on the worker effort.*

In this paper, I test whether emphasizing an organization's mission motivates workers to exert effort in their job. To accomplish this objective, I partner with the District Health Officer (DHO) in Haripur, Pakistan, to implement a mission training for the existing community health workers. Under the treatment, workers watch a video of the DHO describing and emphasizing the mission, which is followed by *reflection* sessions with a facilitator to discuss the mission. Workers are encouraged to share thoughts about the mission, and their experiences that relate to it. Notably, the discussion of mission is not a one-off event; instead, the treatment is designed as a repeated engagement in the form of three monthly sessions.[3] The

[1]For example, Teach for America emphasizes its mission of educational equity to motivate their staff—who have already been selected to work for them—through summer training programs (Diamond 2010). According to a survey of 474 CEOs reported in Harvard Business Review (2015), nearly half of the organizations invest in activities, such as emphasizing the mission, to motivate workers.

[2]To-date, scholars have studied how to get 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; Ager et al. 2016), career concerns (Holmstrom 1999; Dewatripont et al. 1999; Khan et al. 2019), meaning of the job (Grant 2012; Gartenberg et al. 2019), and social incentives (Ashraf and Bandiera 2018).

[3]By design, the treatment is delivered over three months following examples of organizations who frequently use

treatment's delivery is bundled with a skills-refresher training for the workers, which enables using a placebo treatment in the experiment—i.e., only including a skills refresher in the training without any discussion about the mission. I design the experiment to benchmark the performance effect of mission treatment against a monthly performance-linked financial incentive that runs in parallel. Workers in this financial incentives treatment group can earn a bonus of up to 2.9% of their monthly salaries. Finally, a set of workers continue to operate under the status-quo regime, which forms the pure control group for comparison.

Community health workers are permanent government employees, and are responsible for outreach activities within their communities. Their primary job is to provide preventive health services and impart health education to a clearly defined community, which requires them to visit each household in the community at least once a month. Consequently, visits serve as a key metric of performance, while activities carried out during the visit provide a measure of the quality of the service. However, these visits are not monitored by the managers, which potentially leads workers to shirk their responsibilities. The department also does not make any effort to emphasize the mission to workers in their routine operations, making this organization a good setting for the study.

In the first set of analyses, I examine the efficacy of the mission and financial incentives treatments on home/household visits. I conduct monthly surveys of ten households in the community of each worker, asking if they were visited during the last calendar month. In case the household was visited, I further collect information on the activities performed during the visit.

Based on the household survey data, the treatment emphasizing the mission brings a 16.2% improvement in the performance of community health workers. They increase the probability of a household visit by 5.7 percentage points over a baseline of 35.3 % observed in the pure control group. This change can be attributed purely to the mission treatment as the placebo treatment does not achieve any significant improvement. To benchmark the effect of the mission, I compare the effect with a performance-based financial incentive treatment. Workers receiving performance-based financial incentives improve performance by 27.5 percent. The probability of a household visit in the communities of workers receiving this treatment is higher by 9.7 percentage points over the control probability of 35.3%.

Many organizations emphasize the mission and also provide financial incentives, but it is theoretically ambiguous how they may interact. Theory predicts that there can either be

their mission to motivate workers. For example, Nike constantly emphasizes the mission to its workers by encouraging executives to "work the corporate mission statement into regular conversation" (Lashinsky 2015).

a crowding-in, where the two motivations act as additive (Bowles and Polania-Reyes 2012), or they crowd-out intrinsic motivation for the job (Gneezy et al. 2011; Deci et al. 1999; Benabou and Tirole 2003; Cassar 2018). I explore how the two may interact by including a group of workers that receives both the mission training and performance-based financial incentives. I do not find evidence for crowding-out of motivations but financial incentives lose their effectiveness. The workers in the combined treatment improve performance compared to the pure control group but the improvement is not as high as the group that received just the financial incentive. They improve performance by 6.7 percentage points as opposed to an improvement of 9.7 percentage points achieved with a similar, but stand-alone, financial incentive. The difference between the two effects is statistically different from zero, indicating to financial incentives becoming less effective, instead of intrinsic motivations getting crowded-out.[4]

Workers in the mission and combined treatments become more intrinsically motivated in two ways. I find workers in the mission and combined treatments believe their department cares about the mission, is more aligned with their preferences, and they feel more attached to their job. I interpret this as intrinsic motivation due to the alignment of the mission with the preferences. Second, one year after the experiment I find the workers in the mission and combined treatments are more altruistic in an incentivized willingness-to-work task using Becker-DeGroot–Marschak (BDM), indicating higher intrinsic motivation. These two pieces of evidence confirm that the mission treatment intrinsically motivates workers to perform better.

The intrinsic motivation due to the mission treatment makes workers improve performance not only on the home visits but multiple other tasks. The difference in household visits between the financial incentives and the combined treatment appears to be driven by multitasking. Workers in the mission, and combined (mission plus financial incentive) treatment groups are more likely to perform antenatal checks, advise more households on disease prevention, screen more of them for tuberculosis, and also help organize more immunization camps in their communities. In comparison, the financial incentive treatment does not improve productivity on any of these tasks. This difference in the allocation of effort results in the financial incentives becoming less effective when combined with the mission treatment in terms of increasing household visits.

I rule out three alternative explanations for how the mission treatment works. First, if the

[4]See Kamenica (2012); Gneezy et al. (2011); Frey and Jegen (2001); Bowles and Polania-Reyes (2012); De Wit and Bekkers (2016); Deci et al. (1999); Desmidt (2016) for review of crowding-out literature from the viewpoint of different fields.

mission treatment provided new information about the tasks the workers need to perform then we should find the placebo group workers to improve on performance measures related to mother and child health. However, we do not find any evidence of the effectiveness of the placebo treatment. Second, the mission and combined treatment workers do not have different beliefs about being monitored, which addresses the concern that the mission treatment may activate concerns about being monitored. Third, I do not find evidence that, in addition to becoming intrinsically motivated, the treatment influences the behavior of workers through expectations about their peers. I randomize the workers receiving the training either in a group setting or in private, one-on-one, with the facilitator. There is no difference in the performance of the two sub-treatments.

Mission treatment motivates workers to improve effort in terms household visits, and performing multiple tasks. However, these are inputs in the process of improving the health of the community – the ultimate mission of the organization. I collect data through household surveys and from administrative registers to trace the effect of mission treatment on the health of children. Mission and combined treatments result in better health of children compared to the control group as measured through an index of outcomes that includes incidence diarrhea, vaccination rates, mortality rates and weight of the children. The financial incentive treatment also improves health, however, its effect is smaller in magnitude than the mission and combined treatments.

This paper provides, to my knowledge, the first empirical evidence through a field experiment that mission can work as an incentive when contracts are incomplete. Theoretical literature has argued that mission motivation works on the selection margin (Besley and Ghatak 2005; Prendergast 2007). That is, organizations invest in mission to attract workers who have similar preferences, and that helps economize on incentives (Wilson 1989). This paper, however, provides evidence that there exists an incentive effect of the mission beyond the selection margin. When organizations emphasize their mission it motivates workers, who are already part of the organization, to increase effort. With this result the paper also contributes to the literature of personnel economics encompassing financial rewards (Lazear 2000; Prendergast 1999; Gibbons 1998) and social incentives (Ashraf and Bandiera 2018; Ellingsen and Johannesonn 2008; Rotemberg 1994). It extends the theoretical literature that worker may get sentimental utility from their organization (Akerlof and Kranton 2005) to empirically establish that managers can "exploit" the sentimental utility, through emphasizing the mission.

Findings in this paper contribute to, and link, the literatures on the problems of multitasking (Holmstrom and Milgrom 1991; Baker 1992; Hart et al. 1997) and crowding-out

(Gneezy et al. 2011; Deci et al. 1999; Frey and Jegen 2001). While the paper does not find crowding-out of intrinsic motivations, it is the first paper to report that financial incentives can lose effectiveness due to the intrinsic motivations. It also provides evidence that this loss of effectiveness of the financial incentives is linked to multitasking. The paper shows that emphasizing the mission motivates agents to be better workers overall, this helps against the tendency to direct effort only to the contractible tasks.[5] But this equitable allocation to multiple tasks can reduce the efficacy of performance-linked financial incentives on the incentivized task when the two are combined.

This paper also contributes to the literature on improving public services in countries with weak institutions that find it harder to enforce the contracts. In such an environment emphasizing the mission motivates workers to work harder without changing the terms of contract. Existing literature has focused the debate 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.[6] This paper takes the literature beyond the debate between performance-contingent incentives and selection. It argues that the public sector in places with weak institutions can use the mission to activate intrinsic motivations of already contracted agents, making them better without changing the incentives.

Lastly, it highlights the importance of clear communication from managers as an important aspect of managerial practices. With clear communication about the mission, managers set the expectation about what the organization cares about. This 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 2019) and firms (Bloom and Van Reenen 2010; Bloom et al. 2013) that highlight the clarity of outcomes and responsibilities as one important ingredient of better-managed organizations.

In the rest of the paper, I first explain the context and subject population followed by details of the experiment. This is followed by the results section focusing on household visits, health outcomes, and multitasking. I discuss intrinsic preferences as a possible mechanism before wrapping up the discussion in the conclusion section.

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[5]See Dewatripont et al. (2000) for a review of other ways to address the multi-tasking problem.

[6]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, including developed countries like United States of America. According to an estimate there are about five million such workers operational across the world (Perry et al. 2014). Their role has received special attention in low and middle income countries since 1970s as countries faced extreme shortages of trained health professionals to promote preventive health care aimed at achieving sustainable development goals (Scott et al. 2018).

In Pakistan, they are considered the backbone of preventive and primary health care system, especially in the rural areas. They function as a separate division of the Department of Health called the Lady Health Workers (LHW) program. Their division was established as a special program in 1993 with a strength of 96000 workers across the country (Jalal 2011). Since 2014, they are considered full-time public sector employees with a defined service structure and job protection that is afforded to other bureaucrats.

Community health workers in Pakistan are all women.[7] They are hired by the Department of Health to work in specific communities in each district. They are affiliated with a health clinic for reporting purposes but their work involves providing services outside of the facility to a clearly defined community. They do not overlap with the other community health workers in their geographical sphere of responsibility. Since they work in non-overlapping communities, they also do not have any systematic interaction with the other worker in their routine jobs. This feature of the organization helps the study by limiting the scope for spillovers, and also makes a clean measurement of performance feasible.

They are primarily outreach workers. Their core duty is to provide preventive and basic health care to citizens at their doorstep. Providing any kind of service hinges on the workers making visits to the households. The visits are important to stay updated on the health status of the community, and to educate the household members about diseases prevention. Community health workers advise women on birth control, pay antenatal visits to keep track of the health of expecting mothers, and follows up after the birth to advise on disease prevention and nutrition. Performing these duties require them to visit households regularly

[7] According to WHO 70% of the workers in health and social sectors in 104 countries are women (Boniol et al. 2019).

to keep track of marriages, pregnancies and births. It is noteworthy that these tasks are assigned to the workers by their program within the Department of Health so are considered core duties.

Besides these duties the workers also perform tasks that are not considered the core duties but have been added to the roster of tasks they perform. In this research, I focus on two other tasks that are significant for their impact on the health of the community. Workers have been asked to help the department fight the spread of tuberculosis in rural communities. To perform this task they have to ask the household if anyone has been coughing in the family for more than a week. If they respond yes, the workers ask further questions about the nature of the cough if the person is present, and may refer them to visit the nearest clinic for consultation with a doctor.

A second task is to help the vaccination workers organize community immunization camps. Even though the community health workers encourage mothers to get their children vaccinated, they are not directly responsible for vaccinations. Instead, trained technicians based in health facilities provide this service. Parents can take children to health clinics for routine vaccination. However, to make it less costly for them, the technician can also organize camps in communities by bringing the service closer to the household. The successful organization of these camps requires effort from the health worker of the community by teaming up with the technician.

Workers receive a fixed monthly salary that is not dependent on the performance. The starting salary of community health worker is about Rs. 17,500 per month. This pay is at par with the minimum wage set by the Government of Pakistan and higher than salaries in the informal sector for a person with similar skill profile. Alternative employment opportunities are limited in the rural areas. Though the skills gained from being a community health worker can be utilized to act as an informal private health care provider. Community health workers also do not have a direct path for career progression. Theoretically, they can apply for the job of a supervisor, if there is an opening, but those positions are few and open to competition from outside.

Even though there are no prospects for moving up the career ladder, the job of a community health worker comes with protections afforded to any other full time employee of the state. Anecdotally, no one leaves the job and no one gets fired from it. There is no objective system of monitoring other than the requirement that workers keep a register of information that can be checked by a supervisor if needed. This lack of incentives and difficulty in measuring their performance creates conditions for potential moral hazard.

2.2 Haripur District

Haripur lies in the Khyber Pakhtunkhwa province of Pakistan. It has a population of 1.003 million. The district is considered as one of the better areas in Pakistan in terms of economic development. It is ranked at 18 out of 114 districts in the country in terms of the Human Development Index, comparable to Lebanon on the overall score. According to most recent available statistics, female literacy rate in the district is 60% and male literacy rate os 82%.

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

3 Details of the Experiment

This section provides details of the experiment that was designed in partnership with the District Health Officer (DHO) to motivate the community workers. I first discuss the treatments, followed by sample and design.

3.1 Treatments

3.1.1 Organizational Mission

This treatment includes a session of worker(s) with a facilitator that is pitched as a skills refresher training. Before the start of this experiment, I worked with the District Health Officer (DHO) to record a short video of the officer describing and emphasizing the organizational mission of the LHW program (name of the division that employees the workers). In the video, the DHO gives the following 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 I 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 believe you will continue with your good work.

Representatives of the DHO office contact the workers to invite them to the training sessions. I randomize how the treatment is delivered to the workers. This is done to study the peers influence channel for the mission treatment to affect behavior. In **Mission Private** treatment, the worker and facilitator meet one-on-one in a private setting, while in **Mission Public** treatment they meet in a group setting with other workers. The group size can be between 20 to 30 workers, depending on the logistics of the area.

In the session with a facilitator, the worker(s) watch the video of the DHO talking about the organizational mission followed by a discussion. The facilitator guides the workers to discuss this mission statement, whether it aligns with their view, how will it influence their work, what is the importance, etc. The treatment is delivered in a participatory manner. This means the facilitators do not "teach", instead they ask questions to give direction to the discussion and invite workers to participate by sharing their views. The facilitators maintain similar line of questions in the private and the public sessions. In the public sessions, they make sure that every worker gets an opportunity to voice their opinion and participate in the discussion. This is done to guide the workers to internalize the mission statement and also make them feel to have a stake in the process.

This discussion is followed by refresher training on the basic skills required for preventive and basic health care provision. These use case studies on care for pregnant women and children. The inclusion of skills refresher helps in making the discussion on mission appear to be more organic to the organization and it also provides a baseline for the placebo treatment to rule out some alternative explanations for the mission-driven motivation. Each session lasts two to four hours. These sessions are repeated monthly for three months. In the subsequent sessions, the mission discussion focuses more on sharing experiences from the field and how they connect with the organizational mission.

In the original randomization, the public treatment is also divided in two sub-treatments. In the **Mission Public, not Observable**, the workers are told the purpose of these sessions is not to discuss their performance. But in the **Mission Public, Observable** they are told that the group will discuss the performance of workers in the third session. This variation is introduced to understand if the workplace norms mechanism described above is driven by concerns for a social-image or not. The announcement about the discussion on performance in *Mission Public, Observable* should activate concerns for the workers' image, and the announcement that there will be no discussion on performance should act to limit such

concerns. For the main analysis, I will pool these variations in to one main mission treatment.

3.1.2 Performance based Financial Incentives

Workers in this group are informed by the Health Department at the start of the project that they have been selected for a program where they can win a financial reward every month. The reward amount is linked to the number of households the worker visits every month. They can earn Rs. 25 per household for every additional household visited over and above their routine visits (in the baseline), up to 20 additional households. I use the month of November 2018 as a baseline. Workers can get a maximum incentive of Rs. 500 ($ 3.5) if they visit 20 additional households in the month or when run out of households in their area, that is, they visit all households assigned to them. The maximum incentive is 2.9% of their monthly salary. This incentive is provided for three months, however, workers do not know this before the end of the third month.

$$w_{ij} = \begin{cases} 25 * x_{ij} & x_{ij} < 20 \\ 500 & x_{ij} \geq 20 \\ 500 & x_{ij} + h_j = H_j \end{cases}$$

w is amount earned by worker i in month j when they visit x households over and above the number of households visited in baseline h, out of total assigned households H. The baseline benchmark and the subsequent incentive payment is based on the data collected in the independent survey, described in section 3.4. The first incentive payment is made during the second month of the experiment, after the first round of survey collecting information about visits in the first calendar month is completed.

3.1.3 Combined Treatment of Financial Incentive and Mission

In this sub-treatment I pair mission public sessions and financial incentive to the workers. Workers are informed that they have been selected for a financial incentive program through a phone call, and they are invited to the public mission sessions. The reward amount earned by each worker is private and the public sessions do not have any discussion of the financial incentive. This is done to keep the financial rewards part of the treatment comparable to the standalone financial incentive treatment.

3.1.4 Placebos and Control

In order to rule out alternative explanations, I include placebo treatments and a pure control group in the experiment.

Placebo: A basic group meets in a public setting and receive refresher training on the basic services the workers provide to the communities. The refresher training contents are the same as those delivered in the mission treatments. I also divide this treatment into sub-groups based on whether an announcement about performance is made or not. Following the mission treatments, in one group I explicitly announce that there will be no discussion on the performance of workers related to the refresher training and in a second group, workers are informed that the group will discuss their performance in the third meeting. For the main analysis, I pool these sub-treatments in one placebo group.

Control: The pure control workers do not receive any visits or participate in group sessions to maintain them as a status-quo condition.

3.2 Sample and Design

I randomize 710 Lady Health workers into treatment conditions as shown in figure A1. The randomization was done at the individual level but block stratified at the clinic level. Each treatment condition has 89 workers except the "Placebo training, observability" treatment group which has 88 workers. For the main analysis, I will combine all the sub-treatments of the mission and placebo treatments into their respective groups to form larger treatment groups.

3.3 Timeline

Figure A5 shows the project timeline. The project began in December 2018 with baseline survey of households, followed by worker survey in January 2019. The department of health invited the selected workers to training during the last week of January. At the same time, workers in the incentive treatment were informed about the opportunity to earn a "bonus" based on performance. The first training sessions were held at the beginning of February, repeating monthly till April 2019. Post surveys of the households were launched on the 1st of

March 2019 and continued till June. I collected administrative data and conducted a phone interview with the workers in April 2020.

3.4 Data Sources

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

Household Surveys I surveyed 10 randomly selected households in the target community of each worker each month for three months. The households were selected through randomization carried out in the field. The survey was administered to women respondents by female enumerators. Each household was asked if the worker visited them in the previous calendar month.

The baseline survey was conducted in December 2018. Households were re-sampled after the first follow-up survey. The surveys were administered every month starting from March to May 2019, starting from the first of every month. In each survey, the households were asked information about the previous completed calendar month. For example, the survey starting 1st March collected information from the households about worker activities in February. The experiment ended by the end of April 2019, so the survey in May is the last round to collect information relevant to the duration of the experiment. I administer an additional round of survey in June 2019, starting from 7th of the month, to collect information on visits a month after the competition of the experiment.

During the surveys, I also collect information on the health of children, their vaccination status, and other activities performed by the workers. However, due to financial constraints and the need to complete a large number of surveys in limited time, I did not include all questions in all rounds.

Worker Surveys: A baseline survey was administered to the workers in January 2019. This survey collected socio-economic information of workers before the experiment started. An endline survey of workers was administered in June 2019. This survey collected information on the beliefs of workers regarding the mission, its importance, and their identification with their organization. Finally, a post-endline survey was administered a year after completion of the project. This survey collected information on further beliefs of workers as well as allowed us to administer a lab in the field experiment to study the persistence of effects.

Administrative Reports: To trace the effect of treatments on the health outcomes of the communities, I collect data on mortality rates of mothers and children for each worker. I also collect weight data for five children for each worker from the administrative reports generated by them. This information is collected one year after the treatments are administered.

3.5 Randomization Balance

Table A1 tests for the differences between the main treatments on variables using the baseline household data. The table reports a joint orthogonality test between the treatments and confirms treatment assignment does not predict performance or community characteristics at the baseline. I also test for differences between each treatment condition and the pure control condition and report the p-value from Wald test of the null hypothesis that there is no difference between them. In this table I pool the mission and placebo sub-treatments in their respective groups. I also report balance on the original randomization in Table A2. Both tables show the treatments are orthogonal to the distribution of community characteristics.

Table A3 provides summary statistics about community workers and households in experiment. The average worker is responsible for serving 156 households and they have been working with the department for 15 years on average, in the same position. They have completed, on average, 10 years of schooling which is higher than 3.8 years for women in Pakistan. About 38% of them also have a health care related certification. Table A4 reports the balance between the treatments on individual characteristics of workers. Data on these characteristics was collected before the start of the experiment but it became available after randomization was done. The treatments are balanced on all variables except the tenure of workers.

4 Main Results

In this section I report analysis of the data, focusing on the questions of whether organizational mission improves performance and how it compares to the financial incentive treatment. I first describe the estimation strategy to study these questions and then move to the results section.

The data used is collected through a survey of households as described in 3.4. The survey was administered in the respective communities of the 710 community health workers. I run the following regression to estimate the effects.

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

Equation 1 presents the main estimation used for analysis of household level data. V_{ijmb} is the outcome reported by household i from the community of worker j in survey round m. $Mission_jb$, $FinancialIncentive_jb$, and $(Mission\&FinancialIncentive)_{jb}$ represent treatment dummies for each worker indicated by j in block b. $Placebo_jb$ takes a value of one for the placebo treatments and zero otherwise. z_{jb} controls for baseline performance of worker j, however this term is only included when the outcome variable is a visit . B_b is a vector of randomization block controls of each worker and M_m are survey-month dummies, to absorb block and survey month specific variation in the data. ϵ_{ijmb} is an idiosyncratic error term. When a data is reported only in one round of survey or in worker survey, I omit the vector of month dummies. In this estimation, I pool all sub-treatments of the mission into one treatment, and also pool the two placebo sub-treatments into one.

For analysis using worker-level data, I estimate equation 2. V_jb is the dependent variable in the worker level estimates reported by(or for) the worker j. B is a vector of randomization block controls of each worker and ϵ_{jb} is an idiosyncratic error term.

$$
\begin{aligned}
V_{jb} = \beta_0 + \beta_1 * Mission_{jb} + \\
\beta_2 * FinancialIncentive_{jb} + \beta_3 * (Mission\&FinancialIncentive)_{jb} + \\
\beta_4 * Placebo_{jb} + B_b + \epsilon_{jb}
\end{aligned} \tag{2}
$$

4.1 The Effect of Mission on Visits

I study whether mission acts as an incentive for workers to improve their performance in terms of visiting more households, and if it does, how do the traditional incentives in the form of performance-linked payments act in this same environment.

Table 1 presents the main results based on estimating equation 1. Each column in Panel A presents results from regressions using data pooled from three waves of the household survey conducted during the experiment. Each regression uses randomization block and survey wave fixed effects, and clusters standard errors at the worker level. I have data on ten households

per community in each wave of the survey but the communities are of different sizes making some workers responsible for more or fewer households compared to the average. In order to make sure the data is representative of the community, I weight each point with the inverse probability of being selected for the survey. Further, I include the baseline performance level of workers in the regression reported in Column 2, to achieve higher precision. The baseline performance is defined as the probability of a household being visited by the worker before the start of the experiment. Column 1 reports the results of estimating equation 1 without controlling for the baseline performance of workers.

The mission treatment improves the probability of a household visit by 5.1 percentage points if I don't control for the baseline performance as shown in row A of Column (1). This effect changes only marginally when I add the baseline controls to the regression, as shown in Column (2). Workers improve visits by 5.7 percentage points over a control mean of 35.3 percent when I include baseline controls. This is a 16.14 % increase in the performance of workers achieved by the mission treatment, suggesting that the mission does work as an incentive. The extra effort translates into 8 additional visits in a given month, on average. The effects of mission on performance do not disappear immediately after the completion of the experiment. As shown in figure A4, in the post experiment survey the workers who received the mission treatment continue to perform better compared to the pure control. Further, in the appendix section A.1, I rule out alternative explanations for this performance effect of the mission.

To benchmark the incentive effect of mission, I study how traditional financial incentives perform in this same environment. Second row of the table 1 reports the effect of a performance-based financial incentives on the household visits. The probability of a household visit increases by 10.1 percentage points for this group when not controlling for baseline performance (column 1) and 9.7 percentage points when I control for the baseline performance (column 2), compared to the status-quo condition. This means the financial incentives improve the performance of community health workers by 27.4 percent. This improvement translates into 15.1 additional household visits by the workers in a month.

[Table 1 Here]

4.2 The Combined Effect of Mission and Financial Incentive

In the preceding analysis, I established that the mission treatment motivates workers to improve effort on home visits. In this section, I study how the mission treatment interacts

with financial incentives. Many organizations use mission motivation in combination with financial incentives expecting the two to complement each other. Theoretically the literature argues the two can complement each other if they provide some "good news" about the intentions of the principal (Bowles and Polania-Reyes 2012).[8] But if the mission treatment and financial incentives send opposing signals (Benabou and Tirole 2006) then the two treatments may cancel the effect of each other.

To study the combined effect, I include a group of workers in the experiment that receives both the mission and financial incentive treatments. Third row in table 1 shows the effect on the probability of a household visit when workers are provided financial incentive along with the mission treatment. The effect of combining the two treatments is large and statistically different from the pure control group. These workers improve by 6.8 percentage points (column 2) above the control condition, which is an improvement of 19.2 percent in performance. However, despite this treatment motivating workers to work harder, the effect is not additive – combining mission and financial incentives do not lead to a higher improvement in performance that can suggest the two motivations are additive. On the contrary, the effect of combined treatment is smaller than the group that received just the financial incentive treatment.

I test the differences between coefficients on the treatment dummies in the second part of table 1 to study if the effects are indeed different from each other. This part of the table reports the linear combinations of coefficients and tests them against the null hypothesis that the difference between them is zero. I report the $p - values$ of these tests in square brackets. In the second row of the second half of table 1, I find the effect of mission is smaller in magnitude than the effect of combined treatment (mission and financial incentive) but not statistically distinguishable. This result suggests that the intrinsic motivation does not get crowded out when the two treatments are combined.

Third row of the second half table 1 reports the combined treatment is smaller than that of the financial incentive treatment. Receiving the two treatments together blunts the effect of financial incentives by almost 3 percentage points. This difference is also statistically different zero. While, combining the two treatments does not crowd-out the intrinsic motivations, instead, it appears that the effectiveness of the financial incentives is reduced substantially.

While I will discuss the possible channels for this effect in the next section, the current evidence indicates that it is at least not driven by a ceiling effect in the financial incentives treatment. If the ceiling effect was at play, workers in the group receiving both mission and

[8]By complements, I mean the effects of the two motivations are additive.

financial incentive would have at least improved by as much as the financial incentive only group. Instead, their performance is lower than the financial incentive only group rejecting the possibility of a ceiling effect.

The preceding analysis shows organizations can use mission to address the moral hazard arising out of incomplete contracts. Not surprisingly, financial rewards has the bigger effect on effort of workers but a puzzle emerges – when the two treatments are combined the financial incentives appear to be less effective in motivating effort. I explore a possible reason behind this puzzle in the next section.

4.3 How Does the Mission Treatment Work?

In this section, I argue that the mission treatment intrinsically motivate workers to perform. I use two pieces of evidence to make this argument. First, workers may have preferences to work for mission-driven organization. The mission treatment activates those preferences to get them work harder by signaling an alignment between the preferences of workers and the organization. Second, the treatment works through pure altruistic preferences, making the worker more pro-social.

4.3.1 Mission-driven Organization

In the end-line survey, I ask workers whether they agree with statements acknowledging the mission to be central to operations of their organization. I specifically ask them to tell us on a scale of 1 to 7 how much do they agree with the following statements. (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 mission is very similar to my thinking since the beginning of 2019. (3) Mission Dependent Attachment: If the LHW program mission was something else, I would not have been as attached to the program. Responses on these three statements in an index to mission motivation to assess whether they believe an alignment between their preferences and the organization.

Column 1 in table 2 reports the effect of treatments on the index of beliefs. Workers in the mission and the combined treatment groups are 0.201 and 0.23 standard deviations more likely to believe their preferences are aligned with the organization. Second part of the table compares the coefficients on treatments. It is clear the effect of the mission and combined treatments on the beliefs are different from the effect of financial incentive treatment by 0.23 and 0.26 standard deviations respectively. Importantly, the emphasizing the mission has

similar effect on beliefs in mission alone and combined treatments with a difference of 0.036 standard deviation. Appendix table A7 reports the components of this index. Mission and combined treatments have positive and large effects on all beliefs. Workers in these groups are more likely to believe their organization considers the mission to be important, it is more aligned with their own thinking, and because of it, they feel more attached to their work. These effects do not exist for the financial incentive and placebo groups.

These results provide evidence that the workers' preferences for a mission-driven organization is one of the main channels for the mission treatment to influence the performance of workers.

4.3.2 Altruistic Preferences

I also test if the treatment may have activated pure altruistic preferences in the workers. That is, the mission treatment makes the worker more pro-social, giving her utility from performing costly activities related to the job. A year after the experiment I find workers in the mission and combined treatments are pro-social in their behavior towards their job. I administer an incentivized activity with them to collect their willingness to work against several monetary offer, including working for free. One year after the experiment, in April 2020 we designed an incentivized activity to elicit the willingness of workers to perform an activity against different rates of compensation, following Becker-DeGroot-Marschak mechanism. The activity was designed to be performed in person but had to be modified to a phone-based activity due to Covid-19 pandemic.

My team called the workers on the phone, introduced themselves as part of the activity the workers had participated a year ago including mission training, financial incentive or just the survey. They were asked whether they will be willing to make a list of households with pregnant women and children in return for some remuneration. The enumerators read out the list of rates one by one and asked to privately informed us against each offer whether they will accept this offer or not. It was made clear that the actual offer to be implemented was to be selected randomly from their decisions, to make their answers incentive compatible. Though I could not implement the activity, (and it was made clear to them that the implementation depended on how the Covid-19 situation evolved), it was impressed upon the worker that their decision will be implemented with a positive probability. In the menu of offers the first was Rs. 0, that is, asking them if they will do the work for free. Responses to this offer helps us understand if the workers had any differential motivation to perform the job due to the treatments without any money compensating them for the effort.

Column 2 of table 2 reports the effects of treatments on the willingness to work without

extra payment. Workers who received the mission treatment are 10.5 percentage points more willing to do the extra work without being paid. For comparison, the workers who received financial incentive treatment are 5.8 percentage points *less likey* to accept the job without a compensating payment, though the effect is statistically not different from the control group. The second part of the table reports the effects of mission and combined treatments are different from the financial incentive treatment but similar to each other.

[Table 2 Here]

The preceding discussion has revealed that the mission treatment makes the workers more intrinsically motivated. We find that this intrinsic motivation is lead by a belief in the alignment of preferences between the worker and the organization, and also by workers becoming more altruistic. Further, the effect of the mission treatment on the motivations is the same irrespective of whether the treatment is delivered alone or combined with the financial incentive treatment.

5 Why Do the Financial Incentives Become Less Effective?

In this section, I argue the puzzle of financial incentives becoming less effective is a result of the mission treatment leading to more equitable allocation of effort to multiple tasks. To support my argument, I first provide evidence that there is no difference between the mission and the financial treatments in terms of the overall effort, proxied by the length of the work day. Second, I provide evidence that workers in the mission and combined treatments allocate effort to perform multiple tasks where as those in the financial group do not, as they focus mostly on visiting more households.

5.1 Time Spent on the Job

In the endline survey with the workers, I collect information on the length of their typical work day. In appendix table A8 column 1, I find that even thought the treated workers increase the amount of time they spend on their job on a given day, there are no differences between the mission, combined and financial incentives treatments. In status-quo, the workers self report that they spend about 318.4 minutes (or five and a half hours) everyday on their job. The mission treatment increases this time duration by 16.9 minutes, and financial

incentive and combined treatments increase the reported duration by about fifteen minutes. I conclude that all workers exert similar levels of effort on their jobs. But since there are differences in how many households they visit, based on their treatment groups, it must be that there are differences in allocation of effort to multiple tasks. I check this in the next section.

5.2 Multitasking

Financial incentives treatment gives a higher utility to the workers in the form of a monetary payoff only if they improve performance on the incentivized task, resulting in allocation of effort to that task only. In contrast, I hypothesize the mission treatment motivates workers to improve without directing effort to any one task, resulting in better performance overall. When a financial incentive is added to the mission treatment the worker does not direct effort towards just the incentivized task, giving rise to the puzzle of subdued performance on the household visits.

The workers perform multiple tasks that can be largely divided into core and non-core tasks. Core tasks are the activities they perform during a visit and do not get any added financial reward for carrying them out – such as antenatal checks, examination of children and discussion on disease prevention. The non-core tasks include activities that are not direct responsibilities of workers. I track two such tasks – screening for Tuberculosis and organizing immunization camps in the communities. Table 3 presents the analysis on these five tasks. First four columns of the table use data from household survey and the fifth column relies on data from worker surveys.

Data for the antenatal checks and children examination are collected in three rounds of survey administered during the experiment. Column 1 of table 3 reports the effect of treatments on whether the workers perform antenatal check on pregnant women during their visit. Mission and combined treatments increase the probability of an antenatal check by 5.2 and 4.6 percentage points over the control mean of 35.9%. Financial incentive treatment does not have any effect on this task. Column 2 reports the effect on children examined. Workers in the mission and the combined treatments are 3.2 and 2.7 percentage points more likely to examine children. However, only the effect of the mission treatment is significant. Workers in the financial incentive treatment improve effort on this task by 2.4 percentage points but that effect is not significant.

In the post experiment household survey, I ask whether workers discussed disease prevention

with the households that is not exclusive to mother and child. Column 3 table 3 reports the effect of treatments on this outcome. Workers who received the mission and combined treatments are 5 and 5.8 percentage points, respectively, more likely to discuss disease prevention with the household. Financial incentives has an effect of 2.4 percentage points however that effect is statistically not significant.

During the home visits, workers screen the households for symptoms of TB and refer them to doctors for diagnosis if anyone is suspected to have the symptoms. This is an additional task which they are asked to perform but it is not part of the core duties of the community health workers program.[9] Column 4 of the table reports the effect on probability of a household being screened for TB, based on data collected in two rounds of survey. Mission motivates workers to improve performance on this task as well. Workers in the mission and combined treatments are 4.7 and 4.4 percentage points, respectively, more likely to screen the households for TB. However, workers in the financial incentives group do not improve their performance on this task at all.

The last task I analyze is immunization camps co-organized by the workers. Community health workers encourage parents to get their children vaccinated but are not directly responsible for providing vaccination services. Instead, children are taken to a health facility where trained technicians vaccinate them. To improve coverage rates the technicians can also organize community camps to bring their services closer to families, making it less costly for them to avail their services. In organizing these camps the community health workers help the technicians make them successful by managing logistics, advertising the camp, and helping mothers bring children to the location. Workers do not get paid extra for this activity and can easily shirk on some of their responsibilities unless they are motivated by the mission to help improve the health of mothers and children in their communities.

In the endline survey, I ask the workers how many camps did they help organize during the three months period. Column 5 reports the effects of treatments on their responses. Workers on average, report organizing 5.7 camps over three months in the control group. Those in the mission and combined treatments organized almost half an extra camp during this period. In comparison, the workers in the financial incentive treatment increased their effort by 0.17 extra camp.

The preceding five results prove that the mission treated workers are intrinsically motivated

[9]There is a separate division within the health department that is focused exclusively on addressing the spread of Tuberculosis. This division has their own staff and are integrated in the health facilities. However, the department has asked the community health workers to help refer suspected cases of Tuberculosis for proper diagnosis to the doctors from where they are then traced by the separate division.

to perform better overall. That is why they increase effort on multiple tasks whereas the financial incentive treatment does not influence workers effort on the non-incentivized tasks.

I also combine the information from five tasks on an index of multitasking. First, I collapse the household data into a worker level data set by calculating the mean performance for each worker on each task. If the performance was measured in multiple rounds of survey, I collapse it at worker-survey round level. This step is needed to make sure that all the data are at the same level of aggregation, as the information on immunization camps is available only at the worker level. The collapsed data for each variable at the worker-survey round level is standardized using the mean and standard deviation of the pure control. Missing data is imputed with the mean of the respective treatment groups. I weight each component by the variance-covariance matrix before combining in one mean index as prescribed by Anderson (2008). For robustness, appendix table A10 uses index constructed without weighting the data with variance-covariance matrix, that is, each component of the index is assigned equal weight similar to Kling et al. (2007).

The analysis using multitasking index is reported in column 6 of table 3. It presents a clear picture that the mission treatment improves the performance of workers on multiple tasks by 0.175 standard deviation. Similarly, the combined treatment has an effect of 0.143 standard deviation. Both these effects are statistically different from zero. In contrast financial incentives alone have no effect on the multitasking index.

In the second half of the table I test whether the coefficients on the treatment dummies are similar to each other. The effect of financial incentive treatment is smaller by 0.18 and 0.15 standard deviations from the mission and the combined treatment respectively. These results show the difference in allocation of effort between the financial and the mission treatments. Further, the combined treatment's effect cannot be statistically distinguished from the effect of the mission treatment, indicating that the workers in both groups are motivated in the same manner.

These preceding results prove that the workers who receive financial incentives do not exert effort on the non-incentivized tasks but those that receive the mission treatment do improve on multiple tasks. Moreover, the mission driven performance on multitasking does not disappear when that treatment is combined with the financial incentives. Given that they exert similar level of overall effort, as proxied by the time spent working on a day, it follows that differences in its allocation across tasks is the reason for the financial incentive becoming relatively less effective.

[Table 3 Here]

6 Health Outcomes

Community health workers are considered a key link in improving maternal and child health in developing countries. Despite improving performance on the tasks, I do not know whether this actually matters for the health of the communities these workers serve. It is possible that ultimately none of this matters to the people. In this section, I study if the treatments help translate better performance in improved health of mothers and children.

To trace the effect of treatments on health outcomes, I use two sources of data. First, I rely on reports from households as recorded in the surveys. I collect information about the incidence of diarrhea, during the four months period before the survey, and vaccination status among children under the age of two years. Second, I use administrative reports prepared by the workers as part of their routine job. [10] I collect information on child mortality, and maternal mortality from the administrative records that are compiled in paper registers, and combine these outcomes in an index of health outcomes using methods outlined in Anderson (2008). I also collect weight data from the administrative registers to supplement the analysis.

Diarrhea is the most basic preventable disease that the community health workers can influence through transferring knowledge about prevention(such as the importance of sanitation and clean drinking water) and cure (such as how to make and use re-hydration solutions). It is also the second most common reason for child deaths globally.[11] In the post experiment survey I ask the households if any child had diarrhea like symptoms during the last 4 months, and use this information to construct a dichotomous variable of the disease incidence.[12] Column 1 in table 4 reports the effects of treatments on the incidence of diarrhea in households that have at least one child. Nearly 29% of the households in the control group report children getting diarrhea in the four months time period. However, all treatments including Mission, financial incentive, and combined treatments lead to a substantial reduction in diarrhea, indicating that workers performance improved on this basic dimension through all treatments.

Next I track if the workers' efforts translate in children getting better protected against

[10]The plan to collect this information through an independent survey of households did not materialize due to the emergence of Covid-19. To minimize contact, I adapted the study to collect administrative records.

[11]CDC fact sheet on Diarrhea https://www.cdc.gov/healthywater/pdf/global/programs/globaldiarrhea508c.pdf, accessed on 09/03/2020.

[12]It is important to note that this measure of incidence is not comparable to the data from national health surveys because I ask for this information covering a longer period than what is asked in the health surveys done by statistical agencies.

preventable diseases through vaccination. Vaccinations are not a direct output of the workers, rather they are the result of demand from parents and the supply of vaccination services from the health department. But community health workers can influence the vaccination rates by making sure that parents are educated about the need for vaccination, and that there is a service available in the form of immunization camps if they wish to vaccinate their children. Information is collected in two waves of survey, one wave of survey during and second after the experiment. The enumerators ask households about the vaccination status of each child along with their age. Then using guidelines from the CDC they calculate if the child has been getting timely vaccinations, and note the number of children who are indeed fully vaccinated as per the prescribed schedule.

I use the proportion of children timely vaccinated in each household, with at least one child, as the main outcome in the analysis reported in column 2 of table 4. It appears that only mission and combined (mission+financial incentive) treatments have a substantial effect on the proportion of timely vaccinated children. Workers in these treatment groups lead to nearly a 3 percentage points improvement in the outcome, while workers receiving just the financial incentives have a smaller effect of 1.2 percentage points. This effect is directly linked to multitasking performance of workers discussed in 5.

[Table 4 Here]

From the administrative registers, I extracted the number of children born alive in 2019 and how many of them did not survive during the year. I also extracted the number of mothers who died while giving birth or due to birth-related complications during the year. The effect of treatments on child mortality is reported in column 3 and on maternal mortality is reported in column 4 of table 4. Given both are rare events, I do not have enough statistical power to make conclusive claims about the effects. However, all treatments, especially the mission and combined, treatments appear to have negative effect on the mortality rates over the year.

In order to make sure I are not picking up chance effects, by analyzing the different measures of health, and also to better understand the relationship between the treatments and health outcomes, I combine the four measures into one composite Health Index. Since the data is not available for all workers, I impute the missing values by assigning average value of the treatment group to the missing data and use Anderson (2008)'s method that weights each component by the variance-covariance matrix to create a composite index of health outcomes. For robustness, appendix table A10 uses index constructed without weighting the data with variance-covariance matrix, that is, each component of the index is assigned equal

weight similar to Kling et al. (2007).

Results reported in Column 5 of table 4, point out that mission treatment has a positive effect on the health of the community. Workers in the mission treatment led to an improvement of 0.205 standard deviations in the composite health index. This is followed by the positive effect of 0.164 standard deviations achieved by the combined (mission+financial incentive) treatments. Financial incentive also achieved an improvement of 0.12 standard deviations. However, this effect is 0.084 standard deviations smaller ($p - value = 0.127$) than the improvement brought about by the workers motivated with organizational mission. Based on these results, I can argue that the experiment led to meaningful improvement in the health of communities served by workers, especially those motivated by the mission of the organization.

From the above analysis I omitted data on weight of children that was collected from administrative registers. This information was available only for 543 workers, as the rest did not have functional weighing machines to measure the weight. Though the availability of this data is balanced across treatments, there are some differences in terms of gender and age across the groups (see Table A.5). Therefore I did not include this data in the main analysis but present it as additional supporting evidence in appendix.

Table A12 reports the effects on the health outcomes presented in the main table 4 but add the weight data as column 5. This column reports the effect of treatments on the weight of the children as measured in kilogram, after controlling for the age and gender of children for each worker. The important take away from this analysis is that the coefficients on the three treatments are all positive, though only the combined treatment has a statistically significant effect on it. In column 6 I combine the data in health index that includes the weight data. And like the main result in this section, mission and mission plus financial incentive appear to have a much stronger effect on the health of the children compared to the financial incentive treatment. Mission treatment improves health by 0.096 standard deviations ($p-value = 0.079$) more than the financial incentive, and the combined treatment improves more by 0.07 standard deviations ($p - value = 0.276$).

7 Alternative Explanations for How the Mission Treatment Works?

In this section, I study three alternative mechanisms for the effect of mission treatment on worker performance. First, I examine if the mission treatment works purely through conveying information about the type of tasks a worker should perform. Second, it is possible that the mission provides workers information about being monitored, getting them to work harder. Third, I explore if the main channel is through "peer influence", where workers expectations about what their peers think of the mission change and that influences their behavior.

7.1 Mission as Information

The first alternative I test is whether the mission treatment acts as an instrument of learning and information transmission for the workers. It is possible the workers optimize their efforts on certain tasks in the status-quo based on the information they have. But the mission treatment alters the set of available information by highlighting duties such antenatal care and child health. Workers following this new information may re-optimize from other tasks to the performance metrics that they think were conveyed to them via the treatment.

I test for this mechanism by including in the design of the experiment a placebo treatment. The placebo group receives the refresher training just like the public mission treatment but does not discuss the mission. If the mission treatment works through channeling information to workers, I should see the placebo training workers improve effort too as they undergo similar training but without emphasizing the mission. Additionally, if mission works through specific topics that are discussed with the workers then the placebo treatment workers should exert more effort on the tasks related to the topics discussed in their refresher training. I do not find evidence to support this explanation. The placebo treatment does not increase household visits as reported in table A6 and also has no effect on the specific tasks of mother and child health, as reported in table 3. These results suggest that providing information is not main channel through which mission treatment works.

7.2 Monitoring

The second channel for the mission treatment to change behavior is to activate concerns about being monitored. Emphasizing the mission may make workers realize the manager considers their job to be important for the mission, and will thus be monitoring them more to make sure everyone is performing. If this channel is active workers in the mission treatment group should believe to be monitored more than the control group. During the end line survey I ask all workers to tell us their perception of being monitored during the last few months. I plot the mean response and confidence intervals of responses for all treatment groups in appendix figure A5. It is clear that there is no difference in the perception of workers about being monitored across treatments. I can rule out monitoring as the main channel for the mission treatment to influence behavior of workers.

7.3 The Role of Peers

I explore if the mission treatment influences the behavior of workers through peers. The channel can work in two ways. First, workers' expectations of what their peers care for may change which in turn may change the expectations about effort. If workers do not want to appear to be behaving any differently from their peers they may change own behavior. Second, workers may not care about the deviation from the expected effort level per-se but they learn from their peers what is important for their job. This learning may also get them to work harder. It is important to note that these channels of peer influence may be present alone or work in addition to intrinsic preferences of workers.

[Table 5 Here]

The design of experiment helps us disentangle the additional effect of mission treatment through peers. As discussed in section 3.1, the mission treatment is delivered in two different ways. One set of workers receives the treatment individually through one-on-one interactions with a facilitator. With the individual treatment, I restrict the knowledge about others receiving the same treatment.

A second set of workers receive the treatment in public groups, where I try to establish that the organizational mission is common knowledge. I assume the effect of the treatment on this group will be through a combination of intrinsic preferences and expectations about the effort set by the peers. Differencing the effect of private treatment from the public should give us the additional effect of mission that due to the 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.

$$\begin{aligned} V_{ijmb} = {} & \beta_0 + \beta_1 * MissionPublic_{jb} + \beta_2 * MissionPrivate_{jb} \\ & + \beta_3 * FinancialIncentive_{jb} + \beta_4 * (Mission + FinancialIncentive)_{jb} + \beta_5 * Placebo_{jb} \\ & + B_{jb} + z_{jb} + M_m + \epsilon_{ijmb} \end{aligned} \tag{3}$$

In column 1 of table 5, I show the workers in the public and private group have higher reported motivation for the mission, indicating that intrinsic preferences are activated in both groups. However, column 2 shows workers in the private group do not believe their co-workers to be additionally motivate by the mission relative to the control.[13] Though the difference between the private and public group in column 2 is not statistically different, the magnitude is large. This suggests with a bigger sample, the difference could have been statistically significant.

Column 3 of table 5 reports that both the public and private treatments lead to very similar effects on performance of workers. Second part of the table reports the result of testing $\beta_1 - \beta_2 = 0$. I cannot reject the null hypothesis that coefficients on private treatment (pure preference channel) and public treatment (a combination of preference and norms channel) are the same. This result suggests that there may not be an additional effect of the mission treatment due to expectations about the peers. While preferences can be endogenous, since the assignment to public treatments is random I are confident to rule out this as a mechanism of mission treatment.

8 Conclusion

Motivating workers is a key challenge for organizations looking to maximize productivity under resource constraints. As outlined in the introduction, many organizations strive to provide a higher purpose to their workforce to increase their motivation and productivity. And such strategies are not limited to just non-profit sector, nearly half of the organizations surveyed by Harvard Business Review (2015) have invested in creating and adopting

[13] I measure intrinsic preferences and beliefs about others through survey statements. *Mission importance self* is captured by the agreement of workers with the statement "Mission-driven motivation is important for me". *Mission importance others* is captured by the agreement of workers with the statement "Mission-driven motivation is important for my co-workers".

strategies,that give the employees something beyond the monetary financial incentive. But, despite the widespread presence of mission statements in the organizations, it is far from clear whether they actually influence the performance of workers by motivating them.

While there is substantial interest in this question from the theoretical side, the empirical literature has lagged behind exploring if there is an incentive effect of emphasizing the organizational mission to workers. This paper provides, to my knowledge, the first such evidence from the field by showing that indeed communication about the mission is important for motivating workers. That higher motivation results in increased productivity, not just on the margin of core duties but also on multiple tasks. This finding is especially relevant to settings where performance is not easily observable, such as public health settings, and contractible.

A significant number of people living in developing countries rely on the state to provide basic services such as health, education, and sanitation, making the service providers and front line workers one of the most important links in the development chain. Ample evidence suggests that this link is not working as well as it should have been. Especially in the context of health service delivery, countries have been spending significant resources on improving the health outcomes of mothers and children. Though there is progress but improvements are slow especially in Pakistan where this project was implemented. Based on the results in this paper, policymakers should consider investing in motivating workers through better organization design that keeps the mission central to the operational strategy.

While the experiment benefits from unique organizational feature of the community health workers, such as non-overlapping areas of responsibility, the findings here are generalizable to many settings. As mentioned in the paper, almost every country employs community health workers to provide the first layer of preventive and basic health services. This makes the findings generalizable to many countries even if I limit the generalizability to only the organizations performing the exact same tasks.

Beyond the community health workers, I believe the results also speak to the broader question of getting bureaucracies to perform better. Foundations of modern bureaucratic organizations, as outlined by Weber (1922), have no space for emotions with clearly laid out rules governing the behavior of service providers. That is why opportunities to join the public sector in several countries are advertised as avenues for a professional career, and not necessarily as a chance to help the community.[14] But the inherent nature of public service still

[14]This is evident by how the jobs are advertised in many contexts but also by the existence of centralized examinations for induction in the bureaucracy.

appeals more to people who care to serve others. In such organizations, the inherent pro-social nature of workers has been assumed to be active all the time, even used in arguments justifying lower levels of incentives. However, such an argument ignores that besides the desire to serve, the workers also would like to serve in organizations where their managers care about the same things as they do. When workers realize that their managers do not have the same preferences as them, it affects their productivity. This can be avoided with trainings, retreats or communications to workers emphasizing the organizational mission.

Table 1: **Effects of Treatments on Performance**

	Dep Var: Household Visit = 1	
	(1)	(2)
Mission	0.051***	0.057***
	(0.012)	(0.011)
Financial Incentive	0.101***	0.097***
	(0.015)	(0.014)
Mission and Financial Incentive	0.069***	0.068***
	(0.014)	(0.013)
Placebo	0.013	0.013
	(0.012)	(0.012)
Control Mean	0.353	0.353
# of Observations	21279	21279
# of Workers	710	710
Block & Wave Fixed Effects	✓	✓
Baseline Controls	-	✓
	Linear Combinations of Coefficients	
Mission − Financial Incentive	-0.050***	-0.041***
	[0.000]	[0.000]
Mission − Mission and Financial	-0.018	-0.011
	[0.126]	[0.254]
Financial Incentive − Mission and Financial	0.033**	0.029**
	[0.031]	[0.023]

Notes: *$p < 0.1$, **$p < 0.05$, ***$p < 0.01$. This table reports the effects of treatments on the probability of household visits using a linear probability moderl. It uses household level data collected from three rounds of survey. First part of the table reports the coefficients on each treatment dummy. Standard errors clustered at the worker level are reported in parenthesis. Results in column (1) do not control for the baseline performance, while column (2) does include it as a control. Each regression uses randomization block and survey wave fixed effects. Second part of the table reports linear combinations of co-efficients and test them against a null of zero difference. $p - values$ of the tests are reported in square brackets.

Table 2: **Intrinsic Motivation of Mission Treated Workers**

	Index of Mission Motivation	*Willingness to Work for Rs. 0=1*
	(1)	(2)
Mission	0.201***	0.105*
	(0.071)	(0.059)
Financial Incentive	-0.031	-0.058
	(0.090)	(0.076)
Mission and Financial Incentive	0.238***	0.135*
	(0.079)	(0.070)
Placebo	-0.146*	0.012
	(0.081)	(0.065)
Control Mean	0.000	0.614
# of Observations	705	707
# of Workers	705	707
	Linear Combinations of Coefficients	
Mission − Financial Incentive	0.232***	0.163***
	[0.001]	[0.007]
Mission − Mission and Financial	-0.036	-0.029
	[0.515]	[0.578]
Financial Incentive − Mission and Financial	-0.269***	-0.193***
	[0.001]	[0.007]

Notes: This table reports the effect of treatments on two measures of intrinsic motivations. Column 1 uses willingness to work of workers for Rs. 0 using BDM method in a lab-in-the-field activity. Column 2 reports the effect on an index of mission motivation that combines responses of workers 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 mission is very similar to my thinking since the beginning of 2019. (3) Attachment: If the LHW program mission was something else, I would not have been as attached to the program. All regressions control for randomization block fixed effects and standard errors are clustered at the worker level. Second panel reports differences between coefficients and tests them against a null hypothesis of zero. $p - Value$ of the tests are reported in parentheses.

Table 3: **Effects on Multitasking**

	Antenatal Check = 1	*Children Examined = 1*	*Discussed Prevention = 1*	*Tuberculosis Screening*	*Vaccination Camps*	*Multitasking Index*
	(1)	(2)	(3)	(4)	(5)	(6)
Mission	0.052**	0.032**	0.050*	0.047**	0.468*	0.176***
	(0.022)	(0.015)	(0.029)	(0.021)	(0.269)	(0.043)
Financial Incentive	-0.004	0.024	0.024	0.005	0.167	-0.009
	(0.028)	(0.017)	(0.036)	(0.023)	(0.326)	(0.052)
Mission and Financial Incentive	0.046*	0.027	0.058*	0.044**	0.476	0.143***
	(0.025)	(0.017)	(0.034)	(0.022)	(0.345)	(0.051)
Placebo	-0.039	0.009	0.016	0.018	-0.290	-0.022
	(0.026)	(0.016)	(0.031)	(0.022)	(0.292)	(0.047)
Control Mean	0.359	0.457	0.477	0.360	5.716	0.000
# of Observations	1915	3347	7100	8588	702	710
# of Workers	646	689	710	710	702	710
Condition	Pregnant	Children	-	Visit	-	-
Data Source	HH Survey	HH Survey	HH Survey	HH Survey	Worker Survey	-
			Linear Combinations of Coefficients			
Mission − Financial Incentive	0.057***	0.008	0.026	0.042***	0.301	0.185***
	[0.000]	[0.491]	[0.349]	[0.006]	[0.244]	[0.000]
Mission − Mission and Financial	0.007	0.004	-0.008	0.003	-0.008	0.033
	[0.613]	[0.708]	[0.767]	[0.838]	[0.979]	[0.347]
Financial Incentive − Mission and Financial	-0.050**	-0.003	-0.034	-0.039**	-0.309	-0.152***
	[0.014]	[0.820]	[0.309]	[0.021]	[0.357]	[0.001]

Notes: This table reports the effects of treatments on multiple tasks performed by the workers. Each column reports the effects on the task mentioned in the column heading. First four columns use household level data collected through surveys and the fifth column uses worker level data. Column six combines the data used in the first five columns into a composite index of multitasking. Each regression controls for randomization block fixed effects. Analysis using data form multiple rounds of survey (columns 1, 2 and 4) also control for survey round fixed effects. Standard errors are clustered at the worker level and reported in parenthesis. The second half of the table reports linear combinations of coefficients on the treatments and tests them against a null of zero difference. $p - values$ of the tests are reported in square brackets.

Table 4: **Effects of Treatments on Health Outcomes**

	Incidence of Diarrhea	*Proportion Timely Vaccinated*	*Mortality Rate: Children*	*Mortality Rate: Mother*	*Health Index*
	(1)	(2)	(3)	(4)	(5)
Mission	-0.071**	0.031***	-0.003	-0.001	0.205***
	(0.035)	(0.011)	(0.002)	(0.001)	(0.051)
Financial Incentive	-0.098**	0.012	-0.001	0.000	0.121*
	(0.039)	(0.013)	(0.003)	(0.002)	(0.068)
Mission and Financial Incentive	-0.076*	0.029**	-0.001	-0.000	0.164***
	(0.039)	(0.012)	(0.003)	(0.001)	(0.059)
Placebo	-0.002	0.007	-0.001	-0.001	0.048
	(0.036)	(0.011)	(0.002)	(0.001)	(0.054)
Control Mean	0.287	0.888	0.008	0.002	-0.000
# of Observations	2292	5136	703	703	710
# of Workers	686	710	703	703	710
Data Source	HH Survey	HH Survey	Admin	Admin	–
	Linear Combinations of Coefficients				
Mission − Financial Incentive	0.027	0.019***	-0.002	-0.001	0.084
	[0.364]	[0.002]	[0.508]	[0.343]	[0.127]
Mission − Mission and Financial	0.005	0.002	-0.002	-0.001	0.041
	[0.855]	[0.841]	[0.416]	[0.503]	[0.347]
Financial Incentive − Mission and Financial	-0.021	-0.018	0.000	0.001	-0.043
	[0.530]	[0.102]	[0.989]	[0.699]	[0.489]

Notes: $^{*}p < 0.1$, $^{**}p < 0.05$, $^{***}p < 0.01$. This table reports the effects of treatments on health outcomes mention in the column headers, using household and administrative data. Columns 1 and 2 use survey data collected during the experiment. Columns 3 and 4 use administrative data collected one year after the experiment. Column 5 is an index of the first 4 columns. Each regression controls for randomization block fixed effects and column 2 also uses survey round fixed effects as the information was collected in multiple rounds. Standard errors are clustered at the worker level and reported in parenthesis. The second half of the table reports linear combinations of coefficients on the treatments and tests them against a null of zero difference. $p-values$ of the tests are reported in square brackets.

Table 5: **Peer Influence**

	Mission Importance:		*Household*
	Self	*Others*	*Visit = 1*
	(1)	(2)	(3)
Mission Public (Group Treatment)	0.258**	0.215*	0.058***
	(0.120)	(0.125)	(0.011)
Mission Private (Individual Treatment)	0.324**	0.144	0.054***
	(0.130)	(0.131)	(0.013)
Control Mean	0.000	-0.000	0.353
# of Households	701	700	21279
# of Clusters	701	700	710
Data Source	Worker Survey	Worker Survey	HH Survey
Baseline Control	-	-	✓
			Linear Combination of Coefficients
Mission Public - Mission Private	-0.065	0.071	0.004
	[0.469]	[0.497]	[0.702]

Notes: $^{*}p < 0.1$, $^{**}p < 0.05$, $^{***}p < 0.01$. This table reports the effects of sub-treatments of the mission treatment. Columns 1 and 2 use data from the endline survey of workers to test whether workers' stated beliefs about importance of mission for themselves and their beliefs about co-workers are affected by the mode of delivery of the treatment. *Mission importance self* is captured by the agreement of workers with the statement "Mission-driven motivation is important for me". *Mission importance others* is captured by the agreement of workers with the statement "Mission-driven motivation is important for my co-workers". Column 3 uses household survey data to test if public delivery of mission had any positive effect on the performance workers in addition to the effect of intrinsic preferences captured by the privately delivered treatment. First half of the table reports selected coefficients from a full regression as per equation 3. The regressions controls for randomization block fixed effects. Column 3 also controls for the survey round fixed effects and baseline performance. Standard errors clustered at the worker level are reported in parenthesis. Second half of the table reports linear combination of the coefficients and $p - value$ of a test that this combination is zero, is reported in square brackets.

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Figure A1: **Design of the Experiment**

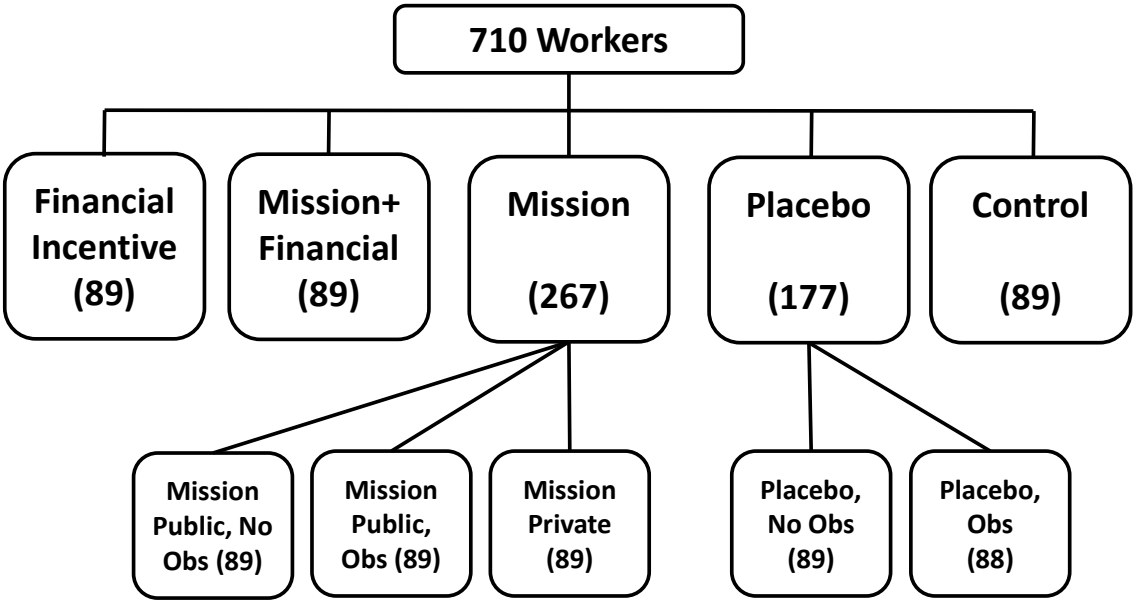


Table A1: **Balance Table for Pooled Treatments**

	Total HH Assigned	*No. of Preg. Women per HH*	*No. of Child. Under two per HH*	*LHW Visit*	*Distance in mins*
A. Control	155.625	0.276	0.516	0.385	15.963
	(3.833)	(0.020)	(0.031)	(0.023)	(0.611)
B. Mission	156.936	0.275	0.484	0.353	16.306
	(2.097)	(0.011)	(0.019)	(0.013)	(0.400)
C. Financial Incentive	156.213	0.284	0.565	0.391	16.691
	(3.716)	(0.020)	(0.039)	(0.022)	(0.599)
D. Mission+Financial Incentive	155.438	0.299	0.508	0.382	16.002
	(3.832)	(0.019)	(0.035)	(0.024)	(0.543)
E. Placebo	154.819	0.288	0.513	0.374	16.268
	(2.605)	(0.015)	(0.024)	(0.015)	(0.411)
Hypothesis tests Joint orthogonality p-value	0.98	0.84	0.44	0.48	0.91
A-B =0	0.76	0.96	0.38	0.22	0.64
A-C=0	0.91	0.77	0.32	0.86	0.39
A-D=0	0.97	0.41	0.87	0.93	0.96
A-E=0	0.86	0.63	0.94	0.69	0.68
# of Households	7099	7099	7099	7099	7099
# of Workers	710	710	710	710	710

Notes: Standard Errors clustered at the worker level.

Table A2: **Balance Table Disaggregated Treatments**

	Total HH Assigned	*No. of Preg. Women per HH*	*No. of Child. Under two per HH*	*LHW Visit*	*Distance in mins*
A. Control	155.625	0.276	0.516	0.385	15.963
	(3.833)	(0.020)	(0.031)	(0.023)	(0.611)
B. Group Mission	154.326	0.281	0.493	0.361	16.275
	(3.559)	(0.018)	(0.032)	(0.022)	(0.459)
C. Group Mission + Observability	157.966	0.280	0.484	0.354	16.269
	(3.697)	(0.022)	(0.032)	(0.021)	(0.828)
D. Private Mission	158.517	0.264	0.474	0.344	16.373
	(3.624)	(0.019)	(0.036)	(0.023)	(0.740)
E. Group Mission + Financial Incentive	155.438	0.299	0.508	0.382	16.002
	(3.833)	(0.019)	(0.035)	(0.024)	(0.543)
F. Financial Incentive	156.213	0.284	0.565	0.391	16.691
	(3.716)	(0.020)	(0.039)	(0.022)	(0.599)
G. Socialization	153.303	0.298	0.492	0.394	16.416
	(3.707)	(0.021)	(0.032)	(0.023)	(0.616)
H. Socialization + Observability	156.352	0.278	0.534	0.353	16.119
	(3.656)	(0.020)	(0.036)	(0.018)	(0.544)
Hypothesis tests Joint orthogonality p-value	0.98	0.94	0.71	0.59	0.99
A-B =0	0.80	0.86	0.61	0.45	0.68
A-C=0	0.66	0.90	0.48	0.32	0.77
A-D=0	0.58	0.66	0.37	0.21	0.67
A-E=0	0.97	0.41	0.87	0.93	0.96
A-F=0	0.91	0.77	0.32	0.86	0.39
A-G=0	0.66	0.46	0.59	0.78	0.60
A-H=0	0.89	0.94	0.70	0.29	0.85
# of Households	7099	7099	7099	7099	7099
# of Workers	710	710	710	710	710

Notes: Standard Errors clustered at the worker level.

Table A3: **Summary statistics**

Variable	**Mean**	**Std. Dev.**	**Min.**	**Max.**	**N**
# 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 A4: **Balance Table Individual Characteristics**

	Years of Schooling	*Health Diploma*	*Tenure in Years*	*PSM Score*	*IQ Score*
A. Control	10.253	0.352	16.000	3.664	0.602
	(0.246)	(0.051)	(0.664)	(0.068)	(0.021)
B. Mission	10.007	0.376	15.624	3.659	0.575
	(0.146)	(0.030)	(0.359)	(0.036)	(0.014)
C. Financial Incentive	10.273	0.466	13.746	3.595	0.579
	(0.267)	(0.053)	(0.689)	(0.068)	(0.021)
D. Mission+Financial Incentive	9.795	0.398	15.870	3.631	0.546
	(0.222)	(0.052)	(0.639)	(0.067)	(0.024)
E. Placebo	9.966	0.350	14.966	3.563	0.548
	(0.194)	(0.036)	(0.449)	(0.049)	(0.016)
Hypothesis tests					
Joint orthogonality p-value	0.58	0.45	0.08	0.56	0.25
A-B =0	0.39	0.69	0.62	0.94	0.29
A-C=0	0.96	0.12	0.02	0.47	0.46
A-D=0	0.17	0.53	0.89	0.73	0.08
A-E=0	0.36	0.97	0.20	0.23	0.04
# of Households	707	707	575	709	710
# of Workers	707	707	575	709	710

Notes: Standard Errors clustered at the worker level.

Table A5: **Time Line**

Dec 2018	Baseline Surveys
1st Feb 2019	Treatments Begin
1st March 2019	First HH Survey
1st April 2019	Second HH Survey
30th April 2019	Treatments End
1st May 2019	Third HH Survey
June 2019	Post Experiment HH Survey Endline Worker Survey
April 2020	Incentivized Lab Activity Administrative Data Collection

Figure A2: **Training Activities**

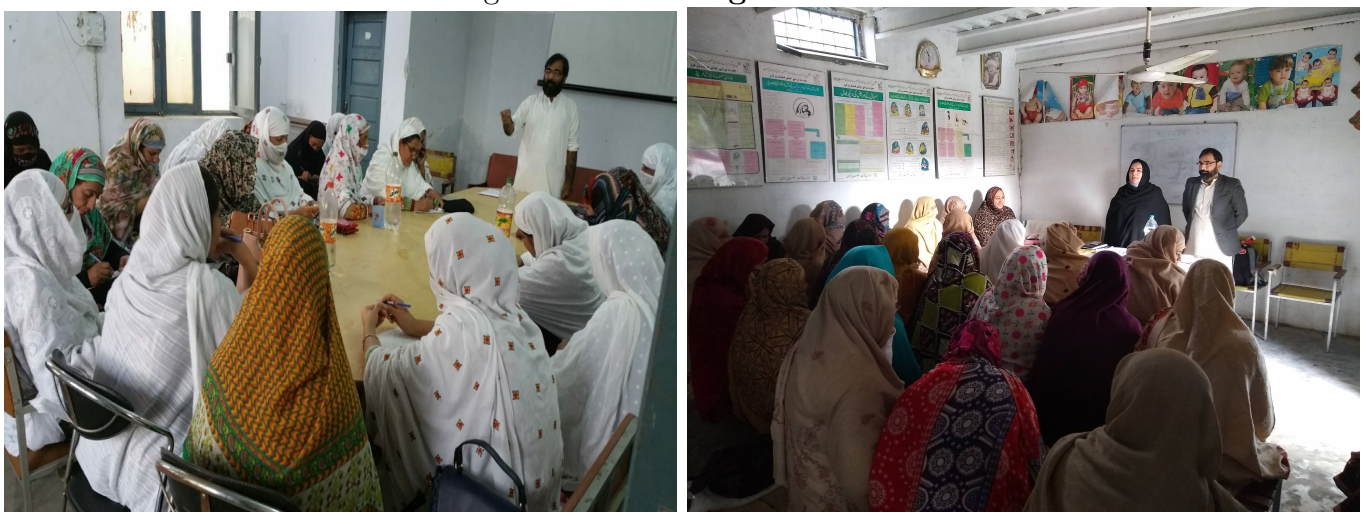


Figure A3: **Survey Activities**

A Additional Results and Tables

A.1 Alternative Explanations for the Effect of Mission Treatment

I have established that introducing a pro-social mission to workers of a public sector organization motivates them to improve their performance. However, it is possible that the reason for improved performance is not the mission itself but something else that also changed for the treatment workers.

The main alternative explanation for why mission may work, may relate to the way the main treatment was delivered. The treatment brings workers together in groups, and the workers also interact consistently over three months with a facilitator. The group setting may result in more social interaction between workers (Feigenberg et al. 2013) and interaction with a facilitator may create goodwill towards the organization. Thus workers can become more inclined towards their duties by virtue of having more goodwill towards the organization and its people.

Table A6: **Alternative Explanations for Mission**

	Dep Var: Household Visit = 1	
	(1)	(2)
Mission	0.051***	0.057***
	(0.012)	(0.011)
Placebo	0.013	0.013
	(0.012)	(0.012)
Control Mean	0.353	0.353
# of Observations	21279	21279
# of Workers	710	710
Block & Wave Fixed Effects	✓	✓
Baseline Controls	-	✓
Linear Combinations of Coefficients		
Mission − Placebo	0.038	0.044
	[0.000]	[0.000]

Notes: *$p < 0.1$, **$p < 0.05$, ***$p < 0.01$.

I test for this alternative explanations by including in the design of the experiment a placebo

treatment. As discussed in section 3.1, the study includes a treatment group that receives the refresher training just like the public mission treatment but does not discuss the mission or shows the video of DHO. This treatment group is similar to the public mission group in terms of receiving refresher training and socializing with other workers. If these alternate reasons were behind the change in performance of workers I should see no difference between the placebo treatment and the mission treatment.

The second row in Table A6 reports coefficients of placebo treatments in the regressions. It is clear that the observed effects of the mission are not driven by these alternate explanations, otherwise I would have seen similar magnitudes between the mission and the placebo treatments. I formally test for the difference between the mission and placebo treatments in second part of the table. I can comfortably reject the null hypothesis that the effect of the mission is driven entirely but these alternative explanations.

A.1.1 Persistence of Mission Motivation

Comparison with the effect of financial incentives on household visits during the course of the experiment does not fully capture the incentive effect of mission, especially if the mission message has been internalized by the workers to create a lasting effect.

To study whether the effect of the mission treatments is sustainable, I announce the end of the project at the end of the three months. I inform the workers that they will not be meeting again to discuss the organizational mission, and that they will also not receive any financial incentive for working harder. However, I still tracked their performance through a survey of households to see if they continued their improved effort. This can be considered a strong test of sustainability because the treatment was not stopped quietly, instead it was done with clear announcements.

Figure A4 shows the effect of treatments on the probability of a household visit after the experiment ended. Workers who received the mission continued to serve their communities with a higher effort post experiment. Their performance was higher than the pure control by 3.7 percentage points. The effect of financial incentive, not surprisingly, went down significantly from 9.8 percentage points (as reported in Table 1) to 1.2 percentage points, which can not be statistically distinguished from zero. This evidence suggests that the message from mission treatment was internalized by the workers.

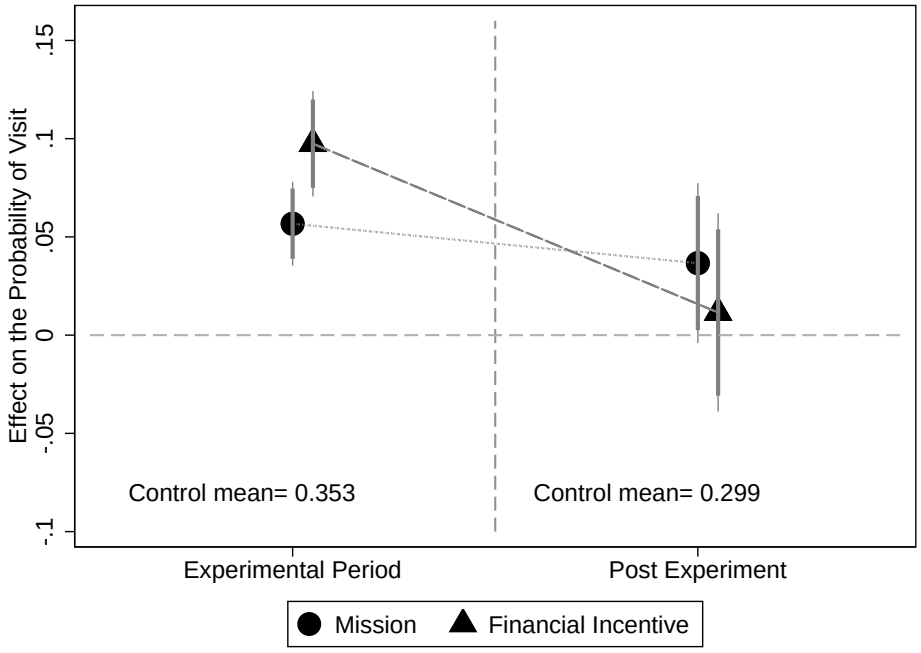


Figure A4: Persistence of Mission Effect Post Experiment

Table A7: **Beliefs About the Role of Mission in the Organization**

	Index of Beliefs	Mission Importance	Mission Alignment	Mission Attachment
	(1)	(2)	(3)	(4)
Mission	0.201***	0.216*	0.174*	0.215*
	(0.071)	(0.115)	(0.104)	(0.110)
Financial Incentive	-0.031	0.045	-0.160	0.024
	(0.090)	(0.139)	(0.143)	(0.141)
Mission and Financial Incentive	0.238***	0.252**	0.218*	0.244**
	(0.079)	(0.127)	(0.119)	(0.118)
Placebo	-0.146*	-0.092	-0.302**	-0.043
	(0.081)	(0.129)	(0.126)	(0.123)
Control Mean	0.000	0.000	0.000	0.000
# of Observations	705	705	705	705
# of Workers	705	705	705	705
	Linear Combinations of Coefficients			
Mission − Financial Incentive	0.232***	0.170*	0.334***	0.191*
	[0.001]	[0.099]	[0.004]	[0.083]
Mission − Mission and Financial	-0.036	-0.036	-0.044	-0.028
	[0.515]	[0.674]	[0.584]	[0.714]
Financial Incentive − Mission and Financial	-0.269***	-0.207*	-0.378***	-0.220*
	[0.001]	[0.078]	[0.003]	[0.063]

Notes: $^*p < 0.1$, $^{**}p < 0.05$, $^{***}p < 0.01$. This table reports the effects of treatments on standardized stated beliefs regarding organizational 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. (3) Attachment: If the LHW program mission was something else, I would not have been as attached to the program. Regressions controls for randomization blocks. First half the table reports the coefficients on each treatment. The regressions control for randomization block fixed effects. Standard errors clustered at the worker level are reported in parenthesis. Second part of the table reports linear combinations of coefficients and test them against a null of zero difference. $p - values$ of the tests are reported in square brackets.

A.2 Time Spent by Workers

One aspect of multitasking that I see in the data is that the improvement in performance on the household visits does not come at the expense of other tasks that are measured. It is possible that there is a cost in terms of some other tasks that I are not measuring. To investigate this I collect data on the time spent in each visit from the households, and ask

the workers in the endline survey what time they start and end their day in the community to measure the total effort proxied by the time spent on the job. Appendix table A8 shows the results from analysis of time spent on the job.

In column 1, I find there is no negative effect on the time spent in each household, which is reassuring that the improvement in performance as measured by more visits does not come at the expense of quality of the visit proxied by time spent in each visit.

Table A8: **Time Spent on the Job**

	Minutes Spent on a Visit	*Minutes Spent on Work in a Day*
	(1)	(2)
Mission	16.857***	0.185
	(5.870)	(0.549)
Financial Incentive	15.241*	0.661
	(8.000)	(0.656)
Mission and Financial Incentive	15.097**	0.296
	(7.526)	(0.693)
Placebo	4.145	0.423
	(6.276)	(0.573)
Control Mean	318.409	18.398
# of Observations	705	5612
# of Workers	705	703
Data Source	Worker Survey	HH Survey
	Linear Combinations of Coefficients	
Mission − Financial Incentive	1.616	-0.476
	[0.824]	[0.364]
Mission − Mission and Financial	1.760	-0.111
	[0.793]	[0.847]
Financial Incentive − Mission and Financial	0.144	0.366
	[0.987]	[0.588]

Notes: $^{*}p < 0.1$, $^{**}p < 0.05$, $^{***}p < 0.01$. This table reports the effects of treatments on time spent in a household during a visit (column 1) and overall time spent on the job during a given day (column 2). Each regression uses block fixed effects and standard errors are reported in parenthesis. Second part of the table reports linear combinations of co-efficients and test them against a null of zero difference. $p - values$ of the tests are reported in brackets.

A.3 Effects on the Acceptance of Offers for Additional Work

Table A9: **Effects of Treatment on Acceptance of Offers**

	Accept to Work = 1			
	Rs. 0	*Rs. 50*	*Rs. 100*	*Rs. 200*
	(1)	(2)	(3)	(4)
Mission	0.105*	0.008	0.007	-0.001
	(0.059)	(0.061)	(0.062)	(0.063)
Financial Incentive	-0.058	-0.018	0.020	0.010
	(0.076)	(0.075)	(0.076)	(0.076)
Mission and Financial Incentive	0.135*	0.001	0.010	0.019
	(0.070)	(0.074)	(0.076)	(0.077)
Placebo	0.012	-0.015	0.010	0.028
	(0.065)	(0.066)	(0.067)	(0.067)
Control Mean	0.614	0.466	0.545	0.557
# of Observations	707	707	707	707
# of Workers	707	707	707	707
Block Fixed Effects	✓	✓	✓	✓
	Linear Combinations of Coefficients			
Mission − Financial Incentive	0.163	0.026	-0.013	-0.011
	[0.007]	[0.678]	[0.834]	[0.856]
Mission − Mission and Financial	-0.029	0.007	-0.003	-0.020
	[0.578]	[0.911]	[0.959]	[0.741]
Financial Incentive − Mission and Financial	-0.193	-0.019	0.010	-0.009
	[0.007]	[0.799]	[0.898]	[0.901]

Notes: $^{*}p < 0.1$, $^{**}p < 0.05$, $^{***}p < 0.01$. This table reports the effects of treatments on accepting to work for various offers on an activity one year after the experiment. The dependent variable in each regression takes the value 1 if the worker accepts the offer mentioned in the column heading. Each regression uses block fixed effects and standard errors are reported in parenthesis. Second part of the table reports linear combinations of co-efficients and test them against a null of zero difference. $p - values$ of the tests are reported in brackets.

A.4 Robustness of Indices

Table A10: **Health and Multitasking Indices Using Equal Weights**

	Multitasking Index (1)	*Health Index* (2)
Mission	0.183***	0.201***
	(0.043)	(0.052)
Financial Incentive	-0.036	0.112
	(0.053)	(0.072)
Mission and Financial Incentive	0.141***	0.155**
	(0.050)	(0.060)
Placebo	-0.039	0.055
	(0.047)	(0.054)
Control Mean	-0.000	-0.000
# of Observations	710	710
# of Workers	710	710
	Linear Combinations of Coefficients	
Mission − Financial Incentive	0.219	0.089
	[0.000]	[0.133]
Mission − Mission and Financial	0.042	0.046
	[0.224]	[0.316]
Financial Incentive − Mission and Financial	-0.177	-0.043
	[0.000]	[0.515]

Notes:The table reports indices of multitasking and health outcomes that are created using equally weighted data following Kling et al. (2007). All regressions control for randomization block fixed effects and standard errors are clustered at the worker level. Second half of the table reports differences between coefficients and tests them against a null hypothesis of no difference. $p - values$ of the tests are reported in square brackets.

A.5 Additional Analysis on Health Outcomes

Table A11: Balance of Children Weight Data

	Weight Data Not Available = 1 (1)	Gender Boy = 1 (2)	Age in Months (3)
Mission	0.228	0.451	16.093
	(0.026)	(0.015)	(0.396)
Financial Incentive	0.236	0.475	15.000
	(0.045)	(0.025)	(0.644)
Mission and Financial Incentive	0.270	0.438	15.414
	(0.047)	(0.026)	(0.574)
Placebo	0.209	0.400	15.329
	(0.031)	(0.018)	(0.422)
Pure Control	0.239	0.439	15.776
	(0.046)	(0.023)	(0.513)
	p-value of hypotheses		
Joint orthogonality p-value	0.873	0.120	0.551
Mission − Control = 0	0.846	0.673	0.625
Financial − Control = 0	0.967	0.302	0.347
Mission and Financial − Control = 0	0.637	0.974	0.638
Placebo − Control = 0	0.590	0.175	0.502
# of Observations	710	2708	2708
# of Workers	710	542	542

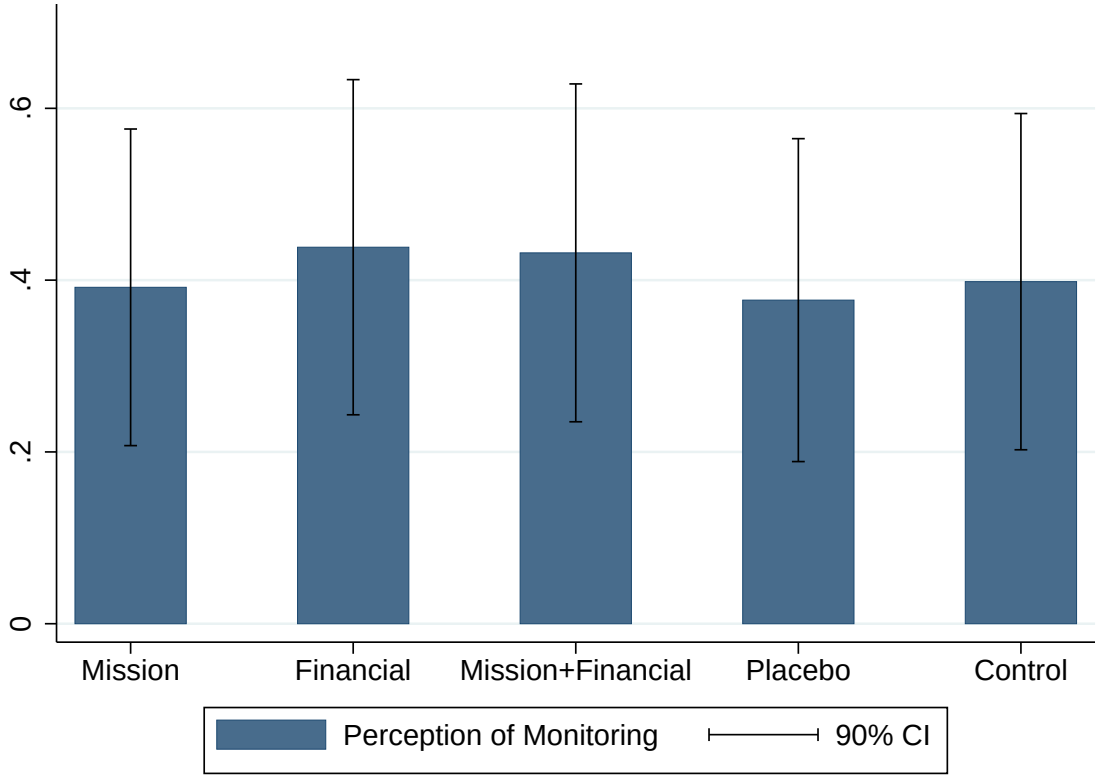
Notes: This table reports the balance on availability, age and gender of the child weight data.

Table A12: **Effects of Treatments on Health Outcomes**

	Incidence of Diarrhea	*Proportion Timely Vaccinated*	*Mortality Rate: Children*	*Mortality Rate: Mother*	*Weight of Children (Kg)*	*Health Index*
	(1)	(2)	(3)	(4)	(5)	(6)
Mission	-0.071**	0.031***	-0.003	-0.001	0.116	0.187***
	(0.035)	(0.011)	(0.002)	(0.001)	(0.136)	(0.048)
Financial Incentive	-0.098**	0.012	-0.001	0.000	0.188	0.089
	(0.039)	(0.013)	(0.003)	(0.002)	(0.151)	(0.069)
Mission and Financial Incentive	-0.076*	0.029**	-0.001	-0.000	0.306*	0.157***
	(0.039)	(0.012)	(0.003)	(0.001)	(0.164)	(0.058)
Placebo	-0.002	0.007	-0.001	-0.001	-0.026	0.053
	(0.036)	(0.011)	(0.002)	(0.001)	(0.144)	(0.052)
Control Mean	0.287	0.888	0.008	0.002	10.648	-0.000
# of Observations	2292	5136	703	703	2711	542
# of Workers	686	710	703	703	543	542
Data Source	HH Survey	HH Survey	Admin	Admin	Admin	–
	Linear Combinations of Coefficients					
Mission − Financial Incentive	0.027	0.019***	-0.002	-0.001	-0.073	0.098*
	[0.364]	[0.002]	[0.508]	[0.343]	[0.529]	[0.075]
Mission − Mission and Financial	0.005	0.002	-0.002	-0.001	-0.190	0.030
	[0.855]	[0.841]	[0.416]	[0.503]	[0.152]	[0.489]
Financial Incentive − Mission and Financial	-0.021	-0.018	0.000	0.001	-0.117	-0.068
	[0.530]	[0.102]	[0.989]	[0.699]	[0.431]	[0.294]

Notes: $^{*}p < 0.1$, $^{**}p < 0.05$, $^{***}p < 0.01$. This table reports the effects of treatments on health outcomes mention in the column headers with addition of the analysis on child weight, using household and administrative data. Columns 1 and 2 use survey data collected during the experiment. Columns 3, 4 and 5 use administrative data collected one year after the experiment. Column 6 is an index of the first 5 columns. Each regression controls for randomization block fixed effects and column 2 also uses survey round fixed effects as the information was collected in multiple rounds. The analysis data also controls for age and gender of the children for whom the weight data is reported. Standard errors are clustered at the worker level and reported in parenthesis. The second half of the table reports linear combinations of coefficients on the treatments and tests them against a null of zero difference. $p - values$ of the tests are reported in square brackets.

Figure A5: **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 worker survey.

B Who Responds to the Treatments?

In this section, I explore heterogeneous responses to treatments based on time-invariant characteristics of workers recorded before the launch of this experiment. The main question explored in this section is how high ability workers and those with higher public service motivation respond differently to the mission and financial treatments. I use baseline performance and Raven's IQ to proxy for ability of workers, and use Perry (1996) to measure their motivation for public service. The discussion in this section is suggestive due limited statistical power.

Ability: Workers can have different levels of abilities related to their jobs. I do not have a single good measure to help discern high ability workers from the low ability ones. But I do know their baseline performance in terms of household visits that can help us identify which workers perform better than others in a status-quo environment. Further, I have a proxy of their inherent "intelligence" measured through Raven's IQ test.[15] Using these two measures, I study how workers respond differentially to the mission and financial treatments given their baseline abilities.

I create a dummy variable that takes value of one if the baseline performance of a worker is higher than the median value of performance in the control group before the experiment. Column 1 in table A13 reports the heterogeneous response of such high performing workers to the three main treatments. High performers do not appear to be differentially responding to the mission treatments, whether delivered alone or in combination with the financial incentive. It is important to note that, the coefficients on these two treatments are almost zero. However, they do respond to standalone financial incentive very strongly. If the baseline performance measures ability, then higher ability workers appear to care more for financial incentives compared to low ability ones. Column 2 uses score on Raven's IQ test to explore the response of high IQ workers to the treatments. Again, I decide on high IQ individuals as those with score higher than the median worker in the control group. The effects are statistically insignificant but the signs on coefficients support the result in column 1. The coefficient on financial incentive is positive and the magnitude is different from zero, through insignificant due to lower power.

On the selection margin several studies have explicitly identified that high ability workers are more likely to be attracted to public sector jobs if there are stronger financial incentives

[15] I acknowledge the limitations of this test given that it was not developed for a Pakistani context.

directly (or indirectly through career progression) linked to the job (Dal Bó et al. 2013; Ashraf et al. 2018). The result on ability in this section show that it may also be true for the performance of workers who have already selected to work for the government.

Public Service Motivation: I measure public service motivation of workers using an abridged version of Perry (1996) based on Callen et al. (2018) in the baseline survey. Using median of the control group, I construct a categorical variable taking value 1 if the PSM score of a worker is above the median. Column 3 in table A13 reports the heterogeneous effects of treatments based on high PSM on the probability of a household visit. I cannot definitely discern if there are differential effects of treatments based on high PSM because none of the effects are statistically significant. The coefficients are not small in magnitude and with a bigger sample, I would be powered to statistically distinguish them from zero. But to the extent the signs on the coefficients are indicative of the behavior, it appears that workers with high public service motivation react negatively to the introduction of financial incentive. This directional effect appears to be driven purely by the signaling value of financial incentives as it does not appear for the workers receiving both mission and financial incentive treatment. Again the suggestive direction of result here is in line with the effects observed in selection studies that show that financial incentive may serve as a negative signal for motivated workers to join a public service organization (Deserranno 2019).

Table A13: **Who Responds to the Treatments**

	Dependent Var: Household Visit = 1		
	(1)	(2)	(3)
Mission	0.058***	0.061***	0.042***
	(0.013)	(0.014)	(0.015)
Financial Incentive	0.083***	0.090***	0.114***
	(0.016)	(0.020)	(0.020)
Mission and Financial Incentive	0.068***	0.067***	0.055***
	(0.016)	(0.019)	(0.020)
High Baseline Performance	0.086***		
	(0.020)		
Mission X High Baseline Performance	0.004		
	(0.024)		
Financial Incentive X High Baseline Performance	0.055**		
	(0.028)		
Mission and Financial Incentive X High Baseline Performance	0.006		
	(0.028)		
IQ		-0.004	
		(0.022)	
Mission X IQ		-0.027	
		(0.025)	
Financial Incentive X IQ		0.027	
		(0.032)	
Mission and Financial Incentive X IQ		0.004	
		(0.029)	
Public Service Motivation (PSM)			0.003
			(0.021)
Mission X PSM			0.019
			(0.024)
Financial Incentive X PSM			-0.033
			(0.031)
Mission and Financial Incentive X PSM			0.027
			(0.029)
Control Mean			
# of Observations	21279	21279	21279
# of Workers	710	710	710
Block & Wave Fixed Effects	✓	✓	✓

Notes: This table reports the heterogeneous effect to treatments based on their characteristics. Regressions control for randomization block and survey wave fixed effects and standard errors are clustered at the worker level.