# The Impacts of Mental Health Treatment on Productivity in India

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**Sector(s):** Health, Labor Markets

**Fieldwork:** Grameena Abudaya Seva Samsthe (GASS)

**Location:** India

**Sample:** 1000 adults from 506 villages

**Initiative(s):** Urban Services Initiative (USI)

**Target group:** Adults

**Outcome of interest:** Earnings and income Mental health

**Intervention type:** Job counseling Mental health

**AEA RCT registration number:** AEARCTR-0001067

**Research Papers:** The Economic Impact of Depression Treatment in India: Evidence from Community-B...

**Partner organization(s):** Swiss Agency for Development and Cooperation (SDC), Swiss National Science Foundation

Although the prevalence of depression among people experiencing poverty is higher than in other economic groups, many in low-income countries have little to no access to mental health care. Researchers conducted an evaluation to test the impact of providing depression treatment and economic assistance on mental health and economic behavior in peri-urban communities near Bangalore, India. Treatment reduced depression severity, a benefit that persisted when paired with light-touch livelihoods assistance, but did not increase productivity, work time, or earnings.

## Policy issue

Depression is a pervasive and costly illness—it has a lifetime prevalence of 15-20 percent and it is the top contributor to global disability—but its effect on people experiencing poverty is especially acute.[1] Depression symptoms can lower productivity, reduce an individual's willingness to invest in their children, and affect participation in household decision making. Unfortunately, demand for treatment is not met in many low-income countries given a dearth of mental health providers.

Pharmacotherapy, or the use of medication for treatment, may be a useful tool to treat depression in developing countries. However, there is little evidence on the feasibility and effectiveness of community-based provision of medication in these contexts and how mental health care affects various socioeconomic outcomes. Can community-based provision of depression treatment complemented by livelihoods assistance improve mental health and productivity?

## Context of the evaluation

Although India's Mental Health Care Act of 2017 guarantees its citizens a right to mental health care, only 15 percent of people with depression receive the necessary care.[2] In an effort to address this gap, the non-governmental organization Grameena

Abudaya Seva Samsthe (GASS) works with people with physical and mental disabilities. GASS aims to improve mental health and patient wellbeing by facilitating psychiatric care and providing livelihoods assistance.

A representative sample of adults living in peri-urban communities near Bangalore, where this evaluation too place, showed that 24 percent of those aged 18 to 50 had some depression symptoms and 10 percent had symptoms of at least moderate depression. Symptoms were more severe among women, elderly people, and people of low socioeconomic status.



A nurse examines a patient at a clinic in India.

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### Details of the intervention

Researchers partnered with GASS to conduct a randomized evaluation testing the impact of psychiatric care and livelihoods assistance on depression, socioeconomic outcomes, and possible pathways linking mental health and economic behavior.

A total of 1,000 adults with symptoms of mild or moderate depression—86 percent of whom were women—were recruited via community screening for the evaluation and randomly assigned into one of four groups:

1. *Psychiatric Care (PC)* (207 individuals): Individuals in this group received eight months of personalized pharmacotherapy with diagnosis and oversight of a psychiatrist at a local private hospital. After their initial visit, individuals returned for monthly follow-up visits to monitor reactions and medication dosage.
2. *Livelihoods Assistance (LA)* (205 individuals): Individuals in this group attended two three-hour group meetings to address work-related challenges, including ways to earn income and deal with on-the-job challenges. This was accompanied by

personalized job placement support through one-on-one sessions.

3. *Psychiatric Care/Livelihoods Assistance (PC/LA)* (195 individuals): Participants in this group were eligible to receive both the PC and the LA interventions.
4. *Comparison group* (395 individuals): Participants assigned to this group received none of the treatments and served as a comparison group.

Researchers measured outcomes five times between 2016 and 2018 starting at recruitment, then twice during the intervention, and ending with surveys 16 and 26 months after initial recruitment. The outcomes of interest included depression severity, work hours, earnings, child human capital investment, and household consumption, wealth, and hygiene as well as pathways that linked depression to the aforementioned outcomes.

In addition to receiving ethical review and approvals from an institutional review board, researchers made efforts to address and account for ethical questions by ensuring staff and GASS personnel monitored the wellbeing of participants. Any participant that began experiencing severe depression was removed from the study and referred to immediate free treatment. For more on the researchers' discussion of ethical considerations, see Appendix B.2 in the paper.

## Results and policy lessons

Results indicate that community-based pharmacotherapy can be effective at reducing depression among individuals in low-income countries, especially when paired with livelihoods assistance. Although researchers did not observe changes in productivity, earnings, household hygiene, or durable goods ownership, the intervention helped increase investments in child human capital development.

*Mental Health*: Individuals in the PC and PC/LA groups experienced reductions in depression symptoms of 0.14 and 0.26 standard deviations, respectively. However, only those in the combined PC/LA intervention reported reduced depression after the program ended. Since the PC/LA intervention was 3.5 times more effective and only 5 percent more expensive than just PC (US$232 versus US$221 per individual), the bundled intervention was the most cost-effective.[3]

*Work Time and Earnings*: Neither PC nor LA increased participants' work time or earnings. Individuals in the PC group actually reduced their work time by 5.4 hours per week (a ten percent decrease) during the intervention. Overall, these results suggest that neither mental health care nor livelihoods assistance was enough to overcome the barriers to increasing work time or earnings that the individuals in this context face.

*Child Human Capital Investment*: The interventions were particularly important in increasing human capital investment for children older than twelve. Children in households where participants received the PC intervention had a human capital investment index that was 0.44 standard deviations (SD) higher than in the comparison group after the program ended.[4] These values were 0.40 SD and 0.32 SD for those in the PC/LA and LA groups, respectively (but statistically insignificant). Impacts on investment in children under twelve were not significant suggesting a possible limitation to alter behaviors around this age group.

*Household Consumption*: Overall, the interventions had no impact on household hygiene or sanitation, consumption, or durable goods ownership.

Taken together, these results suggest potential pathways through which treatment for depression can affect economic behavior and socioeconomic outcomes. For instance, they may increase participants' risk intolerance, thus reducing the likelihood of negative income shocks. Pairing livelihoods assistance with pharmacotherapy seems to be the most cost-effective way to improve mental health and child human capital investment among individuals in low-income communities.

Angelucci, Manuela and Daniel Bennett. "The Economic Impact of Depression Treatment in India: Evidence from Community-

Based Provision of Pharmacotherapy." Working Paper, 2022.

1. World Health Organization. ( 2017) . Depression and other common mental disorders: global health estimates. World Health Organization. https://apps.who.int/iris/handle/10665/254610. License: CC BY-NC-SA 3.0 IGO

2. Gautham, Melur Sukumar, Gopalkrishna Gururaj, Mathew Varghese, Vivek Benegal, Girish N. Rao, Arun Kokane, Bir Singh Chavan et al. "The National Mental Health Survey of India (2016): Prevalence, socio-demographic correlates and treatment gap of mental morbidity." International Journal of Social Psychiatry 66, no. 4 (2020): 361-372.

3. Costs were incurred in Indian rupees from 2017-2019 and converted into US dollars using the January 2017 exchange rate.

4. The child human capital investment index included child school enrollment and attendance, homework time, and whether the child works for pay.