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FINANCIAL INCENTIVES, HEALTH SCREENING,  
AND SELECTION INTO MENTAL HEALTH CARE:  
EXPERIMENTAL EVIDENCE FROM COLLEGE STUDENTS IN INDIA

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Financial Incentives, Health Screening, and Selection into Mental Health Care: Experimental Evidence from College Students in India

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**ABSTRACT**

In an RCT with college students in Chennai (N=340), we test how modest financial incentives and personalized feedback affect the uptake and targeting (by symptom severity) of free therapy. Despite 56% of students screening positive for at least mild depression or anxiety, only 3% in the control group took up therapy. A small cash incentive increased appointments by 9 percentage points ( $p = 0.06$ ) on average without substantially affecting targeting. Personalized feedback and recommendations based on a mental health screening tool significantly improved targeting while keeping overall take-up largely unchanged. Combining these two treatments achieved both higher take-up and improved targeting, by increasing appointments among symptomatic individuals by 21 pp ( $p < 0.01$ ) without affecting uptake by asymptomatic individuals. These findings suggest that low-cost incentives coupled with screening information can effectively increase uptake while allocating limited mental health care resources to those with greater need.

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# 1 Introduction

People around the world face high rates of depression and anxiety, but most do not receive mental health care. While a lack of supply of mental health care professionals is well documented, there is now growing evidence of low demand for care when available. Demand-side barriers such as liquidity constraints, mistrust, and stigma exist for many health conditions, but demand for mental health care may be special in that some mental conditions may themselves reduce demand for care: feelings of hopelessness, low motivation, and self-blame associated with depression may lower expected rewards and increase perceived costs of initiating treatment.<sup>1</sup> This may lead to inefficiently low take-up and poor targeting of scarce resources if those with the highest need face stronger take-up barriers precisely due to their mental distress. Such effects may be exacerbated by low familiarity with mental health and a lack of awareness that treatments are highly effective.

We evaluate two simple and scalable interventions to increase demand for therapy: financial incentives and personalized feedback. Financial incentives may increase demand for care by counteracting high perceived effort costs and low motivation, or by providing social cover to overcome stigma. However, they may worsen the targeting of scarce mental health care resources. Policymakers would like to induce higher take-up among those with higher symptom severity, who benefit more from psychotherapy (Bower et al., 2013). Ex ante, it is plausible that those with worse symptoms (and thus higher clinical need) might instead be unresponsive to rewards due to their condition, while those without clinical need could take up therapy purely to receive payments.

In contrast, personalized information aims to improve targeting by changing beliefs about the person-specific returns to seeking therapy, with ambiguous effects on overall take-up. People naturally have at least some awareness of their mental health status. However, some may not recognize the seriousness of their distress or that therapy is indicated as a treatment for their symptoms.<sup>2</sup> Personalized feedback might thus bring take-up of therapy in line with symptom severity.

We conduct an experiment in a sample ( $N = 340$ ) of college students attending an all-women arts and sciences college in Chennai, India. We document alarmingly high rates of mental distress,

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<sup>1</sup>See, for instance, American Psychiatric Association (2013); Pizzagalli (2014); Salamone et al. (2016).

<sup>2</sup>Alternatively, even well-informed individuals may react to information treatments due to increased salience (Bettinger et al., 2024).

mirroring recent evidence from around the world.<sup>3</sup> On the PHQ-ADS—a validated composite screening tool for depression and anxiety (Kroenke et al., 2019)—56% of students screen positive for at least mild symptoms of depression or anxiety, and around a quarter for moderate or severe symptoms. Nevertheless, take-up of care is very low: only 5% of students report currently receiving treatment from any mental health professional, despite free-of-charge counseling services at the college with excess capacity.

Students were randomly assigned to one of four treatment arms. All students, including those in the *Control* group, watch a video introducing the study counselors and informing students about the available free high-quality therapy, and are given the option to initiate contact with the counselors. In the *Rewards* treatment, students receive a 500 rupee (~6 USD) cash payment upon attending their first therapy session. In the *Screening* treatment, students receive feedback on their PHQ-ADS score, informing them of their psychological distress levels (none, mild, moderate, or severe). Those with at least moderate symptoms were also encouraged to make appointments with counselors. Finally, in the *Rewards & Screening* treatment, students receive both interventions.

Our outcomes track several steps along the way towards receiving care: initiating contact with a counselor, making an appointment, attending the appointment, and making follow-up appointments. We examine average effects on these outcomes, as well as effects separately for symptomatic and asymptomatic students. We define the ‘targeting effect’ as the difference in the treatment effects on symptomatic versus asymptomatic students: positive targeting effects imply larger increases in take-up among those with higher clinical need.

In the control group, 30% of symptomatic students *initiate* contact with a study counselor, compared to 5% of asymptomatic students ( $p < 0.01$ ), suggesting symptomatic students have some understanding of their mental health condition, and many are interested in receiving treatment. However, very few symptomatic students *follow through* on this intention. While they may send an initial text message or ask to be contacted, they do not complete the process of making an appointment. Ultimately, they make and attend appointments at similarly low rates as asymptomatic students (4% among symptomatic *vs.* 3% among asymptomatic students).

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<sup>3</sup>For evidence from India, see Kumar et al. (2012); Yadav et al. (2016); Shah and Pol (2020). For international evidence, see Duffy et al. (2019); Lipson et al. (2022).

The *Rewards* treatment substantially increases take-up of therapy on average. Students offered the cash incentive are 15 percentage points (pp) more likely to initiate contact with counselors ( $p = 0.03$ ), and 9 pp more likely to schedule an appointment ( $p = 0.06$ ), four times the level in the control group. Students follow through on these appointments: they are 7 pp more likely to attend at least one therapy session compared to the control group ( $p = 0.09$ ).

The targeting effect of *Rewards* is negative for initiating contact but positive for the more important final step of making (and attending) therapy sessions. Asymptomatic students respond to the incentive by initiating contact at 23 pp ( $p < 0.01$ ) higher rates, raising concerns that counselors would be swamped by students with low clinical need. But these students largely do not complete the process—their appointment scheduling increases by only 6 pp ( $p = 0.29$ ). In contrast, symptomatic students see a smaller increase of 9 pp ( $p = 0.37$ ) in initiating contact, but a significant 12 percentage point increase ( $p = 0.08$ ) in actually scheduling appointments. This implies that incentives help symptomatic students translate their initial interest into actually attending appointments.

The one-time reward also leads to improved targeting on unincentivized follow-up appointments (10 pp higher effects among symptomatic vs. asymptomatic students,  $p = 0.07$ ). Rewards get more symptomatic students in the door, allowing counselors to identify students needing continued care.

The *Screening* intervention improves targeting while leaving overall take-up largely unchanged. It reduces asymptomatic students' appointments by 5 pp to zero and increases appointments among symptomatic students by 8 pp ( $p = 0.20$ ), implying a targeting effect of 13 pp ( $p = 0.06$ ).

Combining the two interventions leads to approximately the sum of their individual effects and thus achieves both increased take-up and improved targeting. The *Rewards & Screening* treatment has a large average effect on scheduling appointments (11 pp;  $p < 0.01$ ), similar to *Rewards* ( $p = 0.67$ ), but 9 pp larger than *Screening* ( $p = 0.07$ ). Effects on targeting are even more striking than for *Screening*: effects on symptomatic students are larger (relative to effects on asymptomatic students) for scheduling appointments (23 pp,  $p < 0.01$ ), attending appointments (18 pp,  $p = 0.02$ ), and making follow-up appointments (8 pp,  $p = 0.06$ ). Thus, the combined treatment strongly increases take-up, entirely driven by those in need.

While our experiment was not designed to parse the detailed mechanisms driving our results, we find the strongest take-up and targeting impacts of the two treatments in the subset of symptomatic individuals who self-assessed as having poor mental health at baseline. This suggests that information about mental health per se is unlikely to drive the effects. Instead, the incentives and/or the information that therapy might be helpful *for them* likely played a role in pushing people already considering therapy to make an appointment.

Our paper adds to a growing literature on the economics of mental health. Depression and anxiety are leading causes of disability worldwide (Friedrich, 2017). In addition to the profound suffering they cause, they may also worsen economic outcomes (Ridley et al., 2020; Lund et al., 2024). Brief courses of psychotherapy durably reduce depression and anxiety (Cuijpers et al., 2016; Baranov et al., 2020; Bhat et al., 2022), but the “treatment gap” remains stubbornly high. Recent work in economics has argued that demand for treatment is inefficiently low due to factors such as information frictions and social stigma (Cronin et al., 2024; Roth et al., 2024; Smith, 2025).

We show that modest financial incentives paired with personalized feedback can increase demand for treatment while directing scarce resources to those with higher need. We provide the first evidence from a randomized evaluation of financial incentives to increase uptake of therapy for depression and anxiety.<sup>4</sup> Our findings ease concerns that incentives induce gaming and undesirable selection, and are instead consistent with Naik (2025), who finds that people with poor mental health are *more* responsive both to benefits and barriers to take-up of social welfare programs.<sup>5</sup>

Our findings also add to existing work from randomized experiments providing mental health screening results to individuals in online samples (Batterham et al., 2016; Kohlmann et al., 2024). In contrast to our findings, those studies do not find increases in health-seeking behavior. A plausible explanation for the differences is that we provide screening results and recommendations combined with an immediate and relatively frictionless next step of scheduling therapy. Such channel factors have long been understood to be important in affecting behavior (Ross and Nisbett, 2011).

More broadly, we add to the health economics literature on selection into treatment (*e.g.*, Oster,

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<sup>4</sup>Closest to our work, Post et al. (2006) conduct a non-randomized pre vs. post study of financial incentives for attendance among patients already receiving therapy, and find increases in attendance after incentives commence.

<sup>5</sup>Angelucci and Bennett (2024) find that a pharmacotherapy treatment to lower depression leads to lower willingness to pay for a preventive health product, despite unchanged usage when offered the product for free.

2020; Einav and Finkelstein, 2011), and the public finance literature on ordeals and self-selection into social programs (e.g., Alatas et al., 2012, 2016; Finkelstein and Notowidigdo, 2019; Naik, 2025; Raffkin et al., 2023). We find very low uptake of an effective treatment under business-as-usual, with no evidence of selection on need. In contrast, combining modest incentives with personalized information strongly increases take-up while greatly improving targeting.

## 2 Setting and Experimental Design

### 2.1 Context

Rates of depression and anxiety rise during adolescence and young adulthood. Indeed, many mental health conditions first develop at these ages. Given this background risk, college can be a particularly challenging time as students face new social, academic, and career pressures. In recent surveys, over 50% of Indian college students screen positive for depression or anxiety (Kumar et al., 2012; Singh et al., 2017). These numbers, while worrying, are in line with recent estimates from around the world (Auerbach et al., 2018; Li et al., 2022).

Students in our context are broadly familiar with the concepts of depression and anxiety, but many do not think of therapy as a relevant solution for them. In surveys we conducted with similar student populations, about 90% reported some basic familiarity with terms such as counselors, anxiety, and depression, and around half reported knowing where to find a psychiatrist (Figure A.I). In response to a vignette describing an individual who has lost a job or a family member and who subsequently feels persistent sadness that makes them incapable of completing daily activities, around half of the students volunteer that the person shows symptoms of depression. Yet only one-tenth suggest seeing a mental health professional as a way to improve the person’s situation. And, even when prompted, only a quarter of students say they personally would see a mental health professional if depressed. Students might doubt the efficacy of mental health care in general, perceive social stigma around receiving it, or simply not think it is helpful for the issues *they* face.

Low demand for therapy might play a role in the large treatment gaps for depression and anxiety—often as high as 70 to 90%—observed around the world (Thorncroft et al., 2017; Alonso

et al., 2018). These gaps are particularly severe in low- and middle-income countries. India’s National Mental Health Survey reports that over 80% of individuals with mental health disorders do not receive appropriate care (Gururaj et al., 2016). Recent work confirms that this gap is also evident among college students in India (Sidana et al., 2012; Das and Bhattacharya, 2015; Arun et al., 2022).

## 2.2 Sample recruitment

We recruited 340 undergraduate students from an all-women’s arts and science college in Chennai. Enrollment took place at the classroom level on a rolling basis. We recruited our sample during college hours by visiting classrooms at times scheduled in coordination with the college administration. There was minimal attrition: of the students present during our visits, 98% consented to participate in the study, and 97% completed the study. Students received an introduction from the research team, who described the study as focusing on student health and well-being. Consenting students within the eligible age range (18 to 30) completed a survey on their personal mobile devices, including questions on demographics, self-perceived mental health, and treatment history. The survey also included the PHQ-ADS, a 15-question validated composite instrument screening for depression and anxiety.<sup>6</sup> Appendix C contains the full survey instrument.

In our pre-registration (AEARCTR-0015379), we indicated that we would attempt to reach all students in the college, but expressed substantial uncertainty in the eventual sample size due to high student absence rates and our reliance on the college to provide access to students. Due to an unexpectedly early end to the semester at the college (resulting from a government order), the number of days during which we could recruit students was substantially smaller than expected, reducing our sample size.

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<sup>6</sup>We use the 15-question PHQ-ADS, consisting of the PHQ-8 and GAD-7, rather than the 16-question PHQ-ADS, which includes an additional question on suicidal ideation (Kroenke et al., 2016). In practice, the distribution of scores is similar (Ibrahimi et al., 2024).

## 2.3 Experimental design and baseline balance

Figure 1 presents our simple two-by-two cross-randomized design. We randomized participants to a control group or one of the three treatment groups at the individual level, stratifying by PHQ-ADS scores collected at baseline (pre-treatment). All participants, including in the control group, (a) watched a video introducing them to the mental health services and counselors available in the college, (b) were informed they had access to therapy at no cost for the duration of the study, (c) were offered links to prefilled WhatsApp messages to each of the study-affiliated counselors to request a therapy session, and (d) received links to download a mental health app and/or web articles on depression and anxiety, if they indicated interest in receiving these resources. Participants who consented (before randomization) to receive further communications (84% of the sample) were sent text messages one day, seven days, and 21 days after survey completion, reminding them of the mental healthcare services offered as part of the study and how to access them.

In scoping surveys, some students expressed a preference for college counselors, whereas others preferred external counselors. We facilitated both options by partnering with college counselors and SCARF, a reputed academic and clinical mental health center in Chennai.<sup>7</sup> Students were able to make therapy appointments either with college counselors or with SCARF at no cost for the duration of the study. Both facilities offered evidence-based psychotherapy by trained counselors under the supervision of clinical psychiatrists.<sup>8</sup>

In addition, the treatment groups received the following interventions:

1. **Rewards:** Participants in this group received Rs. 500 (~USD 6) in cash for attending their first therapy session with a study-affiliated counselor. Payments were typically made a day or two after the appointment.<sup>9</sup> Students were informed of these incentives in the initial survey and reminded in each follow-up text message. Panel (a) of Figure A.II shows the offer of rewards provided as part of the survey (see Appendix C for the full survey instrument).
2. **Screening:** Participants in the *Screening* group received feedback on whether their responses

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<sup>7</sup>Coauthors Raghavan and Rangaswamy are researchers and clinical psychiatrists at SCARF.

<sup>8</sup>Cases requiring specialist care or pharmacological treatment, if any, were handled by the supervising psychiatrists or provided referrals to outside specialists.

<sup>9</sup>Payments were made only for appointments scheduled within 30 days of students completing the survey.

to the PHQ-ADS questions corresponded to the standard risk categories of no, mild, moderate, or severe distress. Students whose PHQ-ADS scores indicated moderate or severe symptoms of depression or anxiety also saw a message saying that they were “encouraged” or “strongly encouraged,” respectively, to contact a counselor, following an understanding that moderate or higher symptoms necessitate a treatment plan, while mild symptoms require low-intensity treatment, stepped care, or watchful monitoring (National Collaborating Centre for Mental Health, 2010). Panel (b) of Figure A.II shows an example of this information.

3. **Rewards and Screening:** Participants in this group received the *Screening* intervention first, and then the *Rewards* intervention.

For ethical reasons, participants with PHQ-ADS scores of 30 or above (6 percent of the sample)—indicating severe symptoms of depression and anxiety—were informed of their symptom severity at the end of the survey, even if they were not in one of the screening arms. We include these observations in the original groups they were assigned to in an intent-to-treat analysis. We provide robustness checks that exclude all participants classified as severely distressed in the appendix.

Table A.I assesses baseline balance across treatments. Baseline characteristics are generally similar across arms. There is some imbalance on personal income, which is included as a control throughout the analysis. Five students (1.5% of the sample) who started the survey withdrew before the treatments were administered. We exclude these students from the analysis.

## 2.4 Outcome measures

We analyze the impacts of the three interventions on the full pathway of steps towards receiving mental health treatment, from initiating contact with a counselor to scheduling appointments to final attendance and follow-up appointments.

1. *Initiating contact with counselors.* Within the initial survey, students are asked if they would like to book an appointment with a counselor and/or if they would like to be contacted by a study counselor to discuss mental health and therapy. The outcome measure consists of an indicator variable for initiating engagement in either of these ways. This was preregistered as a primary outcome.

2. *Scheduling an appointment.* We measured whether participants actually made appointments with study-affiliated counselors by tracking administrative records from the counseling offices up to 60 days post survey completion. This was preregistered as a primary outcome.
3. *Attending therapy sessions.* We measured whether participants actually attended a scheduled appointment with a study-affiliated counselor by tracking administrative records from the counseling offices at the college and SCARF for a period of 60 days post survey completion. This was preregistered as a secondary outcome.
4. *Making follow-up appointments.* We also measured whether participants scheduled any follow-up appointments using administrative data. This exploratory outcome was not preregistered since we expected it to be difficult to move, given the very low baseline take-up.

We also collected five outcomes to capture participants' broader interest in mental health services: first, we recorded participants' interest in accessing a mental-healthcare app in the survey as well as their choice to click a trackable link to download the app. Second, we recorded participants' interest in receiving additional information about mental health, and, for those interested, their choices to click on a trackable link to mental-healthcare literature (articles on depression and anxiety) provided in the survey. Third, we elicited participants' beliefs about the effectiveness of therapy. Fourth, we asked participants whether they were seeking therapy in the future. Finally, we asked participants whether they would consider undertaking various actions in order to improve their psychological well-being in the future, and recorded whether they included seeing a counselor as one action they would undertake.

## 2.5 Baseline measures of mental health

Figure 2 Panel (a) shows a high incidence of depression and anxiety as measured by PHQ-ADS scores, consistent with other recent surveys of mental health at Indian colleges (Kumar et al., 2012; Singh et al., 2017). A little over half of students screen positive for at least mild depression or anxiety (PHQ-ADS scores of at least 10); around a quarter screen positive for moderate (PHQ-ADS scores between 20 and 29) or severe (PHQ-ADS scores of 30 or above) depression or anxiety. Despite this high incidence, there is very little engagement with mental health services at baseline. Only

around 5% of students report currently receiving care from any mental health professional.<sup>10</sup>

Panel (b) shows students' self-assessed mental health. Around one third of students self-assess as currently having depression; a similar share self-assess as currently having anxiety. One-sixth of students indicate that they believe they have both conditions. Around half of the students indicate that they do not have either condition. These findings suggest that students do not underestimate their mental health issues *on average*: about half of students self-assess as having depression or anxiety (or both), similar to the share who screen positive for at least mild symptoms in the PHQ-ADS scale.

Panel (c) shows the correlation between students' self-assessment and their PHQ-ADS scores (pairwise correlation = 0.43,  $p < 0.01$ ). Since most students appear to have a good understanding of their mental health, the *Rewards* treatment on their own might induce students with the highest need to seek mental health care. At the same time, panel (c) demonstrates significant room for the *Screening* treatment to affect beliefs and take-up: over 50% of students who screen for mild depression or anxiety on the PHQ-ADS do not believe they are suffering from depression or anxiety, and around 25% of students who screen for moderate or severe depression or anxiety do not believe they have either condition.<sup>11</sup>

Panel (d) presents the major stated reasons for mental distress among students screening for depression and/or anxiety. The most common reasons for distress are future job/career prospects (62% of students), academic matters (49%), and feelings of isolation (38%).

## 3 Results

### 3.1 Empirical framework

We pre-registered our analysis plan (AEARCTR-0015379). We report all pre-registered analyses and highlight one deviation from the analysis plan below.

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<sup>10</sup>Figure A.IV presents data from control students who screened positive for depression or anxiety but who did not express interest in therapy on why they made that choice. The two most common stated reasons are the beliefs that they do not need therapy and that therapy will not help them.

<sup>11</sup>Of course, self-assessment may differ from PHQ-ADS scores for reasons other than misclassification: for instance, the PHQ-ADS is itself a noisy measure of mental health.

**Average effects.** We estimate average treatment effects by running the pre-registered fully-saturated OLS regressions:

$$Y_i = \alpha + \beta \text{Screen}_i + \gamma \text{Rewards}_i + \delta(\text{Screen and rewards}_i) + X_i' \lambda + \epsilon_i, \quad (1)$$

where  $Y_i$  represents the outcomes for individual  $i$ , and  $X_i$  is a vector of controls: fixed effects for categories of PHQ-ADS scores, reported family support for seeing a therapist, self-reported mood, self-evaluated overall mental health over the last two weeks and the last six months, self-reported current and past experiences of depression and anxiety, and level of disposable income.<sup>12</sup>

**Heterogeneity by baseline mental health status.** We estimate heterogeneous treatment effects by participants' baseline mental health status in two ways: (i) using discrete categories of mental distress; (ii) using continuous PHQ-ADS scores. In the discrete version, which is a modified version of the pre-registered specification, we estimate:

$$\begin{aligned} Y_i = & \alpha_0 + \alpha_1 \text{Symptomatic}_i + \beta_0 \text{Screen}_i + \beta_1 \text{Screen}_i \times \text{Symptomatic}_i \\ & + \gamma_0 \text{Rewards}_i + \gamma_1 \text{Rewards}_i \times \text{Symptomatic}_i \\ & + \delta_0(\text{Screen and rewards}_i) + \delta_1(\text{Screen and rewards}_i) \times \text{Symptomatic}_i + X_i' \lambda + \epsilon_i, \end{aligned} \quad (2)$$

where  $\text{Symptomatic}_i$  is an indicator variable for student  $i$  having a PHQ-ADS score of at least 10. This specification enables us to estimate treatment effects for symptomatic and asymptomatic students separately. For instance,  $\beta_0$  is the causal effect of assignment to the *Screening* group on the outcome variable among asymptomatic students, and  $\beta_0 + \beta_1$  as the causal effect among symptomatic students.

We had originally specified interacting treatment dummies with separate indicators for *Mild* and *Moderate-or-Severe* symptoms. Our main results table instead uses a single indicator for *Symptomatic* which pools students with mild, moderate, and severe symptoms. We do so to simplify the analysis and discussion (reducing the number of coefficients to be interpreted) and to gain statistical power. Our main conclusions are similar regardless of the regression specification used

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<sup>12</sup>In our pre-analysis plan, we indicated that we would also include a control for participants' (baseline) interest in therapy. Our final survey instrument only asked this question post treatment assignment, so we drop this control.

and also hold if we instead define *Symptomatic* to mean at least moderate symptoms (Section 3.3).

In the pre-registered continuous version, we run:

$$\begin{aligned}
Y_i = & \alpha_0 + \alpha_1 \text{PHQ-ADS}_i + \beta_0 \text{Screen}_i + \beta_1 \text{Screen}_i \times \text{PHQ-ADS}_i \\
& + \gamma_0 \text{Rewards}_i + \gamma_1 \text{Rewards}_i \times \text{PHQ-ADS}_i + \\
& + \delta_0 \text{Screen and rewards}_i + \delta_1 \text{Screen and rewards}_i \times \text{PHQ-ADS}_i + X_i' \lambda + \epsilon_i,
\end{aligned} \tag{3}$$

where  $\text{PHQ-ADS}_i$  is the participant’s continuous PHQ-ADS score from the baseline survey. In this specification, we exclude PHQ-ADS category from the control vector  $X_i$ .

### 3.2 Treatment effects of rewards and/or screening

Table 1 displays regression coefficients for the four main outcomes.<sup>13</sup> Panel A reports average effects, while Panel B shows heterogeneous treatment effects by symptom severity. Figure 3(a) shows (raw) rates of appointment scheduling for the four treatment arms. Navy bars display the likelihood of making an appointment among asymptomatic students, while light-blue bars display the corresponding likelihood among symptomatic students.

**Control group.** Consistent with low baseline engagement with mental health care, the level of take-up in the control group is low: although 19% of students initiate contact with study counselors, only about 3% schedule or attend appointments (last row of Table 1 Panel A). We find limited evidence of selection into treatment based on symptom severity in the control group (last two rows of Table 1 Panel B). While symptomatic students are much more likely to initiate contact with a counselor relative to asymptomatic students (0.30 vs. 0.05, col. 1), most of these students do not ultimately schedule or attend appointments. We find no significant differences between symptomatic and asymptomatic students for these outcomes (cols. 2 through 4).

**Impacts of *Rewards*.** Financial incentives increase average engagement with mental health services (Table 1 Panel A, row 1). The estimated effect of assignment to the *Rewards* group is positive in all specifications, and (marginally) significant for the first three outcomes. Rewards nearly double the rate of students initiating counselor contact (0.34 vs. 0.19, col. 1), and triple the

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<sup>13</sup>Appendix Table A.II shows imprecise null effects on the other pre-registered secondary outcomes.

likelihood of scheduling a therapy appointment (0.12 vs. 0.03, col. 2). These impacts almost fully translate into increased attendance of therapy appointments (col. 3).

We do not find strong evidence for differential effects of the *Rewards* treatment by symptom severity (Table 1 Panel B, rows 1-2). Consistent with financial incentives creating mis-targeting, the *Rewards* treatment substantially increases initial contacts by asymptomatic students by 23 pp ( $p < 0.01$ ), with a smaller but statistically indistinguishable point estimate of 9 pp for symptomatic students. However, this large increase in initial interest does not extend to scheduling or attending appointments. Instead, we find suggestive evidence that the *Rewards* treatment has insignificantly *larger* effects on symptomatic students' appointment scheduling and attendance (cols. 2 and 3). Interestingly, our exploratory analysis shows a marginally significant higher propensity for scheduling follow-up appointments among symptomatic students (column 4), suggesting that incentives can help counselors identify students with the greatest need for continued care.

**Impacts of *Screening*.** Consistent with students not under-estimating their mental health issues on average (Section 2.5), the *Screening* treatment does not affect overall demand for therapy (Table 1 Panel A, row 2): for each of the four outcome variables, the estimated effect of assignment to the screening group is statistically indistinguishable from zero. We can rule out large effects of screening on average: for instance, we can conclude at the 5% level that the effect of screening on the likelihood of attending an appointment was no more than 6 pp.

However, the *Screening* treatment improves targeting by *reallocating* engagement across individuals (rows 3 and 4 of Table 1 Panel B). The *Screening* treatment has a small, statistically insignificant negative effect on appointment scheduling for asymptomatic students, but a marginally significantly more positive effect on symptomatic students relative to asymptomatic students ( $p = 0.06$ ). The point estimates are also consistent with differential impacts for appointment attendance (col. 3) and scheduling follow-up appointments (col. 4), but these differences are not statistically significant.

**Impacts of *Rewards and Screening*.** Combining the two treatments achieves both higher overall take-up and strongly improved targeting. On average, the combined treatment increases appointment scheduling by 11 pp ( $p < 0.01$ ) and attendance by 8 pp ( $p = 0.04$ ), effects similar in magnitude and statistically indistinguishable from the corresponding estimates for the *Rewards*

treatment (Table 1 Panel A). The heterogeneity of treatment effects by symptom severity is even more pronounced than in the *Screening* treatment alone (Table 1 Panel B): assignment to the *Rewards and Screening* treatment strongly increases take-up among symptomatic individuals without affecting take-up among asymptomatic students. The *Rewards and Screening* treatment increases appointment scheduling by 21 pp for symptomatic students ( $p < 0.01$ ), a substantial change relative to the control mean of 4 pp (col. 2). At the same time, the combined treatment does not encourage take-up among asymptomatic students. In fact, none of these students schedule an appointment in either of the *Screening* treatment arms (Figure 3a). Similarly, the combined treatment has sizable effects for symptomatic students on attending an appointment and scheduling a follow-up appointment (cols. 3 and 4).

**Heterogeneity by continuous PHQ-ADS scores.** Figure 3b and Table A.III show estimates examining heterogeneity by the continuous PHQ-ADS score as described in equation (3). The figure presents a binned scatterplot of the likelihood of scheduling counseling vs. PHQ-ADS scores, separately for each of the four treatment lines. Dots represent deciles of the data; we also present lines of best fit from equation (3).

In the pure control group (shown in navy blue), very few students schedule therapy, regardless of their PHQ-ADS score: the slope of the relationship between the likelihood of scheduling counseling and PHQ-ADS score in the control group is very close to zero (slope = 0.12,  $p = 0.53$ ). The *Rewards* treatment, presented in light blue, produces a visual shift in both the mean and the slope, but both of these effects are statistically insignificant. Representing the *Screening* group, the orange line shows suggestive evidence of an increased slope relative to the control group ( $p = 0.14$ ): students at high levels of PHQ-ADS scores are more likely to schedule therapy, whereas there is no effect (or even a suggestive, but insignificant negative effect) for students with low PHQ-ADS scores. Finally, the *Rewards and Screening* line, in maroon, demonstrates the best screening properties, with a large statistically significant increase in slope relative to the control group ( $p < 0.01$ ) and to the rewards group ( $p = 0.05$ ).

**Interpretation and mechanisms.** While our experiment was not designed to conclusively test mechanisms, we present suggestive evidence to help interpret our results. Recall from Table 1 that while 30% of symptomatic individuals in the control group initiate contact with counselors,

only 4% schedule (or attend) an appointment. The rewards and screening interventions appear to help people follow through in making an appointment: 17% of control students who initially contact counselors go on to schedule therapy, whereas the share is roughly twice as high in the rewards (33%) and screening (39%) groups.

In Table A.IV, we estimate heterogeneous treatment effects by participants' baseline self-evaluations of their mental health status. For each treatment, the effects are concentrated among individuals who *already* identified as having depression or anxiety at baseline. This implies that the *Screening* intervention did not operate by changing participants' interpretation or labeling of their own symptoms. Instead, it likely worked by reinforcing the beliefs of participants who already perceive a problem and by providing a concrete recommendation to contact a counselor.

Figure A.V examines take-up by symptom levels and whether participants' baseline self-assessments were consistent with the screening result (which we only shared in the *Screening* and *Screening and Rewards* treatments). Asymptomatic participants who correctly assess themselves as such rarely take up therapy under any treatment. That is, there is little evidence of pursuing therapy purely for the money. Instead, *Rewards* alone are effective precisely for students who are symptomatic and recognize this, or students who believe they have mental health issues (even if our assessment disagrees). Rewards thus appear to help students with self-assessed mental health issues “get over the line” in terms of seeking help.

The effects of the *Screening and Rewards* treatment—our most impactful intervention—are approximately the sum of its constituent parts. For symptomatic participants, both the rewards and the screening information encourage take-up. For asymptomatic participants, the *Screening* and *Rewards* effects are both small and opposite signed, thus canceling out. Thus, the *Screening and Rewards* treatment achieves the best of two worlds: it increases take-up *and* improves targeting.<sup>14</sup>

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<sup>14</sup>One note of caution regarding the combined treatment is that, relative to *Rewards* alone, it (non-significantly) reduces take-up among students who self-identify as depressed or anxious but screen negative on our screening tool. In settings where policymakers prioritize maximizing care-seeking (relying on triage by providers), it may be best to withhold screening results from students who screen negative. The scope for such a demotivating effect may also be more concerning in contexts with higher baseline rates of take-up.

### 3.3 Robustness

Our most important finding, that the combined *Rewards and Screening* treatment significantly increases take-up and improves targeting, survives a series of robustness checks.

First, we repeat our main analysis while excluding all participants with severe symptoms. These participants were informed of their symptom severity and encouraged to seek care at the end of the survey, even if they were not in one of the *Screening* groups. The average effect of the *Rewards and Screening* treatment remains quantitatively similar and significant (Table A.V). The targeting effect remains significant and large, although slightly smaller than before.

Second, an alternative definition of *Symptomatic*—only considering those with moderate or severe symptoms to be *Symptomatic*—leads to very similar conclusions (Table A.VI).<sup>15</sup>

Third, allowing for different interactions of the treatments with *Mild* and *Moderate-to-Severe* symptoms (a pre-registered analysis) reveals that the *Rewards and Screening* intervention has particularly large effects on students with *Moderate-to-Severe* symptoms (Table A.VII). The treatment increases their appointments from 4 pp to 37 pp ( $p < 0.01$ ).<sup>16</sup>

Fourth, we repeat the main analysis excluding the 5% of students who were receiving any form of mental health care at baseline, producing virtually unchanged results (Table A.VIII).

Fifth, our main conclusions remain robust to multiple-hypotheses testing corrections. Table A.IX reports adjusted  $p$ -values which correct for the existence of multiple treatments by controlling the False Discovery Rate using the procedure of Anderson (2008). The statistically significant effects on scheduled appointments discussed above—the average effects of *Rewards* and *Rewards and Screening*, and the heterogeneity by *Symptomatic* for *Screening* and *Rewards and Screening*—remain significant, with slightly higher  $p$ -values.

Finally, Table A.X reports an even simpler pre-registered analysis that considers the effects of pooled rewards and screening arms, as opposed to the saturated specification. We interpret these

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<sup>15</sup>Recall that the *Screening* treatment specifically encourages those with moderate and severe symptoms to seek care.

<sup>16</sup>Similarly, Figure A.VI replicates Figure 3a, distinguishing between participants with mild vs. moderate/severe symptoms of depression/anxiety, and shows that these effects are especially driven by increases in engagement among students with moderate/severe symptoms.

pooled treatment effects as being conditional on the assignment of other treatment arms in the experiment (Muralidharan et al., 2025). The main takeaways are that the *Rewards* treatments significantly increase average take-up while the *Screening* treatment does not. Turning to heterogeneity of pooled treatment effects, the pooled *Screening* treatment shows a marked targeting effect by having a significantly larger effect on symptomatic students (Tables A.XI and A.XII).

## 4 Conclusion

Psychotherapy is an effective treatment for depression/anxiety, but take-up remains low. For this reason, it is a policy priority in many parts of the world to increase engagement with mental health services (Patel and Prince, 2010). In light of the scarcity of supply of mental health services, these policies face the challenge of increasing take-up while prioritizing need.

Studying this challenge in a sample of college students in Chennai, we find three main results. First, a small financial incentive substantially increased engagement with mental health services, including a fourfold increase in the likelihood of scheduling a therapy appointment. Second, providing information based on a simple screening tool improves the targeting of treatment without increasing average take-up. Third, combining screening information with incentives can both increase take-up and improve the targeting of mental health resources towards students with the greatest need. All three interventions are inexpensive—especially compared to the cost of mental health disorders—and easy to scale.

Our study is best positioned to inform the debate on how to close treatment gaps among college students in India. Nonetheless, given there are substantial treatment gaps in other settings, a natural question is how the results compare in other samples, including in other low- and high-income countries. Might our interventions also be effective in non-student populations? Finally, do the increases in take-up induced by incentives and screening lead to sustained engagement with therapy and ultimate improvements in mental health?

## References

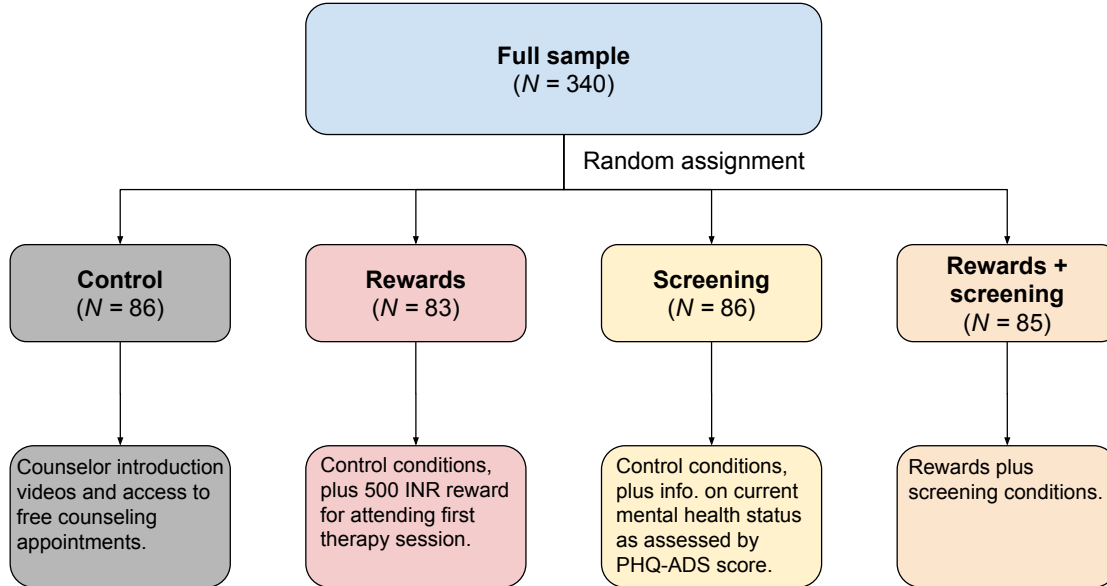
- Alatas, Vivi, Abhijit Banerjee, Rema Hanna, Benjamin A Olken, and Julia Tobias (2012), “Targeting the poor: evidence from a field experiment in indonesia.” *American Economic Review*, 102, 1206–1240.
- Alatas, Vivi, Ririn Purnamasari, Matthew Wai-Poi, Abhijit Banerjee, Benjamin A Olken, and Rema Hanna (2016), “Self-targeting: Evidence from a field experiment in indonesia.” *Journal of Political Economy*, 124, 371–427.
- Alonso, Jordi, Zhaorui Liu, Sara Evans-Lacko, Ekaterina Sadikova, Nancy Sampson, Somnath Chatterji, Jibril Abdulmalik, Sergio Aguilar-Gaxiola, Ali Al-Hamzawi, Laura H Andrade, et al. (2018), “Treatment gap for anxiety disorders is global: Results of the world mental health surveys in 21 countries.” *Depression and anxiety*, 35, 195–208.
- American Psychiatric Association (2013), *Diagnostic and Statistical Manual of Mental Disorders (5th ed.)*. APA.
- Anderson, Michael L (2008), “Multiple inference and gender differences in the effects of early intervention: A reevaluation of the abecedarian, perry preschool, and early training projects.” *Journal of the American statistical Association*, 103, 1481–1495.
- Angelucci, Manuela and Dan Bennett (2024), “Depression, pharmacotherapy, and the demand for a preventive health product.” *Working paper*.
- Arun, Praveen, Parthasarathy Ramamurthy, and Pradeep Thilakan (2022), “Indian medical students with depression, anxiety, and suicidal behavior: why do they not seek treatment?” *Indian journal of psychological medicine*, 44, 10–16.
- Auerbach, Randy P, Philippe Mortier, Ronny Bruffaerts, Jordi Alonso, Corina Benjet, Pim Cuijpers, Koen Demyttenaere, David D Ebert, Jennifer Greif Green, Penelope Hasking, et al. (2018), “Who world mental health surveys international college student project: Prevalence and distribution of mental disorders.” *Journal of abnormal psychology*, 127, 623.
- Baranov, Victoria, Sonia Bhalotra, Pietro Biroli, and Joanna Maselko (2020), “Maternal depression, women’s empowerment, and parental investment: Evidence from a randomized controlled trial.” *American economic review*, 110, 824–859.
- Batterham, Philip J, Alison L Calear, Matthew Sunderland, Natacha Carragher, and Jacqueline L Brewer (2016), “Online screening and feedback to increase help-seeking for mental health problems: population-based randomised controlled trial.” *BJPsych Open*, 2, 67–73.
- Bettinger, Eric, Nina Cunha, Guilherme Lichand, and Ricardo Madeira (2024), “When the effects of informational interventions are driven by salience—evidence from school parents in brazil.” *Working Paper*.
- Bhat, Bhargav, Jonathan De Quidt, Johannes Haushofer, Vikram H Patel, Gautam Rao, Frank Schilbach, and Pierre-Luc P Vautrey (2022), “The long-run effects of psychotherapy on depression, beliefs, and economic outcomes.” Technical report, National Bureau of Economic Research.
- Bower, Peter, Evangelos Kontopantelis, Alex Sutton, Tony Kendrick, David A Richards, Simon Gilbody, Sarah Knowles, Pim Cuijpers, Gerhard Andersson, Helen Christensen, et al. (2013),

- “Influence of initial severity of depression on effectiveness of low intensity interventions: meta-analysis of individual patient data.” *Bmj*, 346.
- Cronin, Christopher J, Matthew P Forsstrom, and Nicholas W Papageorge (2024), “What good are treatment effects without treatment? mental health and the reluctance to use talk therapy.” *Review of Economic Studies*, rdae061.
- Cuijpers, Pim, Ioana A Cristea, Eirini Karyotaki, Mirjam Reijnders, and Marcus JH Huibers (2016), “How effective are cognitive behavior therapies for major depression and anxiety disorders? a meta-analytic update of the evidence.” *World psychiatry*, 15, 245–258.
- Das, Rajasee and Sangeeta Das Bhattacharya (2015), “College psychotherapy at an indian technical education university’s student counseling center.” *Journal of College Student Psychotherapy*, 29, 90–93.
- Duffy, Mary E, Jean M Twenge, and Thomas E Joiner (2019), “Trends in mood and anxiety symptoms and suicide-related outcomes among us undergraduates, 2007–2018: Evidence from two national surveys.” *Journal of Adolescent Health*, 65, 590–598.
- Einav, Liran and Amy Finkelstein (2011), “Selection in insurance markets: Theory and empirics in pictures.” *Journal of Economic perspectives*, 25, 115–138.
- Finkelstein, Amy and Matthew J Notowidigdo (2019), “Take-up and targeting: Experimental evidence from snap.” *The Quarterly Journal of Economics*, 134, 1505–1556.
- Friedrich, Mary Jane (2017), “Depression is the leading cause of disability around the world.” *Jama*, 317, 1517–1517.
- Gururaj, G., M. Varghese, V. Benegal, G. N. Rao, K. Pathak, L. K. Singh, R. Y. Mehta, D. Ram, T. M. Shibukumar, A. Kokane, R. K. Lenin Singh, B. S. Chavan, P. Sharma, C. Ramasubramanian, P. K. Dalal, P. K. Saha, S. P. Deuri, A. K. Giri, A. B. Kavishvar, V. K. Sinha, J. Thavody, R. Chatterji, B. S. Akoijam, S. Das, A. Kashyap, V. S. Ragavan, S. K. Singh, R. Misra, and NMHS Collaborators Group (2016), “National Mental Health Survey of India, 2015-16: Mental Health Systems.” Technical report, National Institute of Mental Health and Neuro Sciences. NIMHANS Publication No. 130.
- Ibrahimi, Ereza, Sophie Fawson, Lyndsay D Hughes, and Joseph Chilcot (2024), “Psychometric validation of the 15-item patient health questionnaire–anxiety and depression scale (phq-ads) to assess psychological distress in breast cancer survivors.” *General Hospital Psychiatry*, 88, 68–74.
- Kohlmann, Sebastian, Franziska Sikorski, Hans-Helmut König, Marion Schütt, Antonia Zapf, and Bernd Löwe (2024), “The efficacy of automated feedback after internet-based depression screening (discover): an observer-masked, three-armed, randomised controlled trial in germany.” *The Lancet Digital Health*, 6, e446–e457.
- Kroenke, Kurt, Fitsum Baye, and Spencer G Lourens (2019), “Comparative validity and responsiveness of phq-ads and other composite anxiety-depression measures.” *Journal of affective disorders*, 246, 437–443.
- Kroenke, Kurt, Jingwei Wu, Zhangsheng Yu, Matthew J Bair, Jacob Kean, Timothy Stump, and Patrick O Monahan (2016), “Patient health questionnaire anxiety and depression scale: initial validation in three clinical trials.” *Psychosomatic medicine*, 78, 716–727.

- Kumar, Ganesh S, Animesh Jain, and Supriya Hegde (2012), “Prevalence of depression and its associated factors using Beck Depression Inventory among students of a medical college in Karnataka.” *Indian journal of Psychiatry*, 54, 223–226.
- Li, Wenzhen, Zhiya Zhao, Dajie Chen, Ying Peng, and Zuxun Lu (2022), “Prevalence and associated factors of depression and anxiety symptoms among college students: a systematic review and meta-analysis.” *Journal of child psychology and psychiatry*, 63, 1222–1230.
- Lipson, Sarah Ketchen, Sasha Zhou, Sara Abelson, Justin Heinze, Matthew Jirsa, Jasmine Morigney, Akilah Patterson, Meghna Singh, and Daniel Eisenberg (2022), “Trends in college student mental health and help-seeking by race/ethnicity: Findings from the national healthy minds study, 2013–2021.” *Journal of affective disorders*, 306, 138–147.
- Lund, Crick, Kate Orkin, Marc Witte, John H Walker, Thandi Davies, Johannes Haushofer, Sarah Murray, Judy Bass, Laura Murray, Wietse Tol, et al. (2024), “The effects of mental health interventions on labor market outcomes in low-and middle-income countries.” Technical report, National Bureau of Economic Research.
- Muralidharan, Karthik, Mauricio Romero, and Kaspar Wüthrich (2025), “Factorial designs, model selection, and (incorrect) inference in randomized experiments.” *Review of Economics and Statistics*, 1–16.
- Naik, Canishk (2025), “Mental health and the targeting of social assistance.” Technical report, Working Paper.
- National Collaborating Centre for Mental Health (2010), “Depression: the treatment and management of depression in adults (updated edition).” British Psychological Society.
- Oster, Emily (2020), “Health recommendations and selection in health behaviors.” *American Economic Review: Insights*, 2, 143–160.
- Patel, Vikram and Martin Prince (2010), “Global mental health: a new global health field comes of age.” *Jama*, 303, 1976–1977.
- Pizzagalli, Diego A (2014), “Depression, stress, and anhedonia: toward a synthesis and integrated model.” *Annual review of clinical psychology*, 10, 393–423.
- Post, Edward P, Mario Cruz, and Jeffrey Harman (2006), “Incentive payments for attendance at appointments for depression among low-income African Americans.” *Psychiatric Services*, 57, 414–416.
- Rafkin, Charlie, Adam Solomon, and Evan Soltas (2023), “Self-targeting in us transfer programs.” *Available at SSRN 4495537*.
- Ridley, Matthew, Gautam Rao, Frank Schilbach, and Vikram Patel (2020), “Poverty, depression, and anxiety: Causal evidence and mechanisms.” *Science*, 370, eaay0214.
- Ross, Lee and Richard E Nisbett (2011), *The person and the situation: Perspectives of social psychology*. Pinter & Martin Publishers.
- Roth, Christopher, Peter Schwardmann, and Egon Tripodi (2024), “Misperceived effectiveness and the demand for psychotherapy.” *Journal of Public Economics*, 240, 105254.

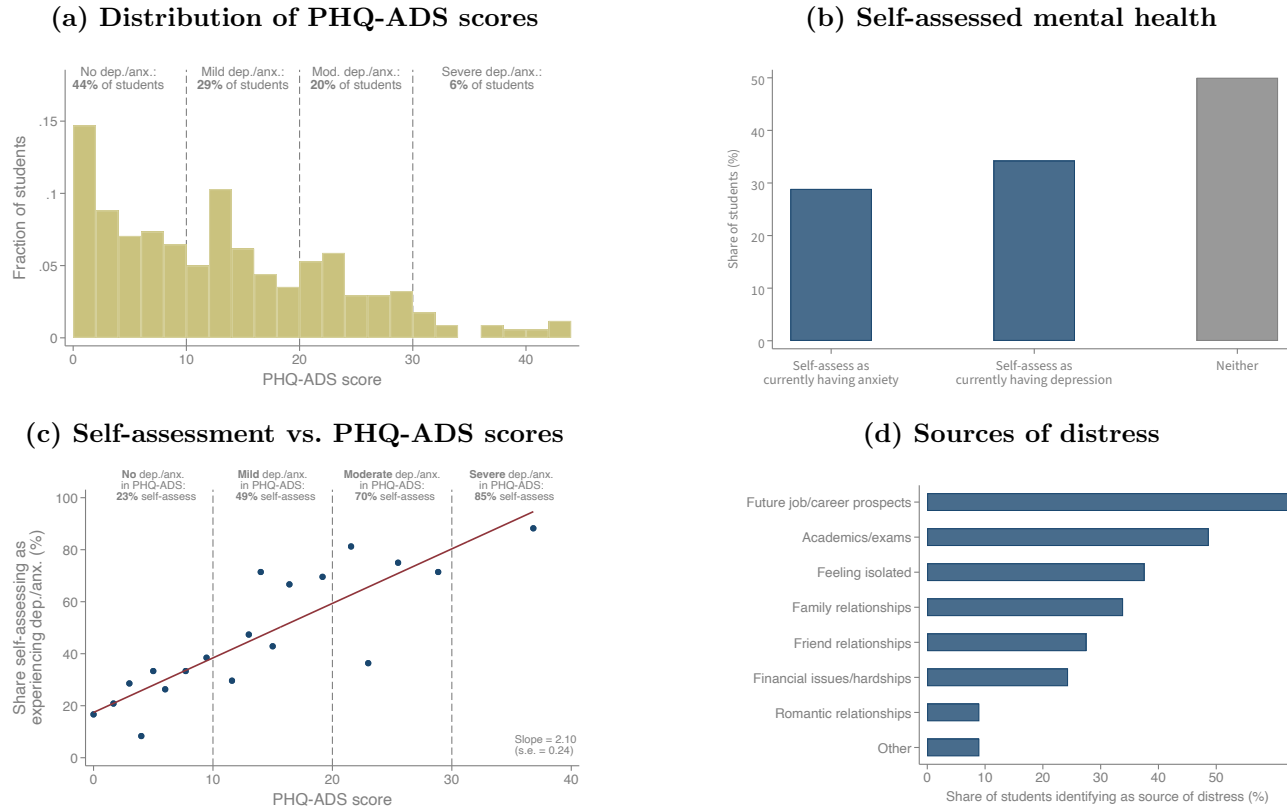
- Salamone, John D., Sarah E. Yohn, Laura López-Cruz, Natalia San Miguel, and Mercè Correa (2016), “Activational and effort-related aspects of motivation: Neural mechanisms and implications for psychopathology.” *Brain Research*, 1640, 23–35.
- Shah, Tanvi Deepak and Titiksha Pol (2020), “Prevalence of depression and anxiety in college students.” *Journal of Mental Health and Human Behaviour*, 25, 10–13.
- Sidana, Surbhi, Jugal Kishore, Vidya Ghosh, Divyansh Gulati, RC Jiloha, and Tanu Anand (2012), “Prevalence of depression in students of a medical college in new delhi: a cross-sectional study.” *The Australasian medical journal*, 5, 247.
- Singh, Manjot, Naveen Krishan Goel, Manoj Kumar Sharma, and Ravleen Kaur Bakshi (2017), “Prevalence of depression, anxiety and stress among students of Punjab University, Chandigarh.” *National Journal of Community Medicine*, 8, 666–671.
- Smith, Emma (2025), “Stigma and social cover: A mental health care experiment in refugee networks.” Working paper.
- Thornicroft, Graham, Somnath Chatterji, Sara Evans-Lacko, Michael Gruber, Nancy Sampson, Sergio Aguilar-Gaxiola, Ali Al-Hamzawi, Jordi Alonso, Laura Andrade, Guilherme Borges, et al. (2017), “Undertreatment of people with major depressive disorder in 21 countries.” *The British Journal of Psychiatry*, 210, 119–124.
- Yadav, Rashmi, Shubhanshu Gupta, and Anil K Malhotra (2016), “A cross sectional study on depression, anxiety and their associated factors among medical students in Jhansi, Uttar Pradesh, India.” *Int J Community Med Public Health*, 3, 1209–14.

**Figure 1: Experimental design**



*Notes:* This figure presents the experimental design. For ethical reasons, we also provide screening results to students who are randomized to the control or rewards groups but screen for severe depression or anxiety (see Section 2.3).

**Figure 2: Mental health status at baseline**

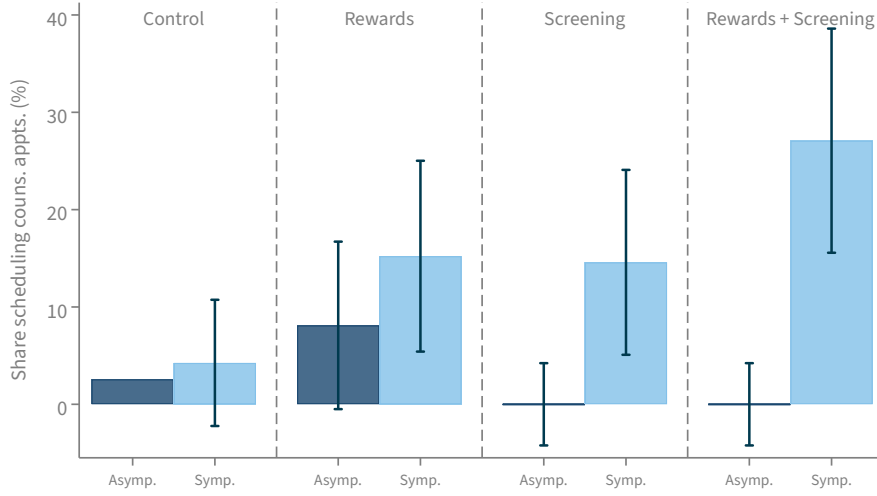


*Notes:* This figure describes participants' mental health at baseline.

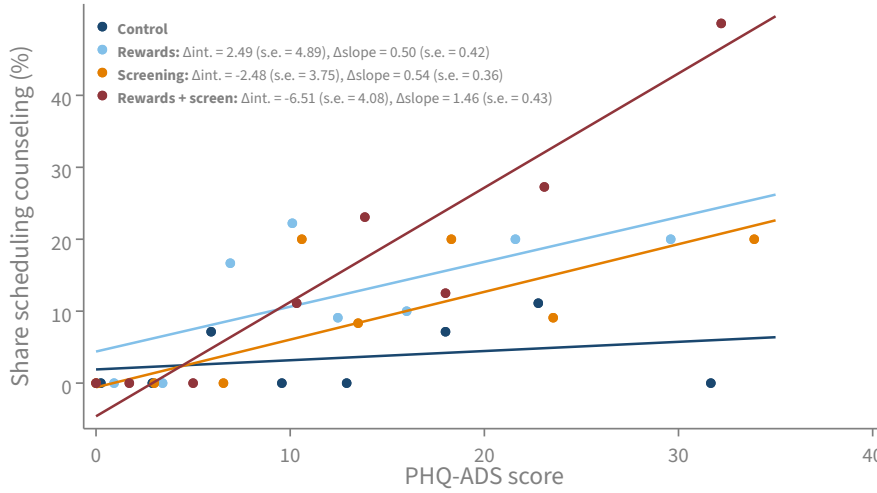
- Panel (a) presents a histogram of PHQ-ADS scores at baseline. The text indicates the share of students screening for no depression or anxiety (PHQ-ADS score  $\leq 9$ ), mild depression or anxiety ( $10 \leq$  PHQ-ADS score  $\leq 19$ ), moderate depression or anxiety ( $20 \leq$  PHQ-ADS score  $\leq 29$ ), and severe depression or anxiety (PHQ-ADS score  $\geq 30$ ).
- Panel (b) presents a bar chart of students' self-assessment of their current mental health. Note that bars do not add up to 100% because students can be in multiple navy bars.
- Panel (c) shows a binned scatterplot of the likelihood that a student self-assesses as experiencing depression or anxiety *vs.* the student's PHQ-ADS score. Ventiles of the data are presented as navy dots; the red line is a line of best fit (estimated on the microdata). The bottom right of the figure displays the point estimate and standard error on  $\beta$  in an OLS regression of the form  $\text{Self-assess}_i = \alpha + \beta \text{PHQ-ADS}_i + \epsilon_i$ .
- Panel (d) presents a bar chart of the sources of distress among students, restricting attention to students who screen for depression or anxiety (PHQ-ADS score of at least 10). Note that bars do not add up to 100% because students can report multiple sources.

**Figure 3: Effects on scheduling counseling, by baseline mental health**

**(a) Effects by symptomatic status**



**(b) Effects by PHQ-ADS score**



*Notes:* This figure shows the likelihood of scheduling counseling by baseline mental health status in each treatment arm. In panel (a), navy bars show the likelihood of scheduling counseling for asymptomatic individuals ( $\text{PHQ-ADS} \leq 9$ ) in each treatment arm, and light blue bars for symptomatic individuals ( $\text{PHQ-ADS} \geq 10$ ). Black lines show 90% confidence intervals relative to the control asymptomatic mean. We construct these confidence intervals using a regression corresponding to specification (2), excluding controls. For instance, the confidence interval around “rewards, symptomatic” bar corresponds to the control mean among symptomatic individuals, plus the 90% confidence interval for  $\gamma_0 + \gamma_1$  in (2).

Panel (b) presents a binned scatterplot. Each navy dot represents a decile of the control group. The navy line is a line of best fit (estimated on the microdata). The light blue, orange, and maroon series replicate the navy series for the rewards, screening, and rewards plus screening groups, respectively. The text reports regressions of (3). The navy text reports estimates of  $\alpha_0$  (as the intercept term) and  $\alpha_1$  (the slope term), with corresponding standard errors. The orange text reports estimates of  $\beta_0$  and  $\beta_1$ . The light blue text reports estimates of  $\gamma_0$  and  $\gamma_1$ . The maroon text reports estimates of  $\delta_0$  and  $\delta_1$ .

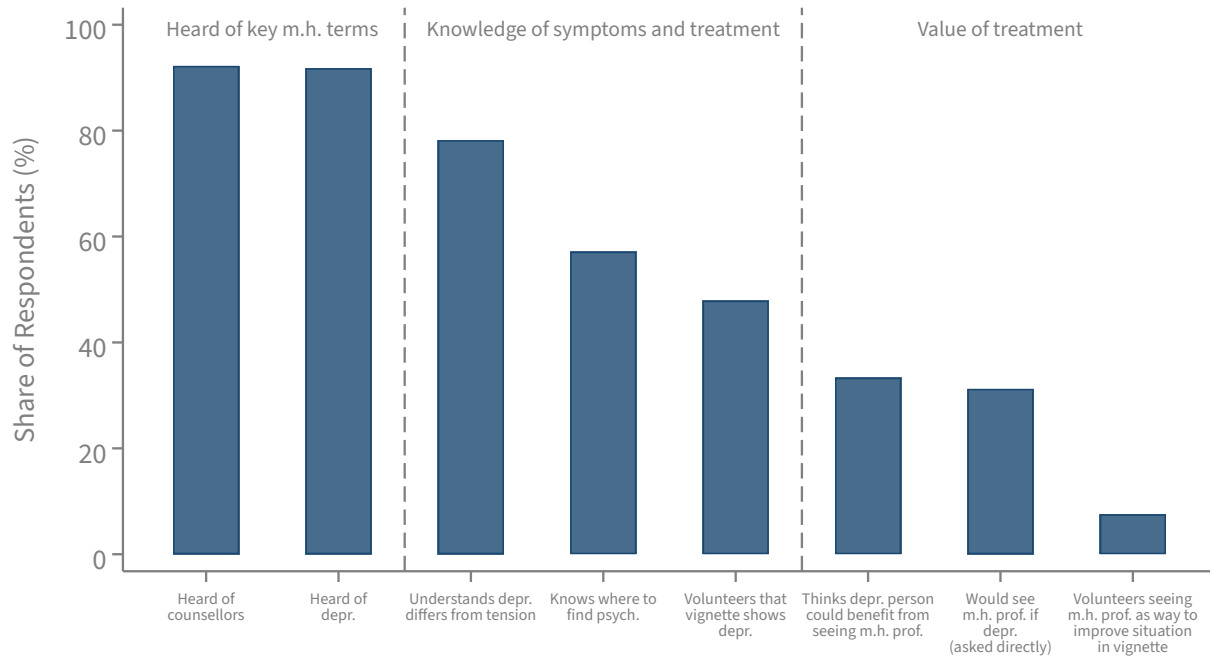
**Table 1: Effects of saturated treatment assignment on counseling appointments**

	Primary		Secondary	Exploratory
	Initiated contact with counselors (1)	Scheduled appointment (2)	Attended appointment (3)	Scheduled follow-up appointment (4)
<b>Panel A: Average effects</b>				
Rewards	0.15** (0.07)	0.09* (0.05)	0.07* (0.04)	0.03 (0.02)
Screening	0.03 (0.06)	0.02 (0.04)	-0.01 (0.04)	0.00 (0.02)
Rewards & Screening	0.09 (0.06)	0.11*** (0.04)	0.08** (0.04)	0.01 (0.02)
Controls	X	X	X	X
Control mean	0.19	0.03	0.03	0.01
<b>Panel B: Heterogeneous effects</b>				
Rewards	0.23*** (0.09)	0.06 (0.05)	0.05 (0.05)	-0.03 (0.03)
Rewards x Symptomatic	-0.14 (0.13)	0.06 (0.09)	0.04 (0.08)	0.10* (0.06)
Screening	0.05 (0.07)	-0.05 (0.04)	-0.05 (0.04)	-0.03 (0.03)
Screening x Symptomatic	-0.04 (0.12)	0.13* (0.07)	0.07 (0.06)	0.05 (0.04)
Rewards & Screening	0.03 (0.06)	-0.02 (0.03)	-0.02 (0.03)	-0.03 (0.03)
Rewards & Screening x Symptomatic	0.11 (0.12)	0.23*** (0.08)	0.18** (0.08)	0.08* (0.04)
Controls	X	X	X	X
Control mean, Asymptomatic	0.05	0.03	0.03	0.03
Control mean, Symptomatic	0.30	0.04	0.04	0.00
Observations	340	340	340	340

*Notes:* This table shows the impacts of the different treatments on students' engagement with mental health services. Panel A displays estimates of equation (1), while Panel B shows estimates of equation (2). The table also displays the baseline levels of the outcome variable in the control group, in total ("Control Mean"), and among individuals with ("Control Mean, Symptomatic") and without symptoms of depression and anxiety ("Control Mean, Asymptomatic"). \*, \*\*, and \*\*\* indicate significance at the 10%, 5%, and 1% levels, respectively.

## A Appendix Figures

Appendix Figure A.I: Knowledge of and engagement with mental health services



*Notes:* This figure summarizes responses to scoping surveys collected at another college in Chennai before our main experiment ( $N = 254$ ).

- The first two bars show the share of students who have heard of mental health terms: counselors (in the first bar) and depression (in the second bar).
- The third, fourth, and fifth bars summarize students' knowledge of mental health symptoms and treatment. The third bar shows the share of students who agree with the statement that depression is different from tension or stress. The fourth bar shows the share of students who indicate that they would know where to find a psychiatrist in Chennai. The fifth bar presents the share of students who volunteer depression as an accurate description of a vignette involving a student who has been feeling unusually sad, has had difficulty sleeping, has lost weight, and has been finding it difficult to continue with his daily activities.
- The sixth, seventh, and eighth bars summarize students' beliefs about the value of treatment. The sixth bar shows the share of students who agree with the statement that a person with depression could benefit from seeing a mental health professional. The seventh bar shows the share of students who agree with the statement that they would see a mental health professional if depressed. The eighth bar shows the share of students who volunteer seeing a mental health professional when asked what the individual in the vignette could do to improve their situation.

## Appendix Figure A.II: Examples of information shown to participants

### (a) Information in rewards treatment

You have been randomly chosen to receive a reward of ₹500 if you attend your first session with a study-affiliated counselor.

நீங்கள் ஒரு படிப்பு சார்ந்த ஆலோசகருடன் முதல் session-ல் கலந்து கொண்டால், ரூபாய்.500 வெகுமதியைப் பெறுவதற்கு தோராயமாக தேர்வு செய்யப்பட்டுள்ளீர்கள்.



### (b) Example in screening treatment

You have been randomly chosen to receive information/feedback on your responses to the mental health screening questions.



You may be experiencing MODERATE psychological distress.

நீங்கள் மிதமான மன உளைச்சலை அனுபவித்துக்கொண்டிருக்கலாம்.

We recommend you to try therapy with one of the study-affiliated counselors.

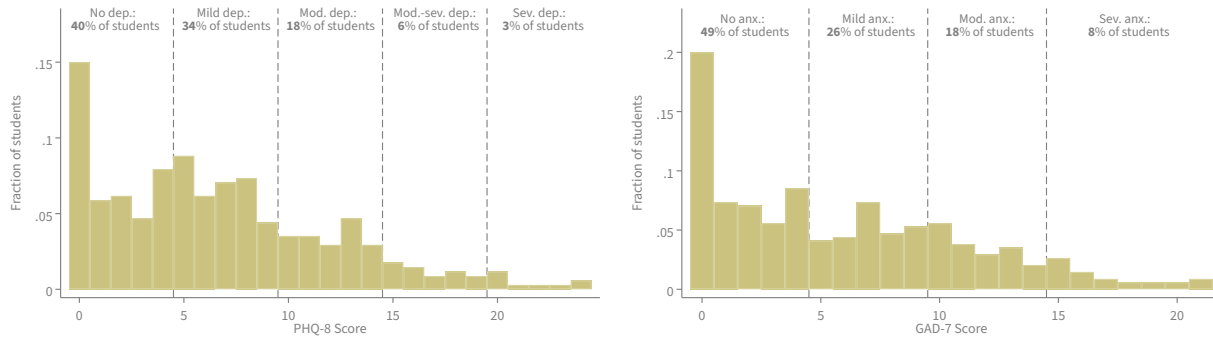
Once you complete your first counseling session, you can collect your Rs 500 reward in cash from a research team member. Your counselor will provide the collection details.

*Notes:* This figure displays an example of information shown to participants as part of the survey.

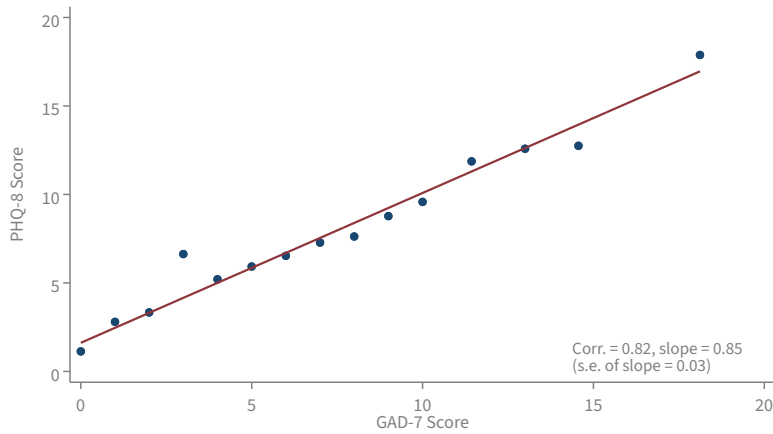
- Panel (a) shows the screen informing participants in the rewards and screening and rewards treatment arms that they were randomly selected to receive payment for attending their first counseling session.
- Panel (b) shows the screen providing information to participants in the screening and rewards and screening treatment arms (“screening arms”) informing them of their level of psychological distress, as indicated by their PHQ-ADS scores. The panel shows an example of the screen received by participants in the screening arms with PHQ-ADS scores between 20 and 29 (inclusive). Participants with PHQ-ADS scores of 9 or below saw a corresponding screen stating that “You are not experiencing any psychological distress,” with no recommendation to try therapy. Participants with PHQ-ADS scores of between 10 and 19 saw a corresponding screen stating that “You may be experiencing mild psychological distress,” with no recommendation to try therapy. Participants with PHQ-ADS scores of 30 or above received a corresponding screen stating that “You may be experiencing severe psychological distress” and text saying, “We strongly recommend you try therapy with one of the study-affiliated counselors.”

## Appendix Figure A.III: PHQ and GAD scores at baseline

(a) Distribution of PHQ-8 (Depression) Scores    (b) Distribution of GAD-7 (Anxiety) Scores



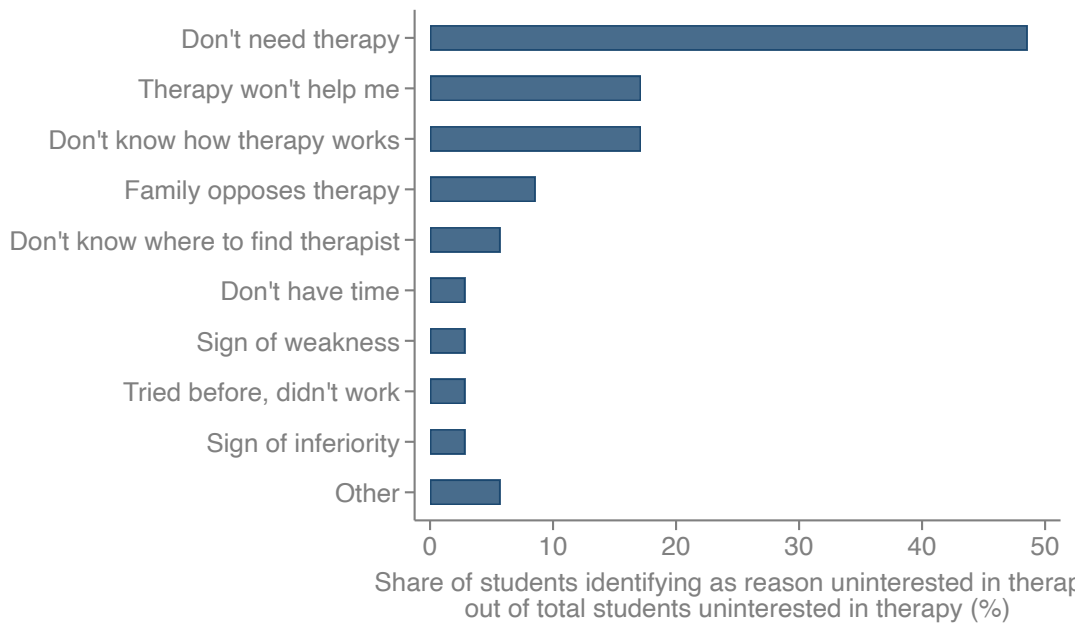
(c) PHQ-8 (Depression) *vs.* GAD-7 (Anxiety) Scores



*Notes:* This figure shows the distribution of depression and anxiety scores, as well as their correlation, at baseline.

- Panel (a) presents a histogram of PHQ-8 scores at baseline. The text indicates the share of students screening for no depression (PHQ-8 score of 4 or below), mild depression (PHQ-8 score between 5 and 9), moderate depression (PHQ-8 score between 10 and 14), moderately-severe depression (PHQ-8 score between 15 and 19), and severe depression (PHQ-8 score of 20 or above).
- Panel (b) presents a histogram of GAD-7 scores at baseline. The text indicates the share of students screening for no anxiety (GAD-7 score of 4 or below), mild anxiety (GAD-7 score between 5 and 9), moderate anxiety (GAD-7 score between 10 and 14), and severe anxiety (GAD-7 score of 15 or above).
- Panel (c) shows a binned scatterplot of a student's PHQ-8 score *vs.* her GAD-7 score. Ventiles of the data are presented as navy dots; the red line is a line of best fit (estimated on the microdata). The text in the bottom right of the figure displays the correlation between the two scores. The text also displays the point estimate and standard error on  $\beta$  in the OLS regression  $\text{PHQ-8}_i = \alpha + \beta \text{GAD-7}_i + \epsilon_i$ .

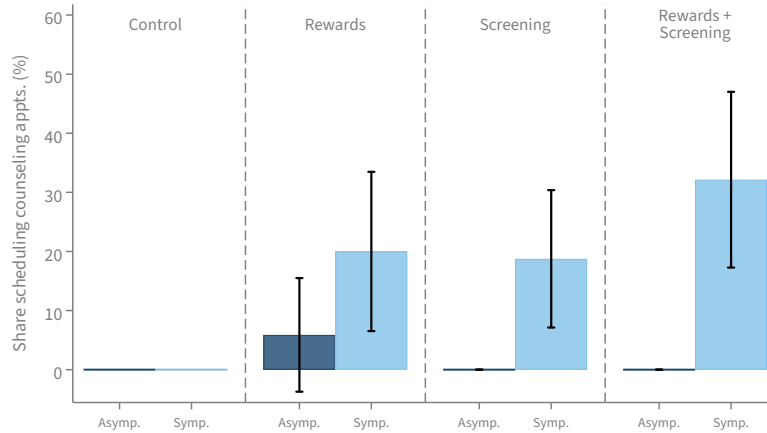
### Appendix Figure A.IV: Reasons not to take up therapy



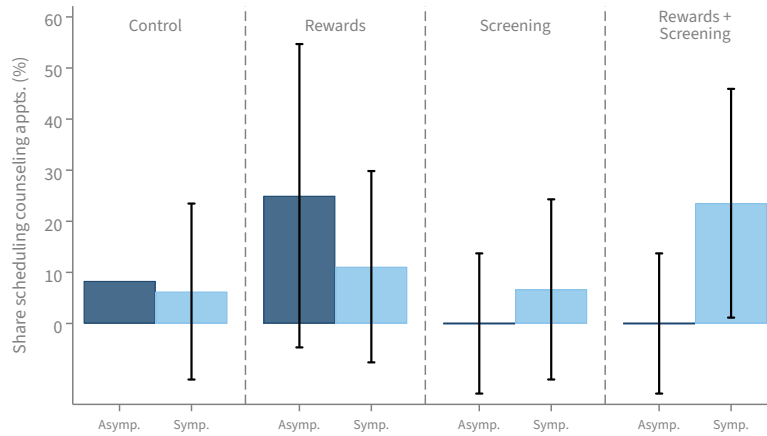
*Notes:* This figure presents descriptive statistics on mental health treatment perceptions, elicited after the therapy take-up decision. The figure shows participants' stated reasons for not taking up therapy, among individuals in the control group who screen for depression or anxiety (PHQ-ADS Score  $\geq 10$ ), but who choose not to initiate contact with counselors, either by messaging study counselors, or by requesting that they be contacted by study counselors (61% of the control group who screen positive do not initiate contact).

**Appendix Figure A.V: Effects on scheduling counseling by consistency of self-assessed mental health with screening tool**

**(a) Self-assessment consistent with screening**

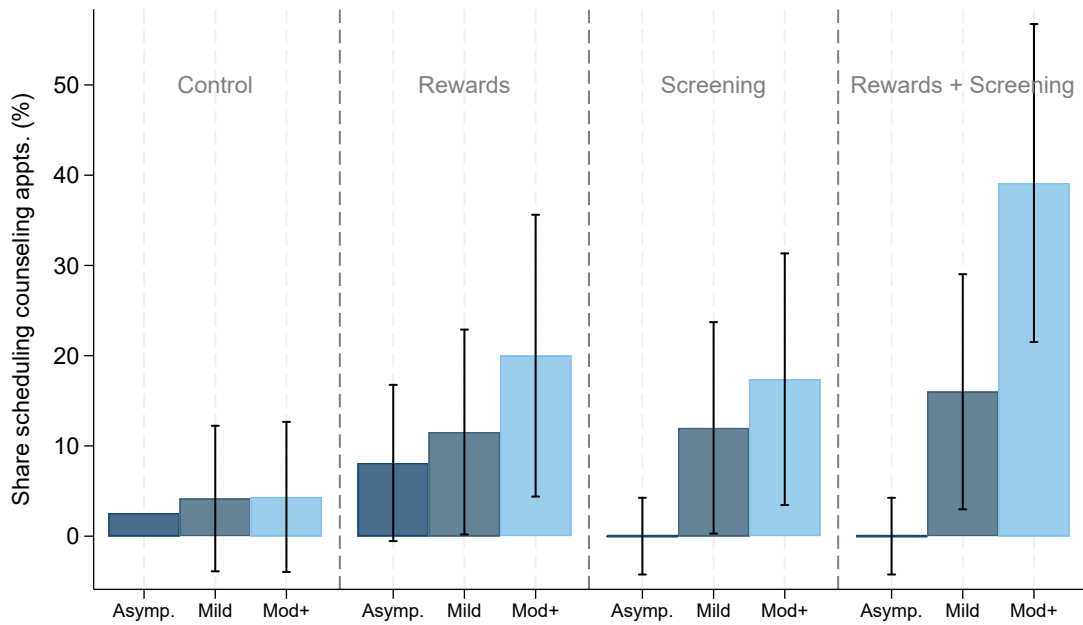


**(b) Self-assessment inconsistent with screening**



*Notes:* This figure shows the likelihood of scheduling counseling by baseline mental health status (per the PHQ-ADS screening tool) in each treatment arm. Panel (a) shows those whose self-assessed mental health status is consistent with the PHQ-ADS screening tool, and panel (b) those whose self-assessed mental health status is inconsistent with the PHQ-ADS screening tool. In panel (a), navy bars show the likelihood of scheduling counseling for asymptomatic individuals ( $\text{PHQ-ADS} \leq 9$ ) in each treatment arm, and light blue bars for symptomatic individuals ( $\text{PHQ-ADS} \geq 10$ ). We exclude 42 respondents who refuse to respond when asked for their self-assessment. Black bars show 90% confidence intervals relative to the control asymptomatic mean, computed using regression specification (2). For instance, the 90% confidence interval on the “screening, symptomatic” bar corresponds to the point estimate for  $\alpha_0$ , plus the 90% confidence interval for the value of  $\alpha_1 + \beta_0 + \beta_1$ .

**Appendix Figure A.VI: Effects of treatment assignment on likelihood of scheduling counseling, by none, mild, and moderate/severe baseline mental health**



*Notes:* This figure shows the likelihood of scheduling counseling by baseline mental health status in each treatment arm. The navy bars show the likelihood of scheduling counseling for asymptomatic individuals ( $PHQ-ADS \leq 9$ ) in each treatment arm, the blue bars for mildly symptomatic ( $PHQ-ADS \geq 10$  and  $PHQ-ADS < 20$ ), and the light blue bars for moderate and severely symptomatic ( $PHQ-ADS \geq 20$ ). Black bars show 90% confidence intervals relative to the control asymptomatic mean.

## B Appendix Tables

Appendix Table A.I: Balance on baseline characteristics

	Control Mean (1)	Coef. on Screening (2)	Coef. on Rewards (3)	Coef. on Rewards & Screening (4)
<b>A. Demographics</b>				
Age	19.65	-0.21* (0.12)	-0.01 (0.12)	-0.11 (0.12)
Has Personal Disposable Income	0.45	0.10 (0.08)	0.12 (0.08)	0.16** (0.08)
Is Preparing for Competitive Exam	0.17	-0.03 (0.06)	0.05 (0.06)	0.08 (0.06)
<b>B. Mental Health (Self Perception)</b>				
Good Mental Health (Current)	0.72	-0.02 (0.07)	-0.01 (0.07)	-0.02 (0.07)
Good Mental Health (Past 2 Weeks)	0.23	-0.01 (0.06)	0.08 (0.07)	0.06 (0.07)
Good Mental Health (Past 6 Months)	0.29	0.06 (0.07)	0.03 (0.07)	0.09 (0.07)
Currently Has Depression or Anxiety (Self Reported)	0.48	-0.03 (0.08)	-0.08 (0.08)	-0.04 (0.08)
Has Had Depression or Anxiety in the Past (Self Reported)	0.65	-0.03 (0.07)	-0.13* (0.08)	-0.10 (0.07)
<b>C. Mental Health (Treatment)</b>				
Currently Seeing Psychiatrist or Counselor	0.03	0.02 (0.03)	0.01 (0.03)	0.01 (0.03)
Has Previously Seen Psychiatrist or Counselor	0.08	0.01 (0.04)	-0.01 (0.04)	0.01 (0.04)
Family Support for Mental Health Treatment	0.28	0.03 (0.07)	0.01 (0.07)	0.04 (0.07)
<b>D. Mental Health (PHQ-ADS Scores)</b>				
PHQ-ADS Score	12.40	0.76 (1.59)	-0.11 (1.47)	0.13 (1.58)
Symptomatic: PHQ-ADS Score $\geq 10$	0.55	0.01 (0.08)	0.01 (0.08)	0.02 (0.08)
Mildly Symptomatic: PHQ-ADS Score 10 – 19	0.28	0.01 (0.07)	0.03 (0.07)	0.02 (0.07)
Moderately Symptomatic: PHQ-ADS Score 20 – 29	0.22	-0.02 (0.06)	-0.03 (0.06)	-0.02 (0.06)
Severely Symptomatic: PHQ-ADS Score $\geq 30$	0.05	0.02 (0.04)	0.00 (0.03)	0.02 (0.04)

*Notes:* This table displays levels of baseline variables in different treatment arms. Each row presents results for a baseline variable from an OLS regression of the form

$$B_i = \alpha + \beta \text{Screening}_i + \gamma \text{Rewards}_i + \delta \text{Screening and rewards}_i,$$

where  $B_i$  is the baseline variable. Column (1) shows the point estimate for  $\alpha$ ; columns (2), (3) and (4) show the point estimates and corresponding standard errors for  $\beta$ ,  $\gamma$ , and  $\delta$ , respectively. Panel A presents results for demographic baseline variables: participants' age; an indicator variable for whether the participant has personal income; and an indicator variable for whether the participant is preparing for a competitive exam or standardized test. Panel B presents results for self-perceived mental health: indicator variables for rating one's well-being currently, over the past two weeks, or over the past six months at least four out of five; and indicator variables for self-identifying as currently or previously having depression or anxiety. Panel C presents results for engagement with mental health treatments: indicator variables for currently or previously seeing a psychologist or counselor; and an indicator variable for family supporting engagement with mental health treatment. Panel D presents results for PHQ-ADS scores: a continuous variable for PHQ-ADS score; and indicator variables for the PHQ-ADS score indicating that a student is symptomatic, mildly symptomatic, moderately symptomatic, or severely symptomatic. \*, \*\*, and \*\*\* indicate

significance at the 10%, 5%, and 1% levels, respectively.

**Appendix Table A.II: Effects of saturated treatment assignment on secondary outcomes**

	Secondary				
	Interested in app (1)	Interested in lit. (2)	Believes therapy is effective (3)	Would consider therapy (4)	Counselor as next step (5)
<b>Panel A: Average effects</b>					
Rewards	0.08 (0.08)	0.06 (0.07)	-0.02 (0.07)	0.11 (0.07)	0.02 (0.05)
Screening	-0.00 (0.08)	-0.04 (0.07)	-0.12 (0.08)	0.00 (0.07)	0.01 (0.05)
Rewards & Screening	-0.05 (0.07)	0.01 (0.07)	-0.11 (0.08)	0.05 (0.07)	-0.02 (0.05)
Controls	X	X	X	X	X
Control mean	0.44	0.43	0.64	0.31	0.10
<b>Panel B: Heterogeneous effects</b>					
Rewards	0.07 (0.11)	0.07 (0.11)	-0.01 (0.11)	0.23** (0.10)	0.01 (0.06)
Rewards x Symptomatic	0.03 (0.16)	-0.03 (0.15)	-0.04 (0.15)	-0.22 (0.15)	0.03 (0.10)
Screening	-0.08 (0.11)	-0.07 (0.11)	-0.13 (0.12)	0.11 (0.09)	-0.02 (0.07)
Screening x Symptomatic	0.14 (0.15)	0.06 (0.15)	0.03 (0.15)	-0.19 (0.13)	0.05 (0.10)
Rewards & Screening	-0.04 (0.10)	-0.01 (0.10)	-0.07 (0.12)	0.03 (0.09)	-0.07 (0.06)
Rewards & Screening x Symptomatic	-0.02 (0.15)	0.04 (0.15)	-0.08 (0.15)	0.03 (0.14)	0.08 (0.09)
Controls	X	X	X	X	X
Control mean, Asymptomatic	0.33	0.31	0.59	0.13	0.08
Control mean, Symptomatic	0.53	0.53	0.68	0.47	0.13
Observations	340	340	340	340	340

*Notes:* This table replicates Table 1, using various secondary outcomes as the outcome variable. In column (1), the outcome variable is an indicator for a student clicking a link on, or downloading, a mental health app via the participant survey. In column (2), the outcome variable is an indicator for the student clicking a link to access literature on mental health. In column (3), the outcome is an indicator variable for the student indicating that therapy would be very or extremely helpful in improving the student’s well-being and quality of life. In column (4), the outcome is an indicator for the student indicating that they would consider visiting a therapist in the future if they needed to do so. In column (5), the outcome is an indicator for the student including seeing a counselor in a list of possible next steps to take care of their psychological well-being. \*, \*\*, and \*\*\* indicate significance at the 10%, 5%, and 1% levels, respectively.

**Appendix Table A.III: Effects of saturated treatment assignment on counseling appointments (continuous specification of PHQ-ADS scores)**

	Primary		Secondary	Exploratory
	Initiated contact with counselors (1)	Scheduled appointment (2)	Attended appointment (3)	Scheduled follow-up appointment (4)
PHQ-ADS	0.016*** (0.004)	-0.001 (0.003)	-0.001 (0.003)	-0.003 (0.002)
Rewards	0.241** (0.101)	0.027 (0.054)	0.014 (0.055)	-0.062* (0.035)
Rewards x PHQ-ADS	-0.007 (0.007)	0.005 (0.004)	0.005 (0.004)	0.007* (0.004)
Screening	0.154* (0.084)	-0.064 (0.049)	-0.052 (0.041)	-0.039 (0.026)
Screening x PHQ-ADS	-0.010* (0.006)	0.007* (0.004)	0.003 (0.003)	0.003 (0.002)
Rewards & Screening	0.123 (0.076)	-0.073* (0.044)	-0.035 (0.041)	-0.040 (0.029)
Rewards & Screening x PHQ-ADS	-0.002 (0.006)	0.015*** (0.004)	0.010** (0.004)	0.004 (0.003)
Controls	X	X	X	X
Observations	340	340	340	340

*Notes:* This table replicates Panel B of Table 1, interacting treatment assignment with continuous PHQ-ADS categories rather than the discrete categories of symptomatic *vs.* asymptomatic. In column (2), the *p*-value for equality of the rewards & screening × PHQ-ADS and rewards × PHQ-ADS coefficients is 0.045; the corresponding *p*-value comparing rewards & screening × PHQ-ADS and screening × PHQ-ADS is 0.113. \*, \*\*, and \*\*\* indicate significance at the 10%, 5%, and 1% levels, respectively.

**Appendix Table A.IV: Effects of saturated treatment assignment on secondary outcomes, by self-assessed mental health status**

	Primary		Secondary	Exploratory
	Initiated contact with counselors (1)	Scheduled appointment (2)	Attended appointment (3)	Scheduled follow-up appointment (4)
Rewards	0.16* (0.08)	0.02 (0.06)	0.01 (0.06)	0.00 (0.01)
Rewards x Self-Assessed	-0.01 (0.14)	0.15 (0.10)	0.13 (0.09)	0.06 (0.06)
Screening	0.09 (0.08)	-0.04 (0.05)	-0.05 (0.05)	-0.01 (0.01)
Screening x Self-Assessed	-0.13 (0.13)	0.14 (0.09)	0.07 (0.08)	0.03 (0.05)
Rewards & Screening	0.12 (0.08)	0.05 (0.05)	0.04 (0.05)	0.02 (0.03)
Rewards & Screening x Self-Assessed	-0.07 (0.13)	0.13 (0.09)	0.08 (0.09)	-0.02 (0.05)
Controls	X	X	X	X
Control mean, not self-assessed	0.11	0.04	0.04	0.00
Control mean, self-assessed	0.27	0.02	0.02	0.02
Observations	340	340	340	340

*Notes:* This table replicates Panel B of Table 1, examining heterogeneity among students who do *vs.* do not self-assess as currently having depression and/or anxiety. \*, \*\*, and \*\*\* indicate significance at the 10%, 5%, and 1% levels, respectively.

**Appendix Table A.V: Effects of saturated treatment assignment on counseling appointments (excluding severely symptomatic students)**

	Primary		Secondary	Exploratory
	Initiated contact with counselors (1)	Scheduled appointment (2)	Attended appointment (3)	Scheduled follow-up appointment (4)
<b>Panel A: Average effects</b>				
Rewards	0.19*** (0.07)	0.10** (0.05)	0.08* (0.04)	0.03 (0.02)
Screening	0.06 (0.06)	0.01 (0.04)	-0.02 (0.04)	-0.00 (0.02)
Rewards & Screening	0.11* (0.06)	0.07* (0.04)	0.06 (0.04)	-0.00 (0.02)
Controls	X	X	X	X
Control mean	0.16	0.04	0.04	0.01
<b>Panel B: Heterogeneous effects</b>				
Rewards	0.24*** (0.09)	0.06 (0.05)	0.06 (0.05)	-0.02 (0.02)
Rewards x Symptomatic	-0.09 (0.13)	0.07 (0.09)	0.04 (0.09)	0.11* (0.06)
Screening	0.07 (0.07)	-0.04 (0.04)	-0.04 (0.03)	-0.02 (0.03)
Screening x Symptomatic	-0.00 (0.12)	0.09 (0.07)	0.04 (0.06)	0.03 (0.04)
Rewards & Screening	0.03 (0.06)	-0.02 (0.03)	-0.02 (0.03)	-0.03 (0.02)
Rewards & Screening x Symptomatic	0.15 (0.12)	0.16** (0.08)	0.14* (0.08)	0.06 (0.04)
Controls	X	X	X	X
Control mean, Asymptomatic	0.05	0.03	0.03	0.03
Control mean, Symptomatic	0.26	0.05	0.05	0.00
Observations	320	320	320	320

*Notes:* This table replicates Table 1, excluding severely symptomatic students. \*, \*\*, and \*\*\* indicate significance at the 10%, 5%, and 1% levels, respectively.

**Appendix Table A.VI: Effects of saturated treatment assignment on counseling appointments (defining symptomatic as moderately or severely symptomatic)**

	Primary		Secondary	Exploratory
	Initiated contact with counselors (1)	Scheduled appointment (2)	Attended appointment (3)	Scheduled follow-up appointment (4)
<b>Panel A: Average effects</b>				
Rewards	0.15** (0.07)	0.09* (0.05)	0.07* (0.04)	0.03 (0.02)
Screening	0.03 (0.06)	0.02 (0.04)	-0.01 (0.04)	0.00 (0.02)
Rewards & Screening	0.09 (0.06)	0.11*** (0.04)	0.08** (0.04)	0.01 (0.02)
Controls	X	X	X	X
Control mean	0.19	0.03	0.03	0.01
<b>Panel B: Heterogeneous effects</b>				
Rewards	0.16** (0.07)	0.06 (0.05)	0.04 (0.05)	-0.02 (0.01)
Rewards x Symptomatic	-0.04 (0.17)	0.10 (0.13)	0.13 (0.12)	0.18* (0.10)
Screening	0.06 (0.07)	-0.02 (0.04)	-0.04 (0.04)	-0.02 (0.02)
Screening x Symptomatic	-0.13 (0.17)	0.14 (0.11)	0.09 (0.10)	0.06 (0.05)
Rewards & Screening	0.09 (0.07)	0.03 (0.04)	0.03 (0.04)	-0.01 (0.02)
Rewards & Screening x Symptomatic	0.01 (0.17)	0.29** (0.12)	0.19* (0.11)	0.07 (0.05)
Controls	X	X	X	X
Control mean, Asymptomatic	0.05	0.03	0.03	0.03
Control mean, Symptomatic	0.30	0.04	0.04	0.00
Observations	340	340	340	340

*Notes:* This table replicates Table 1, defining symptomatic as students with moderate or severe symptoms (as opposed to mild, moderate, and severe). \*, \*\*, and \*\*\* indicate significance at the 10%, 5%, and 1% levels, respectively.

**Appendix Table A.VII: Heterogeneous effects of saturated treatment assignment on primary outcomes among students with no, mild, or moderate/severe symptoms of depression/anxiety**

	Primary		Secondary	Exploratory
	Total interest in counselor contact (1)	Scheduled Appointment (2)	Attended Appointment (3)	Scheduled Follow-Up Appointment (4)
<b>Panel A: Heterogeneous effects</b>				
Screening	0.05 (0.07)	-0.05 (0.04)	-0.05 (0.04)	-0.03 (0.03)
Screening x Mild	0.03 (0.14)	0.08 (0.09)	0.04 (0.08)	0.04 (0.05)
Screening x Moderate-Severe	-0.11 (0.17)	0.18 (0.11)	0.11 (0.09)	0.08 (0.05)
Rewards	0.23*** (0.09)	0.06 (0.05)	0.05 (0.05)	-0.03 (0.03)
Rewards x Mild	-0.17 (0.15)	0.03 (0.10)	-0.03 (0.10)	0.03 (0.04)
Rewards x Moderate-Severe	-0.11 (0.18)	0.10 (0.13)	0.12 (0.12)	0.19* (0.10)
Rewards & Screening	0.03 (0.06)	-0.02 (0.03)	-0.02 (0.03)	-0.03 (0.03)
Rewards & Screening x Mild	0.15 (0.14)	0.13 (0.10)	0.13 (0.10)	0.07 (0.05)
Rewards & Screening x Moderate-Severe	0.07 (0.17)	0.35*** (0.12)	0.24** (0.11)	0.10* (0.05)
Controls	X	X	X	X
Control mean, Asymptomatic	0.05	0.03	0.03	0.03
Control mean, Mild	0.21	0.04	0.04	0.00
Control mean, Moderate-Severe	0.21	0.04	0.04	0.00

*Notes:* This table replicates Panel B of Table 1, separately interacting treatment assignment with indicators for mild (PHQ-ADS score between 10 and 19) and severe (PHQ-ADS score 20 or above) scores. \*, \*\*, and \*\*\* indicate significance at the 10%, 5%, and 1% levels, respectively.

**Appendix Table A.VIII: Effects of saturated treatment assignment on counseling appointments (excluding students receiving therapy at baseline)**

	Primary		Secondary	Exploratory
	Initiated contact with counselors (1)	Scheduled appointment (2)	Attended appointment (3)	Scheduled follow-up appointment (4)
<b>Panel A: Average effects</b>				
Rewards	0.16** (0.07)	0.07 (0.05)	0.06 (0.04)	0.00 (0.02)
Screening	0.03 (0.06)	0.02 (0.04)	-0.01 (0.04)	0.00 (0.02)
Rewards & Screening	0.09 (0.06)	0.10** (0.04)	0.08* (0.04)	0.01 (0.02)
Controls	X	X	X	X
Control mean	0.16	0.04	0.04	0.01
<b>Panel B: Heterogeneous effects</b>				
Rewards	0.24*** (0.09)	0.05 (0.05)	0.06 (0.05)	-0.03 (0.03)
Rewards x Symptomatic	-0.15 (0.13)	0.04 (0.09)	0.01 (0.08)	0.06 (0.05)
Screening	0.04 (0.06)	-0.05 (0.04)	-0.05 (0.04)	-0.03 (0.03)
Screening x Symptomatic	-0.01 (0.11)	0.12* (0.07)	0.08 (0.07)	0.06 (0.04)
Rewards & Screening	0.06 (0.06)	-0.02 (0.03)	-0.02 (0.03)	-0.03 (0.03)
Rewards & Screening x Symptomatic	0.07 (0.12)	0.23*** (0.08)	0.18** (0.08)	0.09* (0.05)
Controls	X	X	X	X
Control mean, Asymptomatic	0.03	0.03	0.03	0.03
Control mean, Symptomatic	0.27	0.04	0.04	0.00
Observations	324	324	324	324

*Notes:* This table replicates Table 1 dropping students already in therapy. \*, \*\*, and \*\*\* indicate significance at the 10%, 5%, and 1% levels, respectively.

**Appendix Table A.IX: Multiple hypothesis test corrections for effects of saturated treatment assignment on primary outcomes.**

	Primary		Secondary	Exploratory
	Total interest in counselor contact (1)	Scheduled Appointment (2)	Attended Appointment (3)	Scheduled Follow-Up Appointment (4)
<b>Panel A: Average effects</b>				
Rewards	0.15**	0.09*	0.07*	0.03
<i>p-value</i>	0.03	0.06	0.09	0.24
<i>FDR-adjusted p-value</i>	0.09	0.06	0.14	1.00
Screening	0.03	0.02	-0.01	0.00
<i>p-value</i>	0.65	0.56	0.69	0.86
<i>FDR-adjusted p-value</i>	0.28	0.23	0.30	1.00
Rewards & Screening	0.09	0.11***	0.08**	0.01
<i>p-value</i>	0.14	0.01	0.04	0.56
<i>FDR-adjusted p-value</i>	0.16	0.03	0.14	1.00
Controls	X	X	X	X
Control mean	0.19	0.03	0.03	0.01
<b>Panel B: Heterogeneous effects</b>				
Rewards	0.23***	0.06	0.05	-0.03
<i>p-value</i>	0.01	0.29	0.31	0.30
Rewards x Symptomatic	-0.14	0.06	0.04	0.10*
<i>p-value</i>	0.28	0.46	0.65	0.07
<i>FDR-adjusted p-value</i>	1.00	0.18	0.66	0.12
Screening	0.05	-0.05	-0.05	-0.03
<i>p-value</i>	0.43	0.17	0.14	0.28
Screening x Symptomatic	-0.04	0.13*	0.07	0.05
<i>p-value</i>	0.72	0.06	0.27	0.17
<i>FDR-adjusted p-value</i>	1.00	0.07	0.36	0.12
Rewards & Screening	0.03	-0.02	-0.02	-0.03
<i>p-value</i>	0.60	0.58	0.53	0.19
Rewards & Screening x Symptomatic	0.11	0.23***	0.18**	0.08*
<i>p-value</i>	0.35	0.00	0.02	0.06
<i>FDR-adjusted p-value</i>	1.00	0.01	0.06	0.12
Controls	X	X	X	X
Control mean, Asymptomatic	0.05	0.03	0.03	0.03
Control mean, Symptomatic	0.30	0.04	0.04	0.00
Observations	340	340	340	340

*Notes:* This table replicates Table 1 using Anderson (2008) False Discovery Rate adjusted p-values. In each of the columns of Panel A, we adjust for the three hypotheses we test for the coefficients on the Rewards, Screening, and Rewards + Screening treatment arms. In each column of Panel B, we adjust for the three targeting hypotheses we test for the coefficients on the interaction between symptomatic and the Rewards, Screening, and Rewards + Screening treatment arms. \*, \*\*, and \*\*\* indicate significance at the 10%, 5%, and 1% levels, respectively.

**Appendix Table A.X: Effects of pooled treatments on take-up of therapy**

	Primary		Secondary	Exploratory
	Total interest in counselor contact (1)	Scheduled Appointment (2)	Attended Appointment (3)	Scheduled Follow-Up Appointment (4)
<b>Panel A: Effects of pooled rewards</b>				
Pooled Rewards	0.11** (0.05)	0.09*** (0.03)	0.08*** (0.03)	0.02 (0.02)
Controls	X	X	X	X
Control mean	0.20	0.06	0.04	0.02
<b>Panel B: Effects of pooled screening</b>				
Pooled Screening	-0.01 (0.05)	0.02 (0.03)	-0.00 (0.03)	-0.01 (0.02)
Controls	X	X	X	X
Control mean	0.25	0.08	0.07	0.02
Observations	340	340	340	340

*Notes:* Panel A shows estimates of the OLS regression

$$Y_i = \alpha + \beta(\text{Rewards}_i + \text{Rewards and Screening}_i) + X_i' \lambda + \epsilon_i, \quad (4)$$

where  $Y_i$  is one of the four outcome variables listed in the first row of the table, and  $X_i$  is the vector of controls described in the notes to Table 1. Panel B replicates Panel A, replacing  $\text{Rewards}_i$  with  $\text{Screening}_i$ . \*, \*\*, and \*\*\* indicate significance at the 10%, 5%, and 1% levels, respectively.

**Appendix Table A.XI: Heterogeneous effects of pooled treatment assignment by baseline symptoms**

	Total interest in counselor contact (1)	Scheduled Appointment (2)	Attended Appointment (3)	Scheduled Follow-Up Appointment (4)
<b>Panel A: Effects of pooled rewards</b>				
Pooled Rewards	0.10* (0.06)	0.04 (0.03)	0.04 (0.03)	-0.02 (0.01)
Pooled Rewards × Symptomatic	0.01 (0.09)	0.09 (0.06)	0.08 (0.06)	0.07* (0.03)
Controls	X	X	X	X
Control Mean, Asymptomatic	0.08	0.01	0.01	0.01
Control Mean, Symptomatic	0.29	0.09	0.06	0.02
<b>Panel B: Effects of pooled screening</b>				
Pooled Screening	-0.07 (0.06)	-0.06* (0.03)	-0.06** (0.03)	-0.02 (0.01)
Pooled Screening × Symptomatic	0.09 (0.09)	0.15** (0.06)	0.11* (0.05)	0.02 (0.03)
Controls	X	X	X	X
Control Mean, Asymptomatic	0.16	0.05	0.05	0.01
Control Mean, Symptomatic	0.33	0.10	0.09	0.03
Observations	340	340	340	340

\*  $p < .10$ , \*\*  $p < .05$ , \*\*\*  $p < .01$

*Notes:* This table replicates Panel B of Table 1 for pooled treatments. \*, \*\*, and \*\*\* indicate significance at the 10%, 5%, and 1% levels, respectively.

**Appendix Table A.XII: Heterogeneous effects of pooled treatment assignment by baseline degrees of distress**

	Total interest in counselor contact (1)	Scheduled Appointment (2)	Attended Appointment (3)	Scheduled Follow-Up Appointment (4)
<b>Panel A: Effects of pooled rewards</b>				
Pooled Rewards	0.10* (0.06)	0.04 (0.03)	0.04 (0.03)	-0.02 (0.01)
Pooled Rewards × Mild	-0.02 (0.11)	0.04 (0.07)	0.03 (0.07)	0.03 (0.04)
Pooled Rewards × Moderate-Severe	0.04 (0.13)	0.14 (0.09)	0.13 (0.08)	0.11* (0.05)
Controls	X	X	X	X
Control Mean, Asymptomatic	0.08	0.01	0.01	0.01
Control Mean, Mild	0.22	0.08	0.06	0.02
Control Mean, Moderate-Severe	0.37	0.11	0.07	0.02
<b>Panel B: Effects of pooled screening</b>				
Pooled Screening	-0.06 (0.06)	-0.06** (0.03)	-0.06** (0.03)	-0.02 (0.01)
Pooled Screening × Mild	0.16 (0.11)	0.09 (0.07)	0.10 (0.06)	0.04 (0.03)
Pooled Screening × Moderate-Severe	0.02 (0.12)	0.21** (0.09)	0.12 (0.08)	-0.01 (0.05)
Controls	X	X	X	X
Control Mean, Asymptomatic	0.16	0.05	0.05	0.01
Control Mean, Mild	0.22	0.08	0.06	0.00
Control Mean, Moderate-Severe	0.47	0.12	0.12	0.07
Observations	340	340	340	340

\*  $p < .10$ , \*\*  $p < .05$ , \*\*\*  $p < .01$

*Notes:* This table replicates Table A.XI, splitting symptomatic into mild and moderate-severe. \*, \*\*, and \*\*\* indicate significance at the 10%, 5%, and 1% levels, respectively.

## C Survey Instrument

This appendix contains our full survey instrument.

## Rewards and Screening Experiment: Survey Instrument

### Preamble

1. Please start entering your college roll number here and select your name from the dropdown.
2. How old are you?
  - a. **If age < 18 or age > 30:** Thank you for your interest in our study! At this time, we are only surveying individuals between the ages of 18 and 30. Since you do not fall within this range, you won't be able to participate. However, we truly appreciate your willingness to be involved!
  - b. **If age < 18 or age > 30:** Thank you for your interest in this study! Please read the consent form on the next page carefully. If you have any questions, feel free to reach out to the nearest research team member. If you're ready to participate, kindly provide your consent to proceed with the survey.
3. Informed consent
4. Please provide us with your WhatsApp number. Note: Your phone number will only be used by the research team to contact you for follow-up activities/surveys in the study. It will not be shared with anyone else outside the research team. [If you do not have a WhatsApp number, please enter the number 9 ten times i.e. 9999999999]
5. Is this number an Indian number, starting with +91? [Yes/No]
  - a. **If no:** Please provide us with the appropriate country code.
6. Can we use this phone number to contact you in the future? [Yes/No]

### Demographics

7. Do you have any personal disposable income like pocket money/allowance received from parents/guardians, income earned from an internship, part time job, freelancing gig, or other sources? If yes, how much is your monthly disposable income?
  - I do not have any personal disposable income.
  - Rs. 1 to Rs. 499
  - Rs. 500 to Rs. 999
  - Rs. 1,000 to Rs. 2,499

- Rs. 2,500 to Rs. 4,999
- Rs. 5,000 to Rs. 9,999
- Rs. 10,000 and above
- Prefer not to say

8. Are you currently preparing for any competitive exams or standardized tests? Note: Competitive exams may include exams for public sector jobs like UPSC, TNPSC, Banking, Railways, etc or entrance exams for professional degrees like CAT, CLAT, GATE, NET, SET, GRE, GMAT, etc

- Yes
- No
- Prefer not to say

9. Pick the color from the list below.

- Paper
- Violin
- Pink
- Mobile

a. If != Pink:

**Read attentively, respond thoughtfully!**

**கவனமாக படித்து,  
விவேகப்பூர்வமாக பதிலளிக்கவும்!**



## Mental Health Perceptions and Treatment History

10. How are you feeling right now? [Move the slider to change the emoji to the one that most accurately represents your mood at the moment.]
11. How have you been doing with regard to your overall mental well-being in the past 2 weeks?
- Extremely well
  - Very well
  - Moderately well
  - Not too well
  - Not well at all
  - Prefer not to say
12. How have you been doing with regard to your overall mental well-being in the past 6 months?
- Extremely well
  - Very well
  - Moderately well
  - Not too well
  - Not well at all
  - Prefer not to say
13. What would you say are the main factors causing you distress, if any, in the past 6 months? Please select all that apply.
- Academics/Exams
  - Future job/career prospects
  - Financial issues/hardship
  - Conflicts with family members
  - Conflicts with friends
  - Conflicts in romantic relationships
  - Feeling lonely/isolated
  - Other
  - None
  - Prefer not to say
- a. **If Other:** What other factors have been causing you distress in the past 6 months?
14. Do you think you are currently experiencing depression and/or anxiety?
- Depression
  - Anxiety

- Both
- Neither
- Prefer not to say

15. Do you think you have ever experienced depression and/or anxiety in the past?

- Depression
- Anxiety
- Both
- Neither
- Prefer not to say

16. If you were to seek treatment from mental health professionals such as a counselor, do you think your family would be supportive?

- Yes
- No
- I don't know
- Prefer not to say

17. When you feel low, how comfortable do you feel reaching out to friends or family to seek support by having conversations about your feelings, emotions, mental health and well-being?

- Extremely comfortable
- Somewhat comfortable
- Somewhat uncomfortable
- Extremely uncomfortable
- Prefer not to say

18. Are you currently receiving treatment from a mental health professional? If yes, from which professional are you receiving treatment?

- Counselor
- Psychiatrist
- Both
- Neither
- Prefer not to say

19. Have you ever received treatment from a mental health professional in the past? If yes, from which professional have you received treatment?

- Counselor
- Psychiatrist
- Both
- Neither

- ⊗ Prefer not to say

20. Which of the following is a fruit?

- Cable
- Mango
- Elephant
- Light
- Fever

a. If != Mango:

**Read attentively, respond thoughtfully!**

**கவனமாக படித்து,  
விவேகப்பூர்வமாக பதிலளிக்கவும்!**



### **Mental Health Screening**

This section consists of a few questions about the state of your mental health and well-being. Your responses to these questions help us screen you for symptoms of psychological distress that you may be experiencing. Please take your time to answer these and be as honest as possible.

21. Over the last two weeks, how often have you been bothered by the following problem?

Little interest or pleasure in doing things.

- Not at all
- Several days

- More than half the days
- Nearly everyday

22. Over the last two weeks, how often have you been bothered by the following problem?  
Feeling down, depressed, or hopeless.

- Not at all
- Several days
- More than half the days
- Nearly everyday

23. Over the last two weeks, how often have you been bothered by the following problem?  
Trouble falling or staying asleep, or sleeping too much.

- Not at all
- Several days
- More than half the days
- Nearly everyday

24. Over the last two weeks, how often have you been bothered by the following problem?  
Feeling tired or having little energy.

- Not at all
- Several days
- More than half the days
- Nearly everyday

25. Over the last two weeks, how often have you been bothered by the following problem?  
Poor appetite or overeating.

- Not at all
- Several days
- More than half the days
- Nearly everyday

26. Over the last two weeks, how often have you been bothered by the following problem?  
Feeling bad about yourself — or that you are a failure or have let yourself or your family down.

- Not at all
- Several days
- More than half the days
- Nearly everyday

27. Over the last two weeks, how often have you been bothered by the following problem?  
Trouble concentrating on things, such as reading the newspaper or watching television.
- Not at all
  - Several days
  - More than half the days
  - Nearly everyday
28. Over the last two weeks, how often have you been bothered by the following problem?  
Moving or speaking so slowly that others have noticed. Or the opposite — being so fidgety or restless that you have been moving around a lot more than usual.
- Not at all
  - Several days
  - More than half the days
  - Nearly everyday
29. Over the last two weeks, how often have you been bothered by the following problem?  
Feeling nervous, anxious, or on edge.
- Not at all
  - Several days
  - More than half the days
  - Nearly everyday
30. Over the last two weeks, how often have you been bothered by the following problem?  
Not being able to stop or control worrying.
- Not at all
  - Several days
  - More than half the days
  - Nearly everyday
31. Over the last two weeks, how often have you been bothered by the following problem?  
Worrying too much about different things.
- Not at all
  - Several days
  - More than half the days
  - Nearly everyday
32. Over the last two weeks, how often have you been bothered by the following problem?  
Trouble relaxing.
- Not at all
  - Several days
  - More than half the days

- Nearly everyday

33. Over the last two weeks, how often have you been bothered by the following problem?  
Being so restless that it's hard to sit still.

- Not at all
- Several days
- More than half the days
- Nearly everyday

34. Over the last two weeks, how often have you been bothered by the following problem?  
Becoming easily annoyed or irritable.

- Not at all
- Several days
- More than half the days
- Nearly everyday

35. Over the last two weeks, how often have you been bothered by the following problem?  
Feeling afraid as if something awful might happen.

- Not at all
- Several days
- More than half the days
- Nearly everyday

## **Treatment Assignment**

### **A: Control Group**

As a participant of this study, you have the opportunity to try out therapy for free for the next 2 months. Therapy is a form of treatment aimed at relieving emotional distress and mental health problems. To avail this service, book your first session with a study-affiliated counselor within the next 30 days. You will be introduced to the study counselors through a video and will receive instructions on how to book an appointment with them along with their contact information in this survey.

### **B: Screening**

You have been randomly chosen to receive information/feedback on your responses to the mental health screening questions.

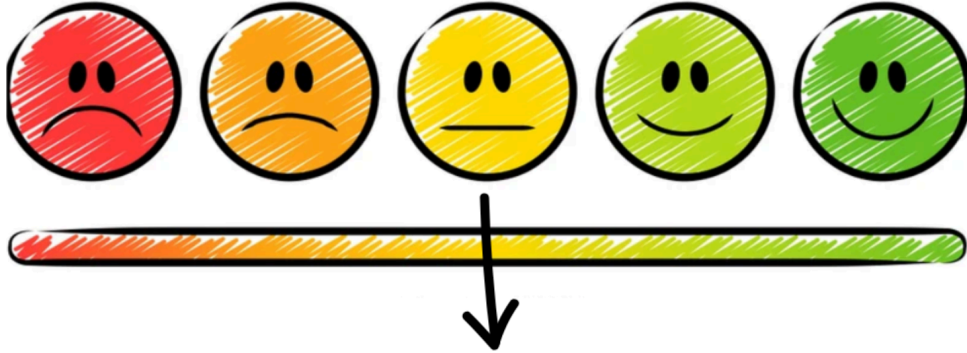
- If  $phq\_ads\_score < 10$ :** Your responses to the mental health screening section of this survey indicate that currently:



**You are not experiencing any psychological distress.**

**நீங்கள் எந்த மனரீதியான துயரத்தையும்  
அனுபவிக்கவில்லை.**

- ii. **If  $phq\_ads\_score \geq 10$  &  $phq\_ads\_score < 20$ :** Your responses to the mental health screening section of this survey indicate that currently:



**You may be experiencing MILD psychological distress.**

**நீங்கள் லேசான மன உளைச்சலை  
அனுபவித்துக்கொண்டிருக்கலாம்.**

- iii. **If phq\_ads\_score  $\geq$  20 & phq\_ads\_score  $<$  30:** Your responses to the mental health screening section of this survey indicate that currently:

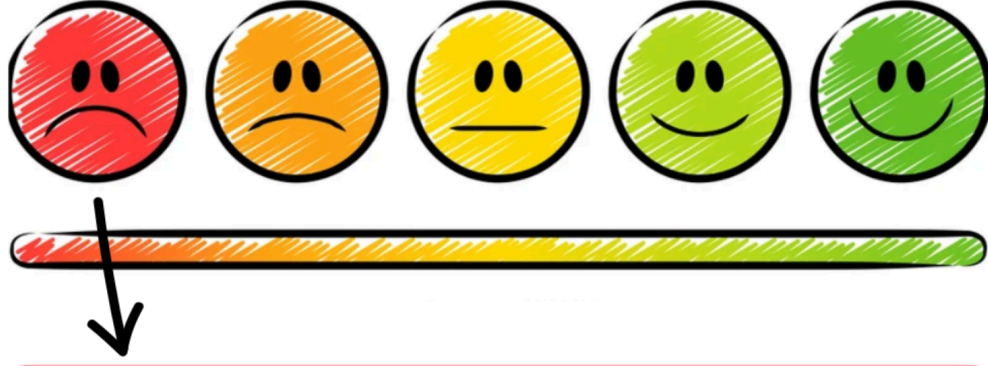


**You may be experiencing MODERATE  
psychological distress.**

**நீங்கள் மிதமான மன உளைச்சலை  
அனுபவித்துக்கொண்டிருக்கலாம்.**

We recommend you to try therapy with one of the study-affiliated counselors.

- iv. **If phq\_ads\_score  $\geq$  30:** Your responses to the mental health screening section of this survey indicate that currently:



**You may be experiencing SEVERE  
psychological distress.**

**நீங்கள் கடுமையான மன உளைச்சலை  
அனுபவித்துக்கொண்டிருக்கலாம்.**

We strongly recommend you to try therapy with one of the study-affiliated counselors.

As a participant of this study, you have the opportunity to try out therapy for free for the next 2 months. Therapy is a form of treatment aimed at relieving emotional distress and mental health problems. To avail this service, book your first session with a study-affiliated counselor within the next 30 days. You will be introduced to the study counselors through a video and will receive instructions on how to book an appointment with them along with their contact information in this survey.

### **C: Rewards**

As a participant of this study, you have the opportunity to try out therapy for free for the next 2 months. Therapy is a form of treatment aimed at relieving emotional distress and mental health problems. To avail this service, book your first session with a study-affiliated counselor within the next 30 days. You will be introduced to the study counselors through a video and will receive instructions on how to book an appointment with them along with their contact information later in this survey.

Once you complete your first counseling session, you can collect your Rs 500 reward in cash from a research team member. Your counselor will provide the collection details. Alternatively, you can choose to receive the reward via UPI by sharing your UPI details with your counselor. Please allow up to 7 business days for UPI payments.

You have been randomly chosen to receive a reward of ₹500 if you attend your first session with a study-affiliated counselor.

நீங்கள் ஒரு படிப்பு சார்ந்த ஆலோசகருடன் முதல் session-ல் கலந்து கொண்டால், ரூபாய்.500 வெகுமதியைப் பெறுவதற்கு தோராயமாக தேர்வு செய்யப்பட்டுள்ளீர்கள்.



#### **D: Screening + Rewards**

You have been randomly chosen to receive information/feedback on your responses to the mental health screening questions.

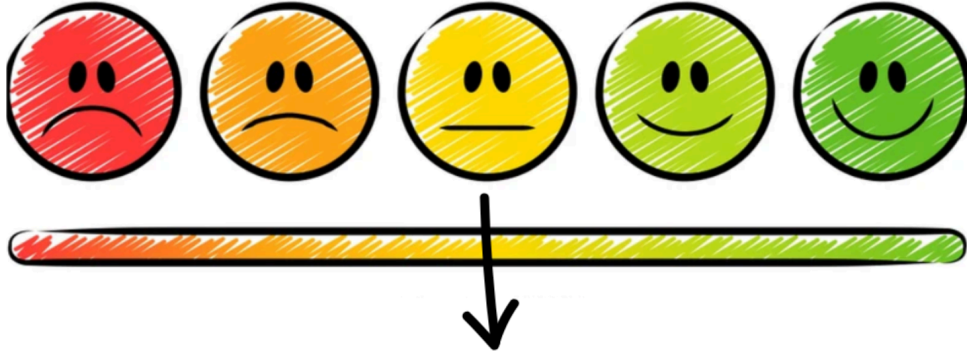
- i. **If phq\_ads\_score < 10:** Your responses to the mental health screening section of this survey indicate that currently:



**You are not experiencing any psychological distress.**

**நீங்கள் எந்த மனரீதியான துயரத்தையும்  
அனுபவிக்கவில்லை.**

- ii. **If  $phq\_ads\_score \geq 10$  &  $phq\_ads\_score < 20$ :** Your responses to the mental health screening section of this survey indicate that currently:



**You may be experiencing MILD psychological distress.**

**நீங்கள் லேசான மன உளைச்சலை  
அனுபவித்துக்கொண்டிருக்கலாம்.**

- iii. **If phq\_ads\_score  $\geq$  20 & phq\_ads\_score  $<$  30:** Your responses to the mental health screening section of this survey indicate that currently:



**You may be experiencing MODERATE  
psychological distress.**

**நீங்கள் மிதமான மன உளைச்சலை  
அனுபவித்துக்கொண்டிருக்கலாம்.**

We recommend you to try therapy with one of the study-affiliated counselors.

- iv. **If phq\_ads\_score  $\geq$  30:** Your responses to the mental health screening section of this survey indicate that currently:



**You may be experiencing SEVERE  
psychological distress.**

**நீங்கள் கடுமையான மன உளைச்சலை  
அனுபவித்துக்கொண்டிருக்கலாம்.**

We strongly recommend you to try therapy with one of the study-affiliated counselors.

As a participant of this study, you have the opportunity to try out therapy for free for the next 2 months. Therapy is a form of treatment aimed at relieving emotional distress and mental health problems. To avail this service, book your first session with a study-affiliated counselor within the next 30 days. You will be introduced to the study counselors through a video and will receive instructions on how to book an appointment with them along with their contact information in this survey.

Once you complete your first counseling session, you can receive your Rs 500 reward in cash from a research team member. Your counselor will provide the collection details. Alternatively, you can choose to receive the reward via UPI by sharing your UPI details with your counselor. Please allow up to 7 business days for UPI payments.

**You have been randomly chosen to receive a reward of ₹500 if you attend your first session with a study-affiliated counselor.**

**நீங்கள் ஒரு படிப்பு சார்ந்த ஆலோசகருடன் முதல் session-ல் கலந்து கொண்டால், ரூபாய்.500 வெகுமதியைப் பெறுவதற்கு தோராயமாக தேர்வு செய்யப்பட்டுள்ளீர்கள்.**



### **Video**

Meet the study counselors! Note: You will be able to go to the next slide only after you watch the entire video.

### **Take-up**

36. Would you like to book an appointment with a study-affiliated counselor? Note: You can choose the counselor and schedule the session at a time that works best for you.

- Yes
- No

- a. **If Yes:** Which counselor would you like to request an appointment with?
- o Any
  - o (College Counselor)
  - o (College Counselor)
  - o (SCARF Counselor)
  - o Unsure? Re-watch the counselor introduction video before deciding
  - o Unsure? Contact the research team for more information/clarifications about the process
- i. **If College Counselor:** Click on the link (green text) below to message [counselor's name] on WhatsApp and book your first session now! Note: Once you click the link, it will open [counselor's name] chatbox on WhatsApp. All you need to do is hit send on the pre-filled message. Message [counselor's name] on WhatsApp.
- ii. **If Any/SCARF Counselor:** Click on the link (green text) below to message [SCARF counsellor name] on WhatsApp and book your first session now! Note: Once you click the link, it will open [SCARF **counsellor's** name] chatbox on WhatsApp. All you need to do is hit send on the pre-filled message. Message [SCARF counsellor's name] on WhatsApp.
- iii. **If Unsure, research team:** Click on the link (green text) below to message the research team on WhatsApp. **We** can help you learn more about the counseling services being provided and how you can avail them. Note: Once you click the link, it will open Research Team's chatbox on WhatsApp. All you need to do is hit send on the pre-filled message. Message the Research Team on WhatsApp
- iv. **If Unsure, Re-watch:** *Repeat video and options*
37. Would you like to be contacted by one of the study-affiliated counselors in the next week to learn more about the counseling services being provided?
- Yes
  - No
38. Here is the contact information of the study counselors. In case you have decided to not schedule an appointment at this point, you can always choose to reach out to them on these numbers. Please take a screenshot for future reference!

We will periodically send you reminders on your WhatsApp number about the availability of these counseling services and how to book an appointment.

39. Would you be interested in using a mobile app that uses methods like therapy, breathing, meditation, and yoga/stretching to help you improve your mental health and well-being?
- Yes
  - No

### **Perceptions of Therapy**

40. In your opinion, how helpful would counseling/therapy be in improving your mental health/well-being and quality of life?

- Extremely helpful
- Very helpful
- Somewhat helpful
- Slightly helpful
- Not helpful at all
- Prefer not to say

41. If **“Would you like to book an appointment with a study-affiliated counselor” = Yes** OR **“Would you like to be contacted by one of the study-affiliated counselors in the next week” = Yes:** Which of the following statements best represent the primary factors motivating you to take up therapy? Please select all that apply to you.

- I have heard good things about therapy from my friends/family
- I am in distress and I think therapy will help me feel better
- I feel I don't have anyone to share my problems with and I think therapy will provide me with a safe space to do so
- I think therapy will help me learn to manage my stress and my emotions
- I think therapy will help me improve my relationships
- I think therapy will help me improve my academic/professional performance
- I am doing well overall but I think therapy will help me to keep improving
- Other
- Prefer not to say

a. **If Other:** What other factors are motivating you to take up therapy?

42. If **“Would you like to book an appointment with a study-affiliated counselor” = No** AND **“Would you like to be contacted by one of the study-affiliated counselors in the next week” = No:** Which of the following statements best represent the primary factors holding you back from taking up therapy? Please select all that apply to you.

- I don't think I need therapy

- I don't know if therapy will help me in particular
- I don't know how therapy works
- My parents/family would oppose my going for therapy
- Going to therapy is time consuming/ I do not have the time to go to therapy
- I don't know where I can find a therapist
- Going to therapy is generally seen as a sign of being inferior and I do not want to be seen as such
- Going to therapy is generally seen as a sign of being weak and I do not want to be seen as such
- I would be afraid or embarrassed to go to therapy, especially if other people found out about it
- I have tried therapy before but I don't think it worked for me
- Other
- Prefer not to say

a. **If Other:** What other factors are **holding** you back from taking up therapy?

43. Would you consider visiting a counselor/therapist in the future if need be?

- Yes
- No
- Prefer not to say

### **Mental Health Self-Care**

44. In the near future, what steps will you take in order to take care of your psychological well-being? Please select all that apply to you.

- I will talk to or spend time with friends/family
- I will go to a counselor (a college or an external counselor)
- I will talk to a teacher or other course related staff in college
- I will focus on academics
- I will try to remain motivated and positive
- I will distract myself from the situation or the problem by doing things I like such as listening to music, watching TV shows/movies, reading, art, etc or trying new hobbies
- I will journal
- I will engage in physical activities i.e. sports, exercise, yoga, etc
- I will practice meditation and mindfulness
- Other
- Prefer not to say.

- a. **If Other:** What other steps will you take in order to take care of your psychological well-being?

### **Links**

45. **If interested in using a mobile app that uses methods like therapy, breathing, meditation...:** Earlier in the survey, you indicated that you were interested in accessing an app for mental health. Click on one of the icons below to download the mental health and wellbeing tracker app! Note: This research is not sponsored by the app. This recommendation is based on public domain knowledge.

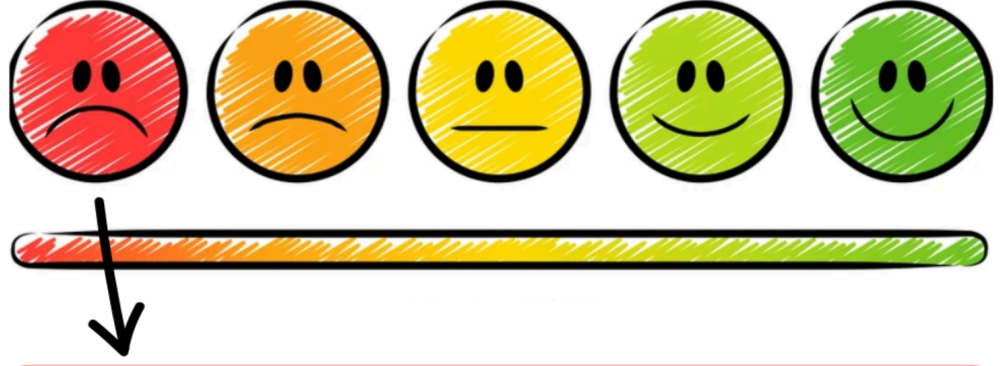
46. Are you interested in reading more about mental health and well-being?

- Yes
- No

- a. **If Yes:** Click here to learn more about Depression and tips on coping with it!  
Click here to learn more **about** Anxiety and tips on coping with it! We recommend bookmarking these webpages for future reference.

### **Severe Depression or Anxiety**

47. **If phq\_ads\_score >= 30 & (Control | Rewards):** Your responses to the mental health screening section of this survey indicate that currently:



**You may be experiencing SEVERE  
psychological distress.**

**நீங்கள் கடுமையான மன உளைச்சலை  
அனுபவித்துக்கொண்டிருக்கலாம்.**

We strongly recommend you to try therapy with one of the study-affiliated counselors.

### **Conclusion**

48. As a reminder, here is the contact information of the study counselors. If you haven't already, please take a screenshot for future reference!

49. You are at the end of the survey! Please re-enter your college roll number below.