COVID-19 and Women’s Mental Health: Evidence from a Telecounseling Intervention in Rural Bangladesh*

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September 21, 2020

Abstract

The COVID-19 lockdown and physical distancing measures are having profound economic and social implications across the world. Women are experiencing a heavier burden of household chores and unpaid care responsibilities, and an increased risk of being victims of domestic violence, which are likely to disproportionally affect their mental health. We provide an evaluation of the impact of a rapid randomized telecounseling intervention that aims to improve the mental health and wellbeing of women in rural Bangladesh. Our remote counseling intervention takes place over the phone in four stages over a period of three months, between July and October 2020. We expect that the provision of mental support to participating women will improve their mental health (levels of stress and depression). In addition, we will examine the impact of the intervention on a range of secondary outcomes: well-being (happiness, life satisfaction), future aspirations, compliance with COVID-19 precautionary measures, physical health of self and other household members, financial standing of the household, well-being of spouse, and relationship with other household members. We plan to conduct two endline surveys to assess the immediate (November 2020) and the short-term (April 2021) impacts of the intervention.

JEL: I10, I12, I18, I31, O12

Keywords: Mental health, COVID-19, telecounseling, randomized experiment, women, Bangladesh.

*This study is pre-registered at the AEA RCT Registry (ref no. AEARCTR-0005948) and the ANZCTR (ref no. ACTRN12620000795998).
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1 Introduction

The coronavirus disease (COVID-19) pandemic is confronting people around the world with an unprecedented combination of challenges: first, there is the risk of infection with the possible dire health implications for one’s self and family members; second, there is the challenge of coping with isolation due to the lockdown and the necessary social distancing measures that were taken by governments to control the spreading of the virus; third, the onset of the pandemic has brought about a dramatic disruption in economic activity exposing people to massive economic uncertainty and turmoil. The above health, social, and economic anxieties are consequently causing widespread psychological distress to people from all walks of life. The United Nations warns of a looming global mental health crisis (United Nations, 2020b), which needs to be urgently and systematically addressed if there is a hope of recovering from the pandemic (Holmes et al., 2020).

Developing countries are particularly vulnerable to the COVID-19 outbreak because of the limited healthcare capacity to treat patients and the limited fiscal capacity to absorb economic shock. A case in point is Bangladesh, one of the most densely populated countries in the world with a health system facing many challenges (limited intensive care units, ventilators, personal protective equipment, and capacity for testing) leaving its citizens particularly exposed to the highly contagious virus (Anwar et al., 2020; Cousins, 2020). The first confirmed case of COVID-19 in Bangladesh was reported on March 8, while the first death occurred on March 18. To contain the quick spread of the virus, the government of Bangladesh announced a countrywide lockdown from March 26, which was extended several times until May 30. As of September 6, 2020, Bangladesh had 325,157 confirmed cases and 4,479 deaths. The economic disruption caused by the lockdown has had a very negative impact on the livelihoods of people with sharp losses in jobs and income, raising concerns about the mental health deterioration for those falling into poverty (Ridley et al., 2020). Like in many other countries, the government of Bangladesh responded to the unfolding economic crisis by announcing a stimulus package that mainly includes subsidized loans to companies to support employment. It also entails a number of other measures aimed at relieving the poor and marginalized groups including informal workers, which constitute a large share of employed workers in the country. Nevertheless, the outlook remains very grim with a majority of rural households reporting to be threatened by food insecurity (Ahmed et al., 2020).

This paper reports the results of an evaluation of a randomized telecounseling intervention aimed at mitigating the mental health impact of COVID-19 on a sample of 2402 women across 357 villages in rural Bangladesh. We focus on women because they
are affected disproportionally by the social and economic impact of the pandemic, being in a more precarious position than men. Women have less decision-making power within the household and tend to take on a greater share of the increased household workload associated with the lockdown, such as caring for children who are out of school and the elderly. There have also been reports and evidence of heightened gender-based domestic violence during the pandemic (Taub, 2020; Ravindran & Shah, 2020). Thus, women bear the brunt of the economic and social consequences of the pandemic making them a highly vulnerable group whose mental health could as a result be suffering disproportionally (Etheridge et al., 2020).

The intervention consists of four brief mental-health counseling sessions that take place remotely over the phone (i.e., telecounseling), roughly on a biweekly basis, starting in mid-July 2020. The sessions, which last for about 20 minutes each, are delivered by locally recruited and trained female para counselors.\(^1\) Widespread use of mobile phones in Bangladesh makes this type of intervention possible.\(^2\) The sessions cover different aspects of the coronavirus’ impact on women’s physical and emotional wellbeing and ways to cope with stress and anxiety, following the COVID-19 mental health and psychosocial support guidelines of the International Federation of Red Cross (2020) and the World Health Organization (2020). The length of the intervention and of the individual sessions was chosen being mindful that participants already face a higher daily burden of household obligations due to the lockdown.

Although telecounseling was recommended before the onset of the pandemic as a complementary approach to the traditional in-person treatments of mental health illnesses (Patel et al., 2016), it is a particularly suitable medium to address mental health problems emerging under pandemic conditions that require adherence to physical distancing measures (Zhou et al., 2020; Kola, 2020). The existing evidence suggests that leveraging digital technologies for the delivery of mental health treatment in low- and middle-income countries are promising (Naslund et al., 2017). Moreover, brief and low-cost psychological interventions in low and middle-income countries have been shown to have moderate to strong effects in ameliorating common mental health problems, such as depression, anxiety, and post-traumatic stress (Singla et al., 2017).\(^3\) In this study,\(^1\) Due to workforce shortages, lay health workers have been mobilized to deliver mental health services and have shown to do so effectively in many low-resource settings (Barnett et al., 2018).

\(^2\) In the region where our study takes place, roughly 80% of the households own at least one cellphone (Bangladesh Bureau of Statistics, 2016).

\(^3\) For instance, mental health counseling interventions of short length, as short as 4-6 weeks in Zimbabwe (Chibanda et al., 2015), and of a small number of sessions, as many as 5 sessions over 7 months, with women participants in Pakistan (Rahman et al., 2019), have been found to be effective in improving the mental health of participants.
telecounseling enables reaching patients remotely without the risk of infecting them or the mental health service providers. It is also a cost-effective medium, which is an important consideration in particular in the context of developing countries that lack the resources and infrastructure to deliver mental health care face to face.

In a baseline survey that took place in May/June 2020, we collected a rich set of data on demographics, knowledge about COVID-19 and compliance with precautionary measures, mental health, and wellbeing of participating women. Our main outcomes, perceived stress and depression, will be collected in two endline surveys, first in mid-November 2020 (one month after the end of the intervention) and, second, in mid-April 2021 (six months after the intervention). We expect that women who are randomly assigned to receive the intervention to show improvement in these main mental health outcomes relative to women in the control group who are not treated. Secondary outcomes include measures of well-being (happiness, life satisfaction), future aspirations, physical health of self and other household members, compliance with COVID-19 measures, financial standing of the household, well-being of spouse, and relationship with other household members. In heterogeneity analysis, we will investigate treatment effects among women who reported being stressed at the baseline. In addition, we will explore whether treatment effects differ by the extent to which one trusts and socializes with neighbors, receives help with household chores, and their perceptions of COVID-19.

This study is related to the growing interdisciplinary literature on the mental health impact of COVID-19. Most of the existing literature documents the negative impact of COVID-19 on mental health in developed countries, such as the US (Adams-Prassl et al., 2020; Fetzer et al., 2020), the UK (Pierce et al., 2020), and Germany (Armbruster & Klotzbücher, 2020), collecting survey data as the crisis has been unfolding, while the evidence from developing countries is more scarce. We contribute to this literature by not only offering evidence on the extent of the mental health impact of COVID-19 in a developing country but also by evaluating the effectiveness of a novel, low-cost intervention aimed at helping vulnerable people cope with the adverse mental health impact of the pandemic. To the best of our knowledge, this is the first study to provide rapid causal evidence of the effectiveness of a mental health intervention fielded in the midst of the COVID-19 crisis. Our study thus responds to the urgent call made by

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4It is also connected to a broader literature on the mental health impact of quarantines imposed during epidemics (Brooks et al., 2020) and the mental health consequences of disasters (Neria et al., 2008).

5Though limited, psychological interventions (such as, cognitive behavior therapy) that have been carried out in a developing country context before COVID-19 have been found to generate beneficial effects on mental health outcomes (Rahman et al., 2008); the evidence is less encouraging for more light-touch interventions (Baranov et al., 2020).
mental health researchers for evidence on effective approaches to address the mental health consequences of the pandemic conditions for vulnerable groups (Holmes et al., 2020).

2 Research Design

2.1 The Telecounseling Intervention

We collaborated with a local research-focused NGO, Global Development and Research Initiative (GDRI), to provide psychosocial support to adult women living in rural areas of southwestern Bangladesh. Specifically, we provide telecounseling sessions to these women (counselees hereinafter), roughly on a biweekly basis, with each session running for about 20 minutes (a detailed timeline of the intervention is described below). The telecounseling sessions are delivered by a team of 18 trained female para counselors who are recent graduates in either psychology, public health, or social sciences from public universities in Bangladesh. The selection of para counselors was carried out by two experts in public health (that also includes Tabassum Rahman, a public health expert and one of the co-authors of this study), one expert in psychology, and a GDRI executive. Following recruitment, para counselors were trained (via video conferencing) by Tabassum Rahman and a psychologist.

To run the counseling sessions, the para counselors contact counselees a week before every session to make an appointment. They then talk to counselees during the nominated day and time. In total, we aim to run four sessions with each woman, covering different aspects of COVID-19’s impact on their physical and emotional wellbeing and ways to tackle it.

For the counseling sessions, we carefully crafted four modules that cater to the psychosocial needs of these women each one aiming to improve specific aspects of the overall wellbeing of the participants during the lockdown period. The modules combine the following four major elements:

- Behavioral elements: problem-solving, behavioral activation, relaxation, and exposure.
- Interpersonal elements: identifying/eliciting support and communication skills.
- Emotional elements: linking affect to events, emotional regulation, and emotional processing.
- Cognitive elements: identifying thoughts, insight building, distraction, and mindfulness.

In developing the modules, we also closely followed the COVID-19 mental health
and psychosocial support guidelines assembled by the International Federation of Red Cross (2020), the World Health Organization (2020), and Brooks et al. (2020). These guidelines emphasize the information and activities that could mitigate distress and worry during the pandemic, the importance of showing care and empathy to the vulnerable, and the “dos-and-don’ts” for para counselors while offering support to these people. The aim of incorporating these elements is to help normalize various negative emotions and promote feelings of safety, calmness, and hope among the distressed.

More concretely, the four modules are on: (a) awareness of COVID-19 and its symptoms and the preventive measures to address the fear of infection (or awareness); (b) taking care of emotional wellbeing to cope with stress (or coping with stress); (c) taking care of physical health of self and child to address health-related anxiety (or self and childcare); and, (d) helping each other and staying connected to cope with isolation (or communication). The exact four modules (translated from Bangla) are provided in Appendix B and are also briefly described below (in chronological order).

**Awareness.** The first session aims to create awareness about COVID-19 among the counselees. During this session, counselors discuss the implications of contracting the virus, the main symptoms to look out for (fever, cough, difficulty breathing, etc.), how the coronavirus spreads, and what could be done to prevent it from spreading (social distancing, face coverings, hand washings, etc). Moreover, counselees are given information on whom to contact locally if someone from the household shows COVID-19 symptoms, how to take care of household members diagnosed with COVID-19, and how to take care of oneself and other unaffected household members. More importantly, counselees are advised to stay calm while handling such situations. Therefore, by providing important information on things-to-do during the pandemic, counselees would feel less anxious and worried about managing their households, help them cope with the fear of infection/disease, and fight misinformation about COVID-19. At the end of this session, contact information of local doctors and public officials (e.g., of Upazila Nirbahi Officers, who are subdistrict-level public chief executive officers and are in charge of managing COVID-19 related issues at the subdistrict level) are also provided via text messages, composed in the local Bangla language.

**Coping with stress.** The aim of the second session is to help counselees to cope with increased stress caused by COVID-19. During this session, para counselors discuss the consequences of over-thinking, stress, and not taking adequate rests throughout the day, and how that would affect their own physical and emotional wellbeing and

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6A version of the guidelines was also used to provide psychosocial support to people in West Africa during the Ebola outbreak. See World Health Organization (2014).
the wellbeing of their household members. Para counselors also discuss why counselees should not blame themselves or other family members for the current situation. To control various emotional outbursts, counselees are asked to discuss their state of mind with someone from their family, neighbors (while maintaining a certain distance), or with other close relatives (over the phone). The final part of the session focuses on the importance of praying and exercising daily, such as walking in the front or backyard of the house early morning and breathing exercises, for both physical and emotional comfort.

**Self and childcare.** The goal of the third session is to cover issues on self and childcare. This session is similar to the first session on awareness but with more emphasis on the steps to take care of oneself, their children, and someone with pregnancy. Counselees are reminded about the COVID-19 health guidelines and ways to take care of a sick person. In addition, more advice is given regarding care during pregnancy (applicable to both self and other female household members), with contact details of local doctors for regular advice and emergencies. Counselors also ask whether counselees have saved or noted down the contact information of local doctors and public officials, provided during the first session. If not, contact information is again sent over via text messages, composed in the local Bangla language. Furthermore, advice on childcare, such as timely feeding (in case of infants), their cleanliness, help with study, asking children to play in the front or backyard, and spending quality time with children, is also provided during this session.

**Communication.** The fourth (and final) session focuses on improving communication between the counselee and her family members, neighbors, and relatives (remotely with the latter two groups), primarily to help them cope with isolation. The session starts with the importance of sharing various issues and problems with neighbors and helping each other during emergencies, and how counselees should communicate with neighbors while maintaining a safe distance. In addition, because rumors and myths about COVID-19 are prevalent in almost all rural areas (United Nations, 2020a), counselees are reminded about the facts surrounding COVID-19 and why blaming, shaming, and outcasting neighbors with COVID-19 infections should be avoided at all cost. Instead, helping out such neighbors with food and medicine (while maintaining a safe distance and wearing masks) is encouraged during the session. In the end, the importance of keeping in touch with relatives, particularly aged relatives, is discussed. Counselees are asked to call their parents and in-laws (if they live elsewhere) to stay in touch. To help initiate such calls, mobile phones of counselees are topped-up with a small amount at the end of this session.
2.2 Sampling and Randomization

We use a randomized controlled trial to evaluate the effectiveness of this intervention. To select our study sample from a list of households previously surveyed by GDRI, we narrowed down to households that meet the following criteria: (i) the household has a mobile phone number, according to GDRI records, (ii) the phone number is valid, and (iii) the household has at least one adult (18 or above) female household member. From this list, we randomly selected 2,647 households and eventually enrolled 2,402 eligible women, one from each household, to the telecounseling program. These households are distributed across 357 villages (in 50 union councils – the smallest rural administrative unit in Bangladesh) in the Khulna and Satkhira districts in Bangladesh, roughly 7 households per village.

Our study sample is largely representative of rural households who have access to a mobile phone in Bangladesh. This can be seen by comparing household characteristics of our sample, such as household monthly income, household head’s occupation, age, education, etc., to that of the rural sample that has access to a mobile phone from the 2016 Bangladesh Household Income and Expenditure Survey (or HIES) (Bangladesh Bureau of Statistics, 2016). We report these summary statistics in Table A1 in Appendix A. Households in our sample are slightly more educated and less likely to work in farming relative to the HIES sample, but are otherwise fairly similar in most characteristics.

Following enrolment, we randomly assigned women to either the telecounseling treatment arm or to the control arm, in which no counseling is provided to women. Thus, our randomization is at the household (or individual) level and ensures that we have both treatment and control households within each village and also have an equal proportion of households in each treatment arm. However, on some occasions, there were villages that either had one enrolled household or an odd number of enrolled households, which resulted in some villages having either only treatment or only control households and some villages with uneven distribution of treatment and control households. Eventually, 1,299 households (or women) were assigned to the treatment and 1,103 households to the control arm. Given the large number of households in each village (more than 500 households on average), the possibility of contamination is very low. Figure A1

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7 Out of 2,647 households, 114 households could not be reached over the phone (they either never answered the phone or phone numbers were found to be turned off). The remaining 2,533 were invited and roughly 95% of women accepted our invitations and were enrolled to the program. All women in our sample are married.

8 We used the command ‘sample’ in Stata to carry out the randomization.

9 For this reason, we cannot use village fixed effects as indicated in the registered pre-analysis plan. Instead, we will use union council fixed effects in our regression analysis.
Revising and adjusting counseling modules, and training para counselors.

4 telecounseling sessions, every two/three weeks.

1 month gap between intervention and first endline.

5 months gap between first and second endline.

Table 1: Intervention Timeline

in Appendix A shows a map of the study area with the geographic distribution of the villages in our study.

2.3 Timeline

The intervention started in mid-July 2020 and is expected to end in mid-October 2020. The baseline data for this study was collected in between the end of May and mid-June 2020 and the 1-month endline data is expected to be collected in mid-November 2020 and the 6-months endline data is expected to be collected in mid-April 2021, right before the Ramadan month begins. Table 1 highlights the major milestones of this project. We discuss data collection in more detail in section 3.

3 Data collection

Between the end of May and the middle of June, 2020, GDRI (the local NGO we collaborated with) surveyed the enrolled women (over the phone) to understand their physical and emotional states during the pandemic. Through this survey, trained enumerators from the NGO gathered information on household demographics, socioeconomic characteristics, and food insecurities, participants’ knowledge and perception of COVID-19, how often they comply with COVID-19 health guidelines, their worries...
and fears, health and wellbeing, and their stress level. Each telephone interview lasted roughly 25 minutes. We use this data as our baseline measures of various characteristics and outcomes of this study. In addition, we also plan to measure women’s perceived stress, depression, and their happiness, life satisfaction, and future aspirations at the endlines to take place in mid-November 2020 (1-month endline), and again in mid-April 2021 (6-month endline). Moreover, in the 6-month endline, we will collect a set of secondary outcomes, that is, measures of the financial standing of households, gender empowerment, parenting style, relationship with family, and mental health and happiness of spouse.

We break down this section into six parts. First, we present our primary and secondary hypotheses (subsection 3.1); second, we define our outcome variables in detail and how they are constructed for the empirical analyses (subsection 3.2); third, we define other individual and household level characteristics that were collected during the baseline, which we use in our balance checks and will include as control variables in the regression analysis (subsection 3.3); fourth, we present some summary statistics and the balance between our treatment and control groups at the baseline (subsection 3.4); fifth, we compute the minimum detectable effect size using our baseline measure of mental stress (subsection 3.5); and, finally, we conclude this section with a brief discussion of attrition and how it will be addressed (subsection 3.6).

3.1 Hypotheses

We expect that the intervention will lead to an improvement in women’s mental health (measured using perceived stress and depression), which is the main aim of the counseling intervention. As a by-product of improving mental health, we might expect to see improvements in other domains such as physical health of participants, their children, and their other household members as well as improvements in other dimensions of wellbeing, such as happiness, life satisfaction, and future aspirations. Furthermore, our intervention provides valuable information about COVID-19; thus, we also expect our intervention to increase participants’ compliance with COVID-19 precautionary measures immediately after the intervention. In addition, in the short-term, we might expect that improvements in mental health due to the intervention may have a spillover effect on other outcomes, such as improvement in household financial standing, gender empowerment, parenting style, the wellbeing of spouse, and relationship with family members.

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11Some of the major symptoms of depression (according to the American Psychiatric Association (2013)), such as feeling worthless, hopeless, anxious, lonely, and worried, were collected during the baseline.
We construct the following set of primary and secondary outcome variables to formally test our hypotheses. In total, we have two primary and eleven secondary outcomes. Table 2 provides a list of our outcome variables and at what point they are (and will be) measured.

### 3.2 Outcome variables

#### 3.2.1 Primary Outcomes

We will conduct two endline surveys (in November 2020 and April 2021); the 1-month endline will look at the immediate impact of our intervention while the 6-month endline will look at the short-term impact of our intervention. Our primary outcomes, perceived stress and depression, will be measured using the same scale at both endlines.

**Perceived Stress.** Participants’ perceived stress level is measured using an adapted version of the Perceived Stress Scale (PSS) (Cohen et al., 1997). The scale consists of 10-items that are answered on a 5-point scale (never (= 0), almost never (= 1), sometimes (= 2), fairly often (= 3), and very often (= 4)). Therefore, the PSS score can take...
values between 0 and 40. The score cut-offs are: low perceived stress = 0 – 13; moderate perceived stress = 14 – 26; and high perceived stress = 27 – 40. Using the PSS score, we will create a binary variable that will equal 1 if a respondent has moderate to high perceived stress and 0 if the perceived stress level is low.

As a robustness check, we will also construct this variable as an index. We will assign 1 to items if the respondent’s answer is either “fairly often (= 3)” or “very often (= 4)” and assign 0 otherwise, and then take the average of these 10 responses. Therefore, this variable will range from 0 to 1. For example, if a respondent answers “fairly often” or “very often” in 5 questions (so each would be assigned 1) and “never”, “almost never” or “sometimes” in the remaining 5 questions (so each would be assigned 0), then the average of these responses would be 0.5. The PSS questions are listed in section A.2 in Appendix A (under Perceived Stress).

**Depression.** Depression level will be measured using the 10-item version of the Center for Epidemiologic Studies Depression Scale (CES-D-10) (Andresen et al., 1994). The scale consists of 10 items that are answered on a 4-point scale (rarely or none of the time (less than 1 day) (= 0), some or a little of the time (1-2 days) (= 1), occasionally or a moderate amount of time (3-4 days) (= 2), most of the time (5-7 days) (= 3)). Therefore, the CES-D-10 score is between 0 and 30, where a score greater than 10 means someone has depression. Using this cut-off, we will create a binary variable that would equal 1 if the CES-D-10 score is above 10 and 0 otherwise.

As a robustness check, we will also construct this variable as an index. We will assign 1 to items if the respondent’s answer is either “occasionally or a moderate amount of time” or “most of the time” and assign 0 otherwise, and then take the average of these 10 responses. Therefore, this variable will range from 0 to 1, where a higher number would mean severe depression. The CES-D-10 questions are listed in section A.2 in Appendix A (under Depression).

### 3.2.2 Secondary outcomes

**Only measured at the 1-month endline:**

Secondary outcomes – physical health and COVID-19 compliance – will only be collected at the 1-month endline. We define these two secondary outcomes as follows:

**Physical Health (of self, children, and adult household members).** We ask 10-item questions on common illnesses that are also common symptoms for COVID-19 (e.g., cold, cough, sore throat, headache, breathing difficulty, etc.) of self, children, and adult household members, experienced in the last 15 days. These questions are answered as either “yes” or “no”. We assign 1 to items if the respondent’s answer is “no” and
assign 0 if “yes”, and then sum up the 10 responses. Therefore, a score of 10 means
a person is perfectly healthy. Using this, we create indicator variables that equals to
1 if the health score is 10 (i.e., perfectly healthy) and 0 if the score is below 10 (not
perfectly healthy). This way we generate three physical health indicator variables, one
for the respondent, a second variable for the children, and a third one for adult household
members.\footnote{In the registered pre-analysis plan, we also said, “As a robustness check, we would create three
binary variables that would equal 1 if the average is more than 5 and 0 otherwise”. However, while
analysing the baseline data, we found that most of the households are healthy and does not allow us to
use this cutoff to create indicator variables.} As a robustness check, we will combine the three health scores to create a
single household health score (that takes values between 0 and 30), and then divide this
score by 30 to create an index. Thus, the value of this household health index will be
between 0 and 1 (where a higher number means better health). The health questions
are listed in section A.2 in Appendix A (under Physical Health).

**Compliance with COVID-19 precautionary measures.** Compliance is mea-
sured using 7-item questions that are answered on 5-point scales. We assign 1 to items if
the respondent’s answer is either of the maximum 2-points (“mostly” or “always”) and
assign 0 otherwise. We then take the average of these binary values to create an index.
Therefore, this index would range from 0 to 1, where a higher number would mean higher
compliance. The compliance questions are listed in section A.2 in Appendix A (under Compliance).

**Only measured at the 6-month endline:**

Secondary outcomes – household financial standings, gender empowerment, par-
enting style, relationship with family members, and mental health and happiness of
husbands – will only be measured at the 6-months endline. We define these there sec-
ondary outcomes as follows:

**Household financial standings.** We will measure financial standings through
households’ last month’s income (in Bangladeshi Taka). We will use the log of income
as our outcome variable.

**Gender empowerment.** We will ask 5 questions on gender empowerment follow-
ing Bandiera et al. (2020). We will ask, “Who should earn money for the family?”, “Who
should have a higher level of education in the family?”, “If there is no water pump or
tap, who should fetch water?”, “Who should help the children in their studies at home?”,
“Who should make household expenditure decisions?” These questions are answered on
a 3-point scale: both, women, or men. Following Bandiera et al. (2020), we will code
each response as 1 if the respondent answered both and 0 otherwise. Then we will create
a gender empowerment index by taking a sum of these responses and dividing it by five so that the index is between 0 and 1 such that 1 indicates both women and men should be responsible for various activities.

**Parenting style.** We will ask 4 questions on parenting style, one from each of the four main parenting practices (warmth and positive involvement, punitive discipline, physical aggression, and inconsistency), following (Stormshak et al., 2000). We will ask, “How often do you spend time together?”, “How often do you scold or scream at your children?”, “How often do you beat up your children?”, “How often do you decide not to punish children even though rules were broken?”. Each question will be answered on a 5-point scale, ranging from 0 (never) to 4 (many times a day). Questions with * measures negative parenting styles and, thus, require reverse scoring. After reversing these two scores, we will create an index by summing up the responses (so that it is between 0-16) and then taking the average (dividing by 16), so that this index is between 0 and 1 (where 1 indicates very positive parenting style).

**Relationship with family.** We will ask 3 questions on the relationship with family members. We will ask, “In the last 15 days, how often did your husband help you with household chores?”, “In the last 15 days, how often did you and your husband argued over household or non-household issues?”, “All things considered, how satisfied are you with your family life considering everything that has happened in the last 15 days with your husband, children, and other household members?”. Each item will be asked on a 5-point scale, where the question with * required reverse scoring. We assign 1 to items if the respondent’s answer is either of the maximum 2-points and 0 otherwise. We then take the average of these binary values to create an index. Therefore, this index would range from 0 to 1, where a higher number would mean a better relationship with the family.

**Mental health of husband.** To explore spillovers in terms of mental health, we will ask respondents to state the current mental health condition of their husbands. We will ask, “Based on your experience from the last 15 days, on a scale from 0-10, how would you describe your husband’s mental health?” Here 10 means ‘very healthy’. We will use this scale as our outcome variable.

**Happiness of husband.** To explore spillovers in terms of wellbeing, we will ask respondents to state the happiness level of their husbands. We will ask, “Taking all things together, how happy is your husband these days?” The question measures happiness on a numerical 11-point scale, where 0 means “not happy at all” and 10 means “extremely happy”. We will then convert this scale into a binary variable that equals 1 if the score is between 6 and 10 (indicating happiness) and 0 otherwise. As a robustness
check, we will also construct this as a continuous variable that will be the score divided by 10, so that the value of this new variable is between 0 and 1 (where a higher number means more happiness). Thus, this variable will be constructed in the same way as the respondent’s happiness variable.

**Measured at both 1-month and 6-month endlines:**

Secondary outcomes – happiness, life satisfaction, and future aspirations – will be measured at both endlines. We define these three secondary outcomes as follows:

**Happiness.** We will measure happiness with the following question from the World Values Survey: “Taking all things together, how happy are you these days?” The question measures happiness on a numerical 11-point scale, where 0 means “not happy at all” and 10 means “extremely happy”. We will then convert this scale into a binary variable that equals 1 if the score is between 6 and 10 (indicating happiness) and 0 otherwise. As a robustness check, we will also construct this as a continuous variable that will be the score divided by 10, so that the value of this new variable is between 0 and 1 (where a higher number means more happiness).

**Life Satisfaction.** We will measure life satisfaction with the following question from the World Values Survey: “How satisfied are you with your life as a whole these days?” The question measures life satisfaction on a numerical 11-point scale, where 0 means “completely dissatisfied” and 10 means “completely satisfied”. We will then convert this scale into a binary variable that equals 1 if the score is between 6 and 10 (indicating higher life satisfaction) and 0 otherwise. As a robustness check, we will also construct this as a continuous variable that will be the score divided by 10, so that the value of this new variable is between 0 and 1 (where a higher number means higher life satisfaction). In addition, as a robustness check, we will also combine happiness and life satisfaction responses to create a single index. That is, we will add the happiness scores with the life satisfaction scores, so that the combined score is between 0 and 20, and then take its average to create a general happiness index. The value of this combined index will be between 0 and 1 (where a higher number means higher happiness).

**Future Aspirations.** We will measure future aspirations with the following questions focusing on life, income, and overall hopefulness for the future: “How hopeful are you about returning to the way life was before?” (Life); “How hopeful are you about (you and/or your husband) earning the same as before?” (Income); “Considering everything, how hopeful are you about the future?” (Overall). These questions measure future aspirations on a numerical 11-point scale, where 0 means “not hopeful at all” and 10 means “extremely hopeful”. We will then convert these scales into three binary variables (for
the three aspects) that equal 1 if the score is between 6 and 10 (indicating higher aspirations) and 0 otherwise. As a robustness check, we will also construct these as three continuous variables that will be the score divided by 10, so that the values of these new variables are between 0 and 1 (where a higher number means higher aspirations for the future). In addition, as a robustness check, we will also combine the three scores to create a single index. That is, we will add the three scores, so that the combined score is between 0 and 30, and then take its average to create a general aspirations index. The value of this combined index will be between 0 and 1 (where a higher number means higher aspirations).

3.3 Other variables

Individual characteristics. In addition to the outcomes defined in subsection 3.2, we also collect data on respondent’s characteristics, such as their age (in years), years of schooling, occupation∗ (whether a homemaker or not, an indicator), and whether the respondent is the household decision-maker or not∗ (an indicator).13

In addition, on household chores, we asked, Now that everyone is home all the time, how have your household chores increased?, which is answered as “1=a little more/25% extra”, “2=increased quite a bit/50% extra”, “3=doubled”, or “4=did not increase”. Using this, we create an indicator variable called Household Chores Increased that equals to 1 if the respondent answered either 1, 2, or 3, and 0 if answered 4. To measure if someone helps with daily household chores, we asked, Who helps you with household chores these days? and then the enumerator listens to the response and ticks on (can be multiple responses): “husband”, “son”, “daughter”, “other female members in the house (e.g., mother-in-law, sister-in-law, etc.)”, “others”, or “no one helps”. Using this, we create an indicator variable called Someone Helps with Household Chores that equals to 1 if the respondent mentioned at least one person from the household and 0 if answered “no one helps”. We also measure to what extent the respondent trusts and socializes with neighbors (to create an indicator called Trusts Neighbors) and their perceptions of COVID-19 (to create a COVID-19 Perception Index). We define these two variables under heterogeneity analysis in section 4.2.

We also measure how worried respondents are in terms of health and wellbeing of family/medical support, putting food on the table, being able to earn income for the family, and financial situation of relatives/neighbors. Each question is answered on a 3-point scale: “1=not at all worried”, “2=somewhat worried”, “3=extremely worried”. Using this, we create four indicator variables, each equals to 1 if the respondent answered

13We ask the latter two “indicator” questions, marked with ∗, only at the 1-month endline.
“3=extremely worried” and 0 if answered otherwise. Besides, we also measured to what extent they are afraid of contracting the virus by asking *Generally, people are more or less worried about catching coronavirus. On a scale of 0-10, how scared are you that you, your spouse, children, or anyone in your family might catch the virus? Here, 0 means “not at all scared” and 10 means “extremely scared”. In addition, we also measure how scared they are in terms of socializing with their relatives/neighbors/friends, if they have a visitor who is a stranger, and going outside such as for work/shopping/a walk. These questions are answered as either “yes” or “no”. Using these, we create three indicator variables, each recorded as 1 if answered “yes” and 0 if answered “no”.

Finally, we also measure their various mental health conditions, such as their feeling of anxiousness, loneliness, hopelessness, and worthlessness, which are some of the major symptoms of depression (American Psychiatric Association, 2013). To measure each, we asked, *We all are more or less worried about the current situation of Coronavirus. Overall, (i) how anxious are you?, (ii) how lonely do you feel?, (iii) how hopeless are you about the future?, and (iv) how worthless do you feel?. These are answered on a 4-point scale (1=very, 2=somewhat, 3=a little bit, 4=not at all), which is analogous to the scale of the Center for Epidemiologic Studies Depression Scale (CES-D-10) questions, our measure of depression. Using these, we create four indicators, each recorded as 1 if the respondent answered 1 or 2, and 0 otherwise.*

**Household characteristics.** In addition to individual-level data, we also collected information on various household characteristics, such as the age of spouse (in years), education of spouse (in years), the number of household members, the number of children under five, and the head of the household’s main occupation. For occupation, we asked, *What is your/your household head’s main occupation?*, with options “1=farmer, 2=agricultural laborer, 3=day laborer, 4=business, 5=public service, 6=private service, 7=others”. To control for occupation in the regression analysis, we will create an indicator variable for household head working in agriculture, which would be recorded as 1 if the respondent answered 1 or 2, and 0 if answered otherwise.

To measure whether the household experienced a loss of income following the lockdown, we asked, *To what extent, your/your household head’s income has been affected due to the coronavirus situation?*, with options “1=total loss of income, 2=partial loss of income, 3=income remained unchanged”. Using this, we created two indicator variables: *Experienced Income Loss*, which is recorded as 1 if the respondent answered 1 or 2, and 0 otherwise, and *Experienced Complete Income Loss*, which is recorded as 1 if the respondent answered 1, and 0 otherwise. Finally, we also measure how food insecure households are using the Food Insecurity Experience Scale (FIES) (Ballard et al.,
2013). FIES consists of 8-questions that can capture how food insecure (i.e., lack of food) households are. These questions are listed in section A.3 in Appendix A. Using responses on these, we assign 1 to items that are answered “yes” and 0 otherwise, and then take the average. Therefore, this index ranges from 0 to 1, where a higher number means higher food insecurity.

### 3.4 Randomization Check and Summary Statistics

We next provide summary statistics for the variables collected in the baseline survey and check whether randomization has produced balanced treatment and control groups in terms of the characteristics and outcomes collected in the baseline survey.

Table 3 provides summary statistics of the characteristics of respondents, while Table 4 shows the characteristics of the household. Table 5 provides summary statistics of some mental health, physical health, compliance with COVID-19, and financial standings measures. All tables report the mean values for the whole sample and by treatment and also report the results of balance tests, which we obtain by running linear regressions, with the variable of interest as the dependent variable and the treatment indicator as an independent variable with standard errors clustered at the village level. Overall, the balance tests indicate that the sample is balanced, as we find statistical differences in only 4 out of the 33 tests at the 10 percent level or higher, and where differences do occur they tend to be small (e.g., 22% of women reported to be feeling lonely in the control group versus 25% in the treatment group).

Table 3 shows that the average participant in our study is 35 years old and has 8 years of education. The majority of respondents report being concerned about the wellbeing of their family, providing food to the family, and about income. This indicates that indeed the women in our sample are experiencing the adverse economic impact of COVID-19. This is further demonstrated in Table 4, where we see that 94% of households have experienced income loss, with almost 60% experiencing complete income loss. One possible explanation for why households are experiencing complete income loss is that household heads’ primary occupations are either day laborers or small business owners (for 66% of households), which were severely affected by the countrywide lockdown.

In terms of measures of mental health, Table 3 shows that 74% of respondents feel anxious, 50% feel hopeless, about 25% feel lonely, and 10% worthless. Looking at the outcomes in Table 5, we see that a striking 83% of respondents are stressed (defined as having a perceived stress scale score that is more than 13 out of 40). In addition, the distribution of perceived stress scale score presented in Figure 1 suggests that most of the women are moderately stressed (roughly 80%, where $14 \leq PSS_{moderate} \leq 26$), with very
few cases of severe stress ($27 \leq PSS_{severe} \leq 40$). This evidence suggests that COVID-19, is having a substantially negative impact on the well-being of this sample of women in rural Bangladesh. In terms of physical health, on the other hand, the respondents tend to report lack of any COVID-19 symptoms and so do their family members, suggesting that COVID-19 symptoms are not widely experienced in the sample. This might be explained by the fact that this sample displays moderate compliance with COVID-19 precautionary measures, on average they report to follow 53% of the 7 measures.

3.5 Power calculations

Due to the current ongoing crisis, we were unable to run a pilot to collect the data needed for a sample size calculation. Instead, we perform a power calculation in section 3.4 using our baseline data to determine the minimum detectable effect size.

Using one of our main outcome variables, stressed, we compute the minimum detectable effect size (MDE) of our study. According to our baseline, 83% of respondents in both treatment and control groups are stressed (see Table 5). Therefore, with 80% statistical power and 5% significance level, this study is powered to detect an effect size
<table>
<thead>
<tr>
<th></th>
<th>Pooled Mean (Std. Dev.)</th>
<th>Control Mean (Std. Dev.)</th>
<th>Treatment Mean (Std. Dev.)</th>
<th>T-test p-values</th>
<th>RI-test p-values</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age of respondent</td>
<td>35.51 (9.51)</td>
<td>35.73 (9.37)</td>
<td>35.32 (9.73)</td>
<td>0.253</td>
<td>0.288</td>
</tr>
<tr>
<td>Education of respondent</td>
<td>8.39 (2.67)</td>
<td>8.32 (2.59)</td>
<td>8.44 (2.73)</td>
<td>0.237</td>
<td>0.253</td>
</tr>
<tr>
<td>Household chores increased*</td>
<td>0.26 (0.44)</td>
<td>0.26 (0.44)</td>
<td>0.26 (0.44)</td>
<td>0.736</td>
<td>0.778</td>
</tr>
<tr>
<td>Someone helps with household chores*</td>
<td>0.49 (0.50)</td>
<td>0.50 (0.50)</td>
<td>0.48 (0.50)</td>
<td>0.338</td>
<td>0.346</td>
</tr>
<tr>
<td>Trusts neighbors*</td>
<td>0.22 (0.41)</td>
<td>0.23 (0.42)</td>
<td>0.21 (0.41)</td>
<td>0.157</td>
<td>0.204</td>
</tr>
<tr>
<td>COVID-19 perceptions index</td>
<td>0.63 (0.16)</td>
<td>0.63 (0.16)</td>
<td>0.63 (0.16)</td>
<td>0.587</td>
<td>0.604</td>
</tr>
<tr>
<td>Worried about: wellbeing of family*</td>
<td>0.50 (0.59)</td>
<td>0.51 (0.59)</td>
<td>0.49 (0.59)</td>
<td>0.263</td>
<td>0.295</td>
</tr>
<tr>
<td>Worried about: providing food to family*</td>
<td>0.75 (0.43)</td>
<td>0.74 (0.44)</td>
<td>0.76 (0.43)</td>
<td>0.240</td>
<td>0.248</td>
</tr>
<tr>
<td>Worried about: income*</td>
<td>0.81 (0.39)</td>
<td>0.81 (0.39)</td>
<td>0.82 (0.39)</td>
<td>0.616</td>
<td>0.652</td>
</tr>
<tr>
<td>Worried about: wellbeing of relatives*</td>
<td>0.18 (0.39)</td>
<td>0.19 (0.39)</td>
<td>0.17 (0.39)</td>
<td>0.197</td>
<td>0.228</td>
</tr>
<tr>
<td>Afraid of contracting coronavirus</td>
<td>8.09 (2.16)</td>
<td>8.20 (2.15)</td>
<td>8.00 (2.17)</td>
<td>0.026</td>
<td>0.034</td>
</tr>
<tr>
<td>Scared of: socializing*</td>
<td>0.86 (0.34)</td>
<td>0.87 (0.34)</td>
<td>0.86 (0.35)</td>
<td>0.599</td>
<td>0.677</td>
</tr>
<tr>
<td>Scared of: home visitors*</td>
<td>0.96 (0.19)</td>
<td>0.97 (0.18)</td>
<td>0.96 (0.19)</td>
<td>0.572</td>
<td>0.574</td>
</tr>
<tr>
<td>Scared of: going outside*</td>
<td>0.97 (0.16)</td>
<td>0.97 (0.16)</td>
<td>0.98 (0.15)</td>
<td>0.209</td>
<td>0.185</td>
</tr>
<tr>
<td>Feeling: anxious*</td>
<td>0.74 (0.41)</td>
<td>0.74 (0.44)</td>
<td>0.74 (0.44)</td>
<td>0.931</td>
<td>0.973</td>
</tr>
<tr>
<td>Feeling: lonely*</td>
<td>0.23 (0.42)</td>
<td>0.22 (0.42)</td>
<td>0.25 (0.43)</td>
<td>0.086</td>
<td>0.132</td>
</tr>
<tr>
<td>Feeling: hopeless*</td>
<td>0.50 (0.50)</td>
<td>0.51 (0.50)</td>
<td>0.50 (0.50)</td>
<td>0.757</td>
<td>0.817</td>
</tr>
<tr>
<td>Feeling: worthless*</td>
<td>0.10 (0.09)</td>
<td>0.10 (0.08)</td>
<td>0.10 (0.09)</td>
<td>0.946</td>
<td>0.944</td>
</tr>
<tr>
<td>Sample Size</td>
<td>2,402</td>
<td>1,103</td>
<td>1,299</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

Note: Age and education are in years; ‘Household chores increased’ is a dummy that equals 1 if respondents’ household chores increased after COVID-19 lockdown and 0 otherwise; ‘Someone helps with household chores’ is a dummy that equals 1 if a household member helps respondent with daily household chores after COVID-19 lockdown and 0 otherwise; ‘Trusts neighbors’ is a dummy that equals 1 if respondent trusts neighbors and relatives and 0 otherwise; ‘COVID-19 perceptions index’ is an index (between 0 and 1) based on true/false responses to 16 COVID-19 related statements, where 1 means having accurate perceptions (see Appendix A.4 for the questions and section 4.2 on how we construct the index); ‘Worried about …’ questions are dummies that equal 1 if respondents are worried about stated situations and 0 otherwise; ‘Afraid of contracting coronavirus’ is answered on scale of 0-10, where 10 means extremely scared; ‘Scared of …’ questions are dummies that equal 1 if respondents are scared of stated activities and 0 otherwise; ‘Feeling …’ questions are dummies that equal 1 if respondents feel the stated emotions and 0 otherwise; t-test p-values are derived from linear regression, with the variable of interest as the dependent variable and the treatment indicator as an independent variable with standard errors clustered at the village level. RI-test p-values are based on a two-sided randomization inference test (described in section 4.4). Variables with * are indicators.

of -0.0453, which is 4.53 percentage points or 5.5% of the baseline incidence of stress.¹⁴ In case we experience very high attrition of roughly 30% (which would reduce the treatment sample to 909 and the control sample to 772), the minimum detectable effect size

¹⁴Computed using a Chi-squared test with two independent proportions on statistical software package STATA.
## Table 4: Baseline Household Characteristics & Balance

<table>
<thead>
<tr>
<th></th>
<th>Pooled Mean (Std. Dev.)</th>
<th>Control Mean (Std. Dev.)</th>
<th>Treatment Mean (Std. Dev.)</th>
<th>T-test/CS-test p-values</th>
<th>RI-test p-values</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Age of spouse</strong></td>
<td>38.14 (8.00)</td>
<td>38.23 (7.99)</td>
<td>38.03 (7.92)</td>
<td>0.502</td>
<td>0.566</td>
</tr>
<tr>
<td><strong>Education of spouse</strong></td>
<td>8.14 (3.35)</td>
<td>8.10 (3.40)</td>
<td>8.18 (3.30)</td>
<td>0.522</td>
<td>0.541</td>
</tr>
<tr>
<td><strong>Number of household members</strong></td>
<td>4.39 (1.37)</td>
<td>4.35 (1.27)</td>
<td>4.43 (1.44)</td>
<td>0.108</td>
<td>0.117</td>
</tr>
<tr>
<td><strong>Experienced income loss</strong></td>
<td>0.94 (0.49)</td>
<td>0.93 (0.49)</td>
<td>0.94 (0.49)</td>
<td>0.197</td>
<td>0.214</td>
</tr>
<tr>
<td><strong>Experienced complete income loss</strong></td>
<td>0.59 (0.26)</td>
<td>0.58 (0.26)</td>
<td>0.60 (0.25)</td>
<td>0.375</td>
<td>0.400</td>
</tr>
<tr>
<td><strong>Food insecurity index</strong></td>
<td>0.63 (0.26)</td>
<td>0.62 (0.27)</td>
<td>0.64 (0.25)</td>
<td>0.050</td>
<td>0.088</td>
</tr>
<tr>
<td><strong>Number of children under five</strong></td>
<td>0.56 (0.74)</td>
<td>0.56 (0.73)</td>
<td>0.56 (0.74)</td>
<td>0.788</td>
<td>0.822</td>
</tr>
<tr>
<td><strong>Occupation</strong></td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td><strong>Farmer</strong></td>
<td>0.17 (0.38)</td>
<td>0.19 (0.39)</td>
<td>0.36 (0.36)</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td><strong>Farming Day laborer</strong></td>
<td>0.10 (0.30)</td>
<td>0.11 (0.31)</td>
<td>0.10 (0.30)</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td><strong>Non-Farming Day Laborer</strong></td>
<td>0.33 (0.47)</td>
<td>0.31 (0.46)</td>
<td>0.34 (0.48)</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td><strong>Business</strong></td>
<td>0.23 (0.42)</td>
<td>0.22 (0.42)</td>
<td>0.24 (0.43)</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td><strong>Public Service</strong></td>
<td>0.03 (0.18)</td>
<td>0.03 (0.17)</td>
<td>0.04 (0.18)</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td><strong>Private Service</strong></td>
<td>0.04 (0.21)</td>
<td>0.05 (0.22)</td>
<td>0.04 (0.19)</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td><strong>Other</strong></td>
<td>0.09 (0.28)</td>
<td>0.09 (0.29)</td>
<td>0.08 (0.27)</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td><strong>Sample Size</strong></td>
<td>2,402</td>
<td>1,103</td>
<td>1,299</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

**Note:** Age and education are in years; “Experienced income loss” is a dummy that equals 1 if a household experienced partial or complete income loss after COVID-19 lockdown and 0 otherwise; “Experienced complete income loss” is a dummy that equals 1 if a household experienced complete income loss after COVID-19 lockdown and 0 otherwise; “Food insecurity index” is an index (between 0 and 1) based on 8 questions regarding food insecurity after COVID-19 lockdown, where 1 means household is extremely food insecure (see Appendix A.3 for the questions and section 3.3 on how we construct the index); Occupation variable has 7 occupation categories (listed), so we perform a clustered (at the village level) chi-squared test or CS-test. T-test p-values are derived from linear regression, with the variable of interest as the dependent variable and the treatment indicator as an independent variable with standard errors clustered at the village level. RI-test p-values are based on a two-sided randomization inference test (described in section 4.4). Variables with * are indicators.

Changes very little to -0.0546, which is 5.46 percentage points or 6.6% of baseline incidence of stress. If we use the perceived stress scale variable (which is between 0 and 40) to compute the MDE, then with 80% power and 5% significance level, this study is powered to detect an effect of -0.50 or 0.114 standard deviation (-0.60 or 0.137 standard deviations with 30% attrition).

As we do not have the baseline measure of depression, we can use the four depression symptoms that are measured at the baseline, such as feeling anxious, lonely, hopeless, and worthless (see Table 3), to compute the MDE of the treatment of depression in this study. Our study is sufficiently powered to detect an effect size of: (i) -0.0519 (for anxiousness), which is 5.2 percentage points or 7% of baseline incidence of anxiousness; (ii) -0.0456 (for...
### Table 5: Baseline Outcomes & Balance

<table>
<thead>
<tr>
<th></th>
<th>Pooled Mean (Std. Dev.)</th>
<th>Control Mean (Std. Dev.)</th>
<th>Treatment Mean (Std. Dev.)</th>
<th>T-test ( p )-values</th>
<th>RI-test ( p )-values</th>
</tr>
</thead>
<tbody>
<tr>
<td>Perceived stress scale score</td>
<td>17.22 (4.37)</td>
<td>17.22 (4.29)</td>
<td>17.21 (4.43)</td>
<td>0.935</td>
<td>0.945</td>
</tr>
<tr>
<td>Stressed*</td>
<td>0.83 (0.38)</td>
<td>0.83 (0.38)</td>
<td>0.83 (0.38)</td>
<td>0.995</td>
<td>1.00</td>
</tr>
<tr>
<td>Health of: respondent*</td>
<td>0.89 (0.31)</td>
<td>0.90 (0.31)</td>
<td>0.89 (0.31)</td>
<td>0.423</td>
<td>0.422</td>
</tr>
<tr>
<td>Health of: adult household members*</td>
<td>0.93 (0.26)</td>
<td>0.94 (0.25)</td>
<td>0.91 (0.25)</td>
<td>0.004</td>
<td>0.007</td>
</tr>
<tr>
<td>Health of: children*</td>
<td>0.93 (0.26)</td>
<td>0.94 (0.25)</td>
<td>0.92 (0.25)</td>
<td>0.117</td>
<td>0.168</td>
</tr>
<tr>
<td>Compliance with COVID-19 precautionary measures</td>
<td>0.53 (0.26)</td>
<td>0.53 (0.25)</td>
<td>0.53 (0.25)</td>
<td>0.697</td>
<td>0.742</td>
</tr>
<tr>
<td>Monthly household income</td>
<td>9,218 (6,974)</td>
<td>9,189 (6,544)</td>
<td>9,243 (7,321)</td>
<td>0.824</td>
<td>0.855</td>
</tr>
<tr>
<td>Sample Size</td>
<td>2,402</td>
<td>1,103</td>
<td>1,299</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

**Note:** “Perceived stress scale score” is a measure of stress based on 10 questions, each answered on 5-point scales (0-4), and takes the value between 0 and 40; “Stressed” is a dummy that equals 1 if the perceived stress scale score is more than 13 and 0 otherwise; “Health of...” are dummy variables where 1 equals to someone being perfectly healthy (or a score of 10) and 0 otherwise; “Compliance with COVID-19 precautionary measures” is an index between 0 and 1 based on responses to 7 compliance questions (see Appendix A.2 for the questions and section 3.2.2 on how we construct the index); where 1 means always comply; income is in Bangladeshi Taka; t-test \( p \)-values are derived from linear regression, with the variable of interest as the dependent variable and the treatment indicator as an independent variable with standard errors clustered at the village level. RI-test \( p \)-values are based on a two-sided randomization inference test (described in section 4.4). Variables with * are indicators.

loneliness), which is 4.6 percentage points or 20% of baseline incidence of loneliness; (iii) -0.0573 (for hopelessness), which is 5.7 percentage points or 11% of baseline incidence of hopelessness; and, (iv) -0.0317 (for worthlessness), which is 3.2 percentage points or 32% of baseline incidence of worthlessness. Of course these calculations are only suggestive as they rely on a different measure of depression than the one that we will collect in the two endlines (CES-D-10).

### 3.6 Attrition

It is possible that some women might drop out in the middle of the intervention or some might refuse to partake in the endline surveys that are scheduled to take place in November 2020 and April 2021. Therefore, in that case, we will compare baseline characteristics of women that dropped out to baseline characteristics of women that remained in the study (both within and across treatment and control groups) to check if attrition is selective. In addition, we will also check if the rate of attrition between treatment and control groups differ (differential attrition).
4 Empirical Analyses

4.1 Outcomes

To test our hypotheses, we will estimate the regression specifications of the following form:

\[ Y_i = \alpha + \beta T_i + \gamma Y_{0i} + X'\zeta + \nu + \epsilon_i \]  

(1)

where \( Y_i \) is the outcome of individual \( i \) measured at the endlines. \( T_i \) is an indicator for women who received the telecounseling treatment. \( Y_{0i} \) is the baseline analogue of the outcome, which we will include when available.\(^{15}\) \( X \) is a vector of controls that includes the respondent’s age, education, occupation of respondent\(^*\), household income loss, food insecurity, number of household members, number of children under five, whether the respondent is the head of the household\(^*\), husband’s main occupation, and increase in household chores.\(^{16}\) \( \nu \) is union council fixed effects, the smallest rural administrative and local government units in Bangladesh, where each union council is made up of nine villages (so our comparisons are between treatment and control women in the same union council).\(^{17}\) We will cluster standard errors at the village level in the main analysis. We will report OLS estimates in the main paper. For robustness, we will also report estimates using probit and ordered probit (for outcomes when this is appropriate) in the appendix.

Our analysis will be carried out on data for the outcomes obtained at both the 1-month and the 6-month endlines—that is, for the two primary (perceived stress and depression) and three secondary outcomes (happiness, life satisfaction, and future aspirations). For secondary outcomes that are only measured once (either during the 1-month or the 6-month endline), regression specification 1 will be estimated only once. All outcome variables are listed in Table 2 and defined in section 3.2.

4.2 Heterogeneity Analysis

To explore heterogeneity, we will estimate the following interaction model:

\[ Y_i = \alpha + \beta_1 T_i + \beta_2 H_i + \beta_3 (T \times H)_i + \gamma Y_{0i} + X'\zeta + \nu + \epsilon_i \]  

(2)

\(^{15}\)We measure depression and a range of secondary outcomes only at the endlines (see Table 2). Thus, while estimating the impact on these outcomes, we will not control for their baseline level \( Y_{0i} \).

\(^{16}\)All but variables with * are defined in section 3.3. Variables with * will be collected at the 1-month endline.

\(^{17}\)We have 50 union councils in our sample, roughly 7 villages or 48 households per union council.
where $H_i$ is, alternatively, an indicator for (i) being stressed, (ii) trusting and socializing with neighbors, (iii) perceptions about coronavirus, or (iv) whether someone helps with household chores, all measured at the baseline.

Below we discuss these four key sources of heterogeneous effects of our intervention. We will explore heterogeneity in terms of:

**Already stressed women (measured at baseline).** The impact of the intervention might vary with the level of stress experienced by participants in the baseline. From the summary of perceived stress among women reported in Table 5, we know that 83% of women are stressed at the baseline, and this is a subgroup of particular policy interest as it is in more pressing need for support. We will investigate the impact of the intervention on the stress level of this subgroup as measured by both the continuous *Perceived Stress Scale Score* (defined in section 3.2.1 and Table 5) and the indicator for being “stressed” (defined in section 3.2.1 and Table 5).

**Trusting and socializing with neighbors (measured at baseline).** The impact of the intervention might vary with the level of trust and extent of socialization with neighbors. If the impact is greater for those who trust and, thus, socialize with neighbors frequently then trust and socialization complements the intervention. On this, we ask “*Do you trust your neighbors or relatives to the extent you did before this crisis?*”, with options “(i) Trust everyone and socialize as usual, (ii) Trust most of them and socialize with them, (iii) Trust very few and socialize only with them, (iv) Do not trust anyone and do not socialize with anyone.” We will then create a binary variable that equals 1 if answered either (i) or (ii), and 0 if answered otherwise.

**Perceptions about coronavirus (measured at baseline).** The intervention might be more effective for those who hold accurate perceptions about the virus. We will create a perception index based on 16-item questions, answered as either “yes” or ‘no”. We will assign 1 to items that are answered “yes” and 0 otherwise, and then take the average. Therefore, this variable will range from 0 to 1, where a higher number would mean having a more accurate perception. The perception questions are listed under section A.4 in Appendix A.

**Whether someone helps with household chores (measured at baseline).** Impact might vary depending on whether the respondent deals with household chores by herself or with the help of other household members. If the impact is greater for those who receive help with household chores, then this help and the intervention are complementary. This variable is defined in section 3.3.
4.3 Multiple Hypotheses Testing

Since we test many hypotheses (2 primary and 11 secondary), we will correct \( p \)-values using the Westfall-Young (WY) adjustments (Westfall & Young, 1993). WY accounts for correlations across outcomes using bootstrap resampling. Therefore, to check the robustness of our results, we will initially use 1,000 replications to compute the Family Wise Error Rate (FWER) adjusted \( p \)-values and then repeat the process with 5,000 replications. We will report these \( p \)-values (with 1,000 replications) in all regression tables. Although very conservative, we will also compute the Bonferroni-adjusted \( p \)-values and report it in all regression tables.

4.4 Randomization Inference Test

To account for uncertainty in our estimates that arises naturally from the random assignment of participants into the treatments, we will report \( p \)-values using randomization-based inference (RI). These will be constructed by randomly shuffling the treatment dummy and re-estimating our \( \beta \) using this placebo assignment 1,000 times, and then 5,000 times for robustness. In all regression tables, we will report the two-sided RI-test \( p \)-values that test the null that the placebo coefficients are similar to the actual coefficients. We also report RI-test \( p \)-values in our summary statistics tables (see the rightmost columns in Tables 3, 4, and 5).

4.5 Evaluation

One of the advantages of the telecounseling intervention is that it is low-cost, which is a particularly important consideration in low-resource contexts. To inform follow-up research about the effectiveness and policy-makers about the feasibility of scaling up this type of intervention, we will provide estimates of the economic effectiveness of the approach. Intervention costs include training costs and staff time costs of the para-counselors. For example, we can provide a back-of-the-envelope estimate of the improvements in mental health (reduction in incidence of stress and depression) per the cost of treating an individual.
References


## Appendix A

### A.1 Additional Tables & Figures

Table A1: Comparison of rural HIES 2016 sample and study sample characteristics

<table>
<thead>
<tr>
<th></th>
<th>A: HIES Rural with mobile phone</th>
<th>B: Our Study Sample</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean (Std. Dev.)</td>
<td>Mean (Std. Dev.)</td>
</tr>
<tr>
<td></td>
<td>Obs.</td>
<td>Obs.</td>
</tr>
<tr>
<td>Monthly household income</td>
<td>9,424 (5,966)</td>
<td>9,218 (6,974)</td>
</tr>
<tr>
<td></td>
<td>21,253</td>
<td>2,402</td>
</tr>
<tr>
<td>Number of household members</td>
<td>4.11 (1.46)</td>
<td>4.39 (1.37)</td>
</tr>
<tr>
<td></td>
<td>24,343</td>
<td>2,402</td>
</tr>
<tr>
<td>Age of women</td>
<td>36.15 (11.47)</td>
<td>35.51 (9.44)</td>
</tr>
<tr>
<td></td>
<td>21,979</td>
<td>2,402</td>
</tr>
<tr>
<td>Age of spouse</td>
<td>42.13 (12.59)</td>
<td>38.13 (7.95)</td>
</tr>
<tr>
<td></td>
<td>21,979</td>
<td>2,402</td>
</tr>
<tr>
<td>Education of women</td>
<td>5.05 (4.05)</td>
<td>8.39 (2.67)</td>
</tr>
<tr>
<td></td>
<td>21,979</td>
<td>2,402</td>
</tr>
<tr>
<td>Education of spouse</td>
<td>4.29 (4.34)</td>
<td>8.15 (3.35)</td>
</tr>
<tr>
<td></td>
<td>21,980</td>
<td>2,402</td>
</tr>
<tr>
<td>Number of children under five</td>
<td>0.52 (0.65)</td>
<td>0.56 (0.74)</td>
</tr>
<tr>
<td></td>
<td>24,343</td>
<td>2,402</td>
</tr>
<tr>
<td>Occupation (agriculture)</td>
<td>0.40 (0.49)</td>
<td>0.27 (0.44)</td>
</tr>
<tr>
<td></td>
<td>24,343</td>
<td>2,402</td>
</tr>
</tbody>
</table>

Note: HIES or Bangladesh Household Income and Expenditure Survey was collected in 2016 by Bangladesh Bureau of Statistics (2016). The total HIES sample consists of 46,076 households, among which 32,096 (roughly 70% of total) are in rural areas and 24,343 (roughly 53% of total) are in rural areas and have at least one mobile phone. Reported summary statistics under A: HIES Rural with mobile phone is for rural households in HIES data with at least one mobile phone. Income is in Bangladeshi Taka. Age and Education of the spouse corresponds to age and education of head of households in HIES data (in case the household head is a female, we took the age and education of her spouse). Likewise, Age and Education of women corresponds to age and education of spouses of household heads in HIES data (in case the household head is a female, we took the age and education of the household head). Both age and education are measured in years. Occupation is a dummy variable that equals 1 if the household head’s primary occupation is in agriculture, and 0 otherwise.
Figure A1: Map of the study area

Note: This map shows the location of villages in the five subdistricts (in Khulna and Satkhira districts) in Bangladesh. Stars correspond to our study villages (i.e., both treatment and control). The right side of the Koyra subdistrict, where we do not have any study villages, is part of the Sundarbans mangrove forest.
A.2 Questions used to create outcome variables

**Perceived stress.** The PSS questions are as follows:
1. How often have you been upset because of something that happened unexpectedly?
2. How often have you felt that you were unable to control the important things in your life?
3. How often have you felt nervous and “stressed”? 
4. How often have you felt confident about your ability to handle your personal problems? *\(^a\)*
5. How often have you felt that things were going your way? *\(^a\)*
6. How often have you found that you could not cope with all the things that you had to do?
7. How often have you been able to control irritations in your life? *\(^a\)*
8. How often have you felt that you were on top of things? *\(^a\)*
9. How often have you been angered because of things that were outside of your control?
10. How often have you felt difficulties were piling up so high that you could not overcome them?

where *\(^a\)* requires reverse-scoring.

**Depression.** The CES-D-10 questions are as follows:
In the last 7 days...
1. I was bothered by things that usually do not bother me.
2. I had trouble keeping my mind on what I was doing.
3. I felt depressed.
4. I felt like everything I did was an effort.
5. I felt hopeful about the future. *\(^a\)*
6. I felt fearful.
7. My sleep was restless.
8. I was happy. *\(^a\)*
9. I felt lonely.
10. I could not get “going”.

where *\(^a\)* requires reverse-scoring.

**Physical health.** We ask the following questions to measure physical health of self, children, and adult household members.
In the past 15 days did you or your family members have the following ailments?
1. Cold
2. Cough
3. Fever
4. Feeling chills
5. Headache
6. Body ache
7. Sore throat
8. Sneeze
9. Difficulty breathing
10. Congestion in the chest

**Compliance.** What measures have you taking to protect yourself and your family from the coronavirus:

1. Wash my hands frequently with soap and water.
2. Do not go outside unless absolutely necessary.
3. Do not go outside to pray or worship.
4. Stay 1.5m away from other if need to go outside.
5. Wear mask if need to go outside.
6. Cough/sneeze into my arms.
7. Do not shake hands with others or hug anyone.

### A.3 Questions used to create the food insecurity index

We ask the following questions to create the variable *Food Insecurity Index*:

Has the following happened in the last 2-3 weeks that...

1. You have been worried that there might not be enough food in the house to arrange three meals for everyone in a day?
2. You or anyone in your family could not have nutritious food due to lack of money?
3. There was lack of variety in food items due to lack of money?
4. Someone in the family could not have a meal due to lack of money?
5. You had three meals a day but the food was not sufficient?
6. There was scarcity of food in your family
7. You or anyone in your family were hungry but you could not buy food due to lack of money?
8. Someone in your family was unfed for a day due to lack of money?
A.4 Questions used to create variables for heterogeneity analysis

To create the variable COVID-19 Perceptions Index (defined in section 4.2), we ask the following questions:

Could you please tell me whether these statements are accurate or wrong (answers are given in brackets).

1. Anyone regardless of age can be infected by the virus. [Accurate]
2. Anyone infected with the virus will die. [Wrong]
3. Coronavirus is contagious, it can spread from one person to other. [Accurate]
4. If anyone in the neighborhood/village gets infected with the virus, everyone will be infected. [Wrong]
5. There is no vaccine for Coronavirus. [Accurate]
6. If anyone in the neighborhood/village dies from Coronavirus they cannot be buried in this neighborhood/village. [Wrong]
7. Staying home can protect from Coronavirus. [Accurate]
8. If anyone in the neighborhood/village gets infected, they needs to be ostracised. [Wrong]
9. One gets infected with the Coronavirus because of their sins. [Wrong]
10. This virus is a curse. [Wrong]
11. Foreigners/people who come from abroad spread the virus. [Wrong]
12. I will not give anyone from my family into marriage in family that had anyone infected with Coronavirus. [Wrong]
13. No one will give anyone from their family into marriage in my family if any of my family members were infected with Coronavirus. [Wrong]
14. If I get infected with the virus, no one will ever hire me for work. [Wrong]
15. This is a disease of the poor. [Wrong]
16. This is a disease of the rich. [Wrong]
Session 1

Instruction for the counselors: Following topics will be discussed over the phone. The counselors will discuss these topics in simple language so that the counselee can easily understand. The counselor should talk slowly so that the counselee understands everything. The counselor should talk at least 20 minutes with each counselee.

Greetings,

I am ______________________. I am working with GDRI. How are you? In the last few weeks, we have spoken with you about what is coronavirus and how to remain safe and from the virus. In this pandemic, all of us are somewhat worried. There are a lot of things we could do a few days ago such as, going outside, working outside, going to a neighbor’s house, which we cannot do now. It may feel like we do not get to hear good news as much as we used to get. We called today to discuss the things we can do to be mentally healthy. Also, If there is anything you want to know, you can ask me.

Though you have just mentioned how you are you doing today, I would still like to ask you, how would you rate yourself regarding how you are doing on a scale of 0-10? Here 0 means “not good at all” and 10 means “extremely well”. -----------------

We may have things in our minds that we are worried about. On a scale of 0-10, how worried are you? Here 0 means “I am extremely worried” and 10 means “I am not worried at all”. ---------------------------------

Firstly, it should be noted that we are going through something none of us experienced before. We do not have a clear understanding of what is happening around us. Naturally, we are worried about keeping ourselves and our family members safe. We are worried about daily needs, health, and our future. At this time, it is very natural to panic, get anxious, or having difficulty sleeping. Some people may react differently compared to how they would normally. But if we know how to get out of these negative thoughts, we can decrease mental pressure and live a better life.

To live a better life, we need to shake off the fears in our minds. How do we do that? At this time, we can be afraid of a lot of things. We can be worried someone like myself or family members getting affected by coronavirus. We can be worried about poverty, our future, etc. One way to deal with fear is to know about what we are afraid of. If we know what is coronavirus and how to be safe from COVID-19 disease, we will be able to protect ourselves and our family members by following what to do. Thus, we will be less afraid of coronavirus. This knowledge will help to get courage.

We will know how to be safe from coronavirus, will follow those rules and live without tension

So, first, we need to know how can we be safe from coronavirus.

What do you know about coronavirus? (Instruction: Listen carefully to what counselee says. If she cannot tell about coronavirus, tell her the following points. Counselee who correctly discussed these points. Appreciate her and discuss following points)
Coronavirus is a very tiny germ that is not visible to human eyes. People usually experience difficulty breathing in this disease.

Some usual symptoms of coronavirus are Fever, Cough, difficulty breathing.

It is also possible that a person has coronavirus but does not have any symptom

People can die due to coronavirus

Coronavirus can spread through cough, sneeze, etc.

Until now, there is no medicine or vaccine for coronavirus. That is why the easiest way to be safe from coronavirus is to take preventive measures.

You have already got information on how to be safe from Coronavirus through Television, Radio, Newspaper, and Mobile phone. Do you know what measures you should take to keep yourself and your family members safe from coronavirus?

(Instruction: Listen carefully to what counselee says. If she cannot clearly tell about coronavirus, tell her the following points. Counselee who correctly discussed these points. Appreciate her and discuss following points)

One way to stay safe from coronavirus is to stay at home. For emergencies, we all go outside the home, but the less you go outside the home is better.

If you have a fever, cough, or difficulty breathing, you must stay at home and stay away from healthy peoples.

We should avoid going to places where a lot of people gathers such as social ceremonies, general meeting with people. In this place, the possibility of corona spread is higher.

If we go outside the home, we should keep a distance of a minimum of 1.5 meters or three times your arm's length.

We should wash our hands with soap and water for at least 20 seconds after coming home.

People staying at home should also regularly wash hands in the same way.

We should cover our mouth with a handkerchief or with the fold of our elbow while coughing or sneezing.

We should avoid touching our eyes, nose, or mouth.

If someone gets sick, we should call 16263, take and follow instruction from them

If someone is diagnosed with corona, there is no need to ostracized him/her. It is a disease like any other disease. If he/she follows proper rules and take medicine, they will get well. It should be noted that people can die due to coronavirus but many people also get well.

It is not mandatory to hospitalize a corona patient. Most of the patients can be treated at home.

This disease is contagious. That means if we are not cautious enough, other people can get affected by a corona patient. So, some measures should be taken while treating a patient.

While treating a patient at home, both the patient and the person treating him/her should wear cloth made mask. It reduces the probability of spreading disease with
others. The person who is treating corona patients should be cautious. There is no alternative for him but to wash hands regularly.

- All the tv news, newspaper, local government office, the health center is saying to take these measures.
- It is possible to think that we are overreacting by taking all these steps. But we are calling over and over; also everyone is telling to take these measures because we can only be safe by following these steps.
- We can also think that we do not have enough money to buy this amount of soap. If we do not have soap, we can easily make soap water with the following step.
- Usually, every one of us has washing powder. If we mix four tea-spoon of washing powder with 1.5 liters of water and shake it properly, we can use that water to wash our hands. Before each use, we will have to shake the bottle. It will be easier to use if we make a hole in the bottle cap. Even if there is less foam, this soap water cleans germs properly.
- We get anxious by thinking about what we will do if someone in our family gets sick. If we know what we need to do, we are less likely to be worried.

Do you understand everything I have talked about until now? (If the answer is no, ask her which part she did not understand and try to explain that part again)

Have you learned some new today, from what we have just discussed?

(If Yes) Could you please mention them? -------------------------------

(If No, Write 0 here) ---------------------------------------------

We hope that you will follow these instructions. Be careful. We will keep in touch.

Greetings.

For text messages:

Please call the following numbers for any advice:

*Shasthyobatayan* Helpline: 16263
Specialist Helpline: 09611677777

If you are in Khulna or Shatkhira district you may call the following numbers for advice:

Dr. Asheem Kumar Sarkar: 01957410585 (Pediatrics and Diarrhea)
Dr. Tamanna Nushrat Khan: 014108507324 (Medicine, Asthma, Dermatology)
Dr. Md Shahinoor Hassan: 01777270282 (Medicine, Neurology, Rheumatoid Arthritis)
You may contact the following persons in your local government area should you or any of your family members had any symptoms of COVID-19. They will arrange a test for you/your family if required.

<table>
<thead>
<tr>
<th>Subdistrict</th>
<th>Name</th>
<th>Designation</th>
<th>Mobile</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asasuni</td>
<td>Meer Alif Reza</td>
<td>Assistant Executive Officer</td>
<td>01726702172</td>
</tr>
<tr>
<td>Tala</td>
<td>Md Iqbal Hossain</td>
<td>Do</td>
<td>01738917192</td>
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<tr>
<td>Paikgacha</td>
<td>Julia Sukayana</td>
<td>Do</td>
<td>01969655888</td>
</tr>
<tr>
<td>Dumuria</td>
<td>Mst Shahnaz Begum</td>
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<td>01969655888</td>
</tr>
<tr>
<td>Koyra</td>
<td>Shimul Kumar Shaha</td>
<td>Do</td>
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</tr>
</tbody>
</table>


Session 2

Instruction for the counselors: Following topics will be discussed over the phone. The counselors will discuss these topics in simple language so that the counselee can easily understand. The counselor should talk slowly so that the counselee understands everything. The counselor should talk at least 20 minutes with each counselee.

Greetings,

I am ______________________. I am working with GDRI. How are you? In the last few weeks, we have talked with you about what is coronavirus and how to be safe from coronavirus. In this pandemic, all of us are somewhat worried. Also, we are not always in a good state of mind. Today we have called to talk about how to be in a better mental state.

Though you have just mentioned how you are you doing today, I would still like to ask you, how would you rate yourself regarding how you are doing on a scale of 0-10? Here 0 means “not good at all” and 10 means “extremely well”. -----------------

We may have things in our minds that we are worried about. On a scale of 0-10, how worried are you? Here 0 means “I am extremely worried” and 10 means “I am not worried at all”. -----------------

Keeping the mind healthy:

- Last week we discussed that this is an unusual time. This is a more or less difficult time for all of us. Since we have never seen such a disease before, we are afraid.
- In day or night, we may think about many things - the thought of getting food, the health and education of children, the thought of keeping everyone in the family healthy, how long this situation will last, what will happen in the future.
- These thoughts may come to our mind. But we also need to know that if we are always thinking, it is not good for our health.
- You may have noticed that when you are over-thinking or under a lot of stress, you may feel very restless, do not feel like doing anything, have no appetite, may have headaches, have less sleep, or have scary dreams. These symptoms may be different for everyone.
- None of this is good for our bodies.
- Now we are all worried about coronavirus. But many of us may not know that those whose bodies are already weak or who fall ill very easily, that is, those whose bodies are already less able to protect themselves from diseases, are more likely to be infected with this virus.
- If we have anxious for a long time, we become mentally weak; we may even suffer from mental illness, such as restlessness of mind, worrying too much about everything, fear of anything. These are not good for health. For those who already have it, the extra stress on the mind can add to these problems.
- So, we need to remember that the time we are going through now will come to an end, we may not know when, but we should not be afraid.
- It is often seen that if we talk to family members or relatives or neighbors with whom we have a good relationship, then we feel less burdened.
**Not blaming yourself or anyone in the family**

- We often blame ourselves in times of danger or problems.
- We get a little angry. Maybe we get angry with the people in the house or misbehave with them.
- But with a little thought, we realize that none of us has a hand in the current situation.
- In such a time of danger, there may be no food in the house, or there may not be money to buy food. Or there may be a fear of getting sick. If someone in the house is sick, you may have worries about where to go, or someone may scold you, or you may have a bad experience, all in all, we may feel frustrated. You have done nothing wrong.
- We need to remember that we are blaming ourselves or others out of our stress. Many times, when we have a problem, we either blame ourselves or blame others. But with a little thought, we can realize that we often have no control over the problems we are in.
- If you feel frustrated or afraid, talk to your family, tell them about your state of mind. If you want you can talk to someone in the area on the phone. You can try and speak with your neighbors maintaining physical distance standing in front of your respective houses. You will see that they are in a similar mental state. Everyone will feel less isolated when they get to communicate with somebody or vent.
- It would not be right to feel guilty for no reason.

**Keeping your mind healthy**

- Now that everyone is at home, many of us have more housework than before.
- It is very normal to be stressed due to the burden of daily chores and various thoughts. We may be upset or angry at everything, or we may get angry. These reactions are very normal.
- But by doing something very simple, we can take care of ourselves.
- We all know that exercise keeps the body well. You may think ‘I am a woman, there is no place for me to go and exercise’ or ‘What will people say if there are people at home’ or ‘Why to exercise after working all day’. Or it may seem that ‘exercise will not solve my problem’. Indeed, this will not solve the problem, but exercise will keep your mind and body healthy so that you do not get sick because of all the problems. If we get sick, the problem may get worse, which we do not want.
- You can take a short walk in the yard or in front of or behind the house before starting work in the morning.
- When the stress is high or the fear increases, take a long breath through the nose, as much as possible. In this case, slowly count to 1 to 5, then slowly exhale. Do this 10-12 times. During this time, pay attention to exercise, such as stomach and chest ups and downs, swelling of the nose. Doing this will move your attention from what you are thinking about for a while; both of you may feel better. This exercise will calm your mind, reduce stress. Even if there is no fear or worry in your mind, if you practice doing it every day, the mind stays healthy. You can do this exercise at any time.
- Generally, we all follow a religion - some perform Namaz, some worship, some pray. Many people feel calm after Namaz, worship, or pray. You can do that if you want.
Everyone else in the house can do these exercises.
We want to be good mentally and physically so that we do not get infected with coronavirus.

Do you understand everything I have talked about until now? (If the answer is no, ask her which part she did not understand and try to explain that part again)

Have you learned some new today, from what we have just discussed?

(If Yes) Could you please mention them? ---------------------------------------

(If No, Write 0 here) ----------------------------------------------------------------

We hope that you will follow these instructions. Be careful. We will keep in touch. Greetings.
Session 3

Instruction for the counselors: Following topics will be discussed over the phone. The counselors will discuss these topics in simple language so that the counselee can easily understand. The counselor should talk slowly so that the counselee understands everything. The counselor should talk at least 20 minutes with each counselee.

Greetings,

I am ______________________. I am working with GDRI. How are you? In the last few weeks, we have talked with you about how to stay safe from coronavirus. In this pandemic, we all are concerned about our health. So, today we have called you to give the guideline about what are the things to do for maintaining good health and keeping the children healthy.

Though you have just mentioned how you are doing today, I would still like to ask you, how would you rate yourself regarding how you are doing on a scale of 0-10? Here 0 means “not good at all” and 10 means “extremely well”. 

We may have things in our minds that we are worried about. On a scale of 0-10, how worried are you? Here 0 means “I am extremely worried” and 10 means “I am not worried at all”.

Maintaining good health:

- We have already talked with you about how to stay safe from Coronavirus. Just maintaining a few basic hygiene rules and being careful can help us to stay healthy during this pandemic time, for example-
  1. Frequently washing hand using soap and water
  2. While sneezing/coughing covering face using folded elbow or using a handkerchief
  3. Not touching face, eyes, and nose unnecessarily
  4. Without emergency not going out of home
  5. If you have fever, cough, and difficulty breathing, should not go out at all and maintaining quarantine or staying away from others at home

  Hope you and your family members maintaining these basic rules

- Every group of people like child, female, male everyone one of the members of a family will have to maintain these rules equally because this is the best way to stay away from coronavirus and maintain good health.

- As during this pandemic, everyone is staying home, children are not going to school, so we have a heavy workload at home. In addition to that, if someone becomes sick, we have to take care of that person as well.

- After doing all the chores, very often we are not able to take care of our health, henceforth we have a probability of becoming sick. Because of this, we all need to take care of ourselves according to our convenience.
If we feel sudden fever, cough, and difficulty breathing, we must stay at home and maintain quarantine from the family members so that we all do not become sick. If we all become sick at the same time, this will only rise our difficulty.

At home, if someone becomes sick and has a fever, cough, and difficulty breathing or that person is infected with coronavirus, then we need to stay conscious during taking care of that person so that we also do not get infected. So we have to wear a mask while taking care of the patient. In case we do not have a mask, at least we will have to wrap a handkerchief or a cloth around our face.

It is important to wear a mask or handkerchief over your nose and mouth properly. We will have to wear masks or handkerchief in a way so that our nose, mouth, chin, and some area between our chin and throat are covered.

If possible, while taking care of the patient, we need to use gloves. In case we do not have gloves at home, after being in contact with the patient, we need to wash our hands with soap and water.

If we have to step out of the home due to an emergency, after returning we will have to change our clothes and immediately wash our hands with soap and water. Every member of the family must maintain this.

We need to boil fish, meat, and egg properly, and it is recommended not to drink raw milk. Before eating fruits and cooking vegetables, we need to wash them properly. These rules apply to everyone.

**Staying more cautious because of pregnancy**

If you are pregnant, you will have to be more careful. Due to pregnancy or during pregnancy, the probability of being infected with coronavirus does not increase. But, our body changes a lot because of pregnancy. Due to this, there is a high probability that we can have few sicknesses like- cough for a long time, difficulty breathing, and pneumonia.

So during this pandemic time if you are pregnant, then you need to be more careful so that you do not have these problems. Keep in mind that if we become sick, then our body loses the capacity to fight against the sickness, henceforth we become ill very easily.

Apart from that fever, cough, shortness of breath, and sore throat is the symptom of coronavirus. So if you get these symptoms, you need to stay away from the family members and maintain quarantine like said I have before so that they do not become sick as well. In this case, 14 days of quarantine is mandatory. This rule is for everyone. In addition to that, the rest of the rules should be maintained.

If you become sick the person who would come to take care of you, you both need to wear a mask or handkerchief or a folded big piece of cloth around the face.

Drink a lot of water and liquid food. Try to eat warm food.
Collet the phone number of the doctor in your area so that if an emergency, the doctor can be contacted. If necessary to take advice call 16263 and 333, IEDCR hotline number 01937000011, 01937110011, 01927711784, and 0192771178. We will send these numbers via SMS or message.

If someone is sick at home, stay away from that person. If there is no way and you have to take care of the patient then abide by the rules we mentioned before like wearing a mask or covering nose and mouth using a handkerchief and after being in contact with the patient washing hands.

To remove the stress and keep the body healthy, do breathing exercises and regular walking as we recommended last week.

Taking care of the children

- If you have an infant whom you breastfeed, you have to continue that.
- Even if you become sick, you need to continue breastfeeding. Coronavirus cannot infect the baby via breast milk, so do not worry about that. Breast milk enhances the immune system of the baby, so it is important to continue it.
- But if you have fever, cough, and difficulty breath and sore throat while breastfeeding the baby you must wear mask or handkerchief and cover the nose and face. Before feeding the baby, washing hands with soap and water is mandatory.
- If you become so sick, then you need to breast pump and keep the milk in a hygienic bowl or spoon, and someone else will feed the baby.
- If anyone else of the home becomes sick, keep the baby away from the person.
- The dishes and bowls that are used need to be kept separated so that others do not use it. The child should not be fed things eaten by you or others.
- It is prohibited to smooch babies; this can spread disease.
- If it is time for the vaccination of the baby, you need to search for the nearest vaccination center and learn about their system. Some vaccines can be given at other times. Learn about that from the vaccination center. If you need to go out for the vaccination of the baby, you need to stay careful. It is recommended to take the appointment and go according to that time.
- A little grown-up baby should be taught washing hands and not touching face, nose, and also not putting a thumb in mouth. They need to be taught why it is important.
- If a person comes from outside children, tend to go to them jumping. After coming from outside without changing clothes, no one should touch the baby.
- It is important to keep children busy with studies and indoor sports. In the backyard, children can play.
- Children may become bored due to staying home all the time. Do not scold them and make them understand why they should not go out. We need to behave with children in a good way so that they do not get scared of us. Like elderly people, children can become stressed, and it is not good for them.

The things I have said, have you understood? (If you answer is No, ask which part you did not understand and will try to make you understand that part again.)
Have you learned some new today, from what we have just discussed?

(If Yes) Could you please mention them? ---------------------------------------

(If No, Write 0 here) ----------------------------------------------------------------

Hope the conversation we had today will help you to stay healthy. We will check on you again.
Greetings.
Session 4

Instruction for the counselors: Following topics will be discussed over the phone. The counselors will discuss these topics in simple language so that the counselee can easily understand. The counselor should talk slowly so that the counselee understands everything. The counselor should talk at least 20 minutes with each counselee.

Greetings,

I am ______________________. I am working with GDRI. How are you? In the last few weeks, we have talked with you about what is Coronavirus and how to be safe from Coronavirus. At this time everyone is at home. It is less likely to get to meet with relatives/neighbors than before. There are fewer people around who can help if we are in danger because everyone is in their home. In this situation, it is very normal for us to feel alone. We have called today to discuss how we can keep in touch with everyone from our homes, and how we can help each other.

Though you have just mentioned how you are doing today, I would still like to ask you, how would you rate yourself regarding how you are doing on a scale of 0-10? Here 0 means “not good at all” and 10 means “extremely well”. -----------------

We may have things in our minds that we are worried about. On a scale of 0-10, how worried are you? Here 0 means “I am extremely worried” and 10 means “I am not worried at all”. ---------------------------------

Keeping communication with neighbors

- We have been told to stay at home to avoid coronavirus. This situation has been going on for a long time. As we used to be able to visit our relatives and neighbors, cannot do that now.
- Besides, we used to go to work outside the house, We would meet many people on the road, but that does not happen now. In this way, our communication with everyone has decreased.
- This condition is not normal for us. We usually stay in touch with relatives and neighbors.
- But now we cannot do that for this unusual situation. We know that at this time we have to stay at home.
- Since the coronavirus spreads from one person to another, the fewer people we interact with, the safer we will be.
- But this way we can feel alone while staying away from everyone. More importantly, if we are suddenly in danger, we may not be able to find someone around us who can help us. For many of us, this can be a cause for concern.
- However, we can keep in touch with each other from home.
- Now we all have at least one mobile phone in our house. We can keep track of the phone numbers of our neighbors, who live nearby, and if possible, get in touch with once a week. We will not feel alone if we do this.
- We may think, ‘There is no time to look for someone else as we are struggling to run our own family’. It is just that we are all very busy. But talking to our neighbors, looking for
them will reduce our stress a bit. Talking to someone about your thoughts makes the mind light and calm; the stress on the mind also decreases.

- After talking with your neighbors, you may find that they too are under pressure of quality, fearing for their well-being and future. If you talk to him, his/her mind will also feel better.
- Often, when we talk to each other, we may find a solution to a problem that both of us are having.
- Also, when we are in danger, our neighbors come forward to help first. If there is communication between us, we can help each other in danger.
- Get the phone number of someone you are in good terms with. You may need this sometime.
- If you are currently in trouble or danger, talk to someone you trust, he/she may be able to help you.
- It will be beneficial for everyone to share the news of emergency assistance provided by the government or NGOs such as food, health care information, zakat, etc.

**Do not blame a neighbor or someone in the vicinity for being infected with coronavirus**

- In many parts of the country, when someone is infected with the coronavirus, people or neighbors in the area blame the sick person, slander him or her family, or look down on him or her.
- We must remember that illness can happen to anyone; it is not a fault to get sick.
- If someone is infected with coronavirus, he and his family can be emotionally broken. We should all be kind to the patient and his family.
- We need to remember, ‘If I had this disease, how would I expect others to treat me’.
- If someone is infected with coronavirus, he can get better with proper treatment. However, since it is a contagious disease, if anyone in the area is affected, we must stay away from them.
- It is a contagious disease. So we should keep the patient isolated. It is not the patient's fault. they should not be ostracized
- The affected person may be your friend or neighbor, and you may think you should be able to treat. But for the good of yourself and everyone in the family, you have to stay away from the patient.
- If possible, you can help your sick neighbor by arranging food or medicine by following all the rules, i.e. wearing a face mask or handkerchief, wearing gloves, and keeping a safe distance. However, you cannot go inside the neighbor's house; you can leave it within the boundaries of the house so that they can take it from there.
- If someone in that area has a fever, cough, and difficulty breathing, you should also stay away from that patient. Keep your family members away from her too.

**Staying in touch with relatives**

- Similarly, we can keep in touch with relatives by phone. So that you will know how they are, whether they are healthy or not. This will reduce your worries about them.
- If mother, father-in-law, and mother-in-law are not in the same house, we can call them and get the news.
Older people are getting affected more and dying from coronavirus. They are also scared and worried after hearing various news about this disease. If we talk to them, their minds will be lightened, and they will have confidence.

Older people are getting affected more and dying from coronavirus. However, many of them are also getting better. Giving this positive information will reduce their fear.

Older people usually want their children to talk to them. So, at this time, when they are thinking or worrying about their well-being or survival, if you communicate with them frequently, they will have the courage, and the fear will decrease.

Do you understand everything I have talked about until now? (If the answer is no, ask her which part she did not understand and try to explain that part again)

Have you learned some new today, from what we have just discussed?

(If Yes) Could you please mention them? ---------------------------------------

(If No, Write 0 here) ----------------------------------------------------------------

We hope that you will follow these instructions. Be careful. We will keep in touch. Greetings.
C Appendix C: Administrative Information

- Funding: This project is funded by Monash University, Australia.
- Ethics Approval: Ethical clearance for this project was received from Monash University (ref no. 24746) and Indian Institute of Technology Kanpur, India (ref no. IITK/IEC/2019-20-II/Jul/I).
- Declaration of interest: No conflict of interest.