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Cognitive Behavioral Therapy among Ghana's Rural Poor Is Effective Regardless of Baseline Mental Distress[†]

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We study the impact of group-based cognitive behavioral therapy (CBT) for individuals selected from the general population of poor households in rural Ghana (N = 7,227). Results from one to three months after the program show strong impacts on mental and perceived physical health, cognitive and socioemotional skills, and economic self-perceptions. These effects hold regardless of baseline mental distress. We argue that this is because CBT can improve well-being for a general population of poor individuals through two pathways: reducing vulnerability to deteriorating mental health and directly increasing cognitive capacity and socioemotional skills. (*JEL* D12, I12, I15, I31, I32, O12, O18)

Spurred in part by the inclusion of mental health as a key sustainable development goal, a growing "global mental health" movement argues for improved access to therapy (e.g., Patel and Prince 2010; Patel et al. 2018). How broad might the impact of this movement be? We argue that increasing access to mental health therapy in low-income countries should be seen as a core means of improving well-being and increasing socioemotional skills and cognition in the *general* population, with relevance beyond treating those with a diagnosable mental health condition.

We base this argument on the results of a large-scale randomized controlled trial (N = 7,227, with 5,937 in control and 1,290 in treatment)[‡] evaluating the impact of untargeted, group-based, cognitive behavioral therapy (CBT) in rural Ghana. Using

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The Impact of Cognitive Behavioral Therapy on Low-Income Individuals in Rural Ghana

Abstract

Cognitive behavioral therapy (CBT) may be an effective mental health approach for people living in poverty, who are especially vulnerable to mental distress and face unique demands on their mental "bandwidth." Researchers worked with Innovations for Poverty Action and the University of Ghana Medical School to design, implement, and conduct a randomized evaluation of the impacts of a group CBT curriculum on low-income individuals in rural Ghana. CBT improved participants' mental and physical well-being, socio-emotional and cognitive skills, and economic outcomes two to three months later. Results held true whether participants had reported mental distress before the program or not, suggesting that CBT has the potential to address both mental health vulnerability and participants' mental bandwidth

regardless of mental health status.

Policy Issue

People living in poverty can be uniquely vulnerable to mental health difficulties for several reasons. First, poverty entails increased vulnerability from unexpected negative "shocks" like disease, drought, or the sudden loss of a source of income, and evidence suggests that negative economic shocks can have corresponding negative impacts on people's mental health.[1] Second, evidence suggests that the conditions of poverty are uniquely taxing on mental resources, with the amount of mental "bandwidth" spent on dealing with short-term economic problems reducing cognitive resources for making decisions in other realms.[2] In turn, mental health care may provide meaningful benefits for low-income populations.

Cognitive behavioral therapy (CBT) is a common clinical approach to mental health that aims to improve a wide range of harmful beliefs and behaviors by addressing thought patterns. For instance, a counselor using CBT might help a patient understand when they are "catastrophizing" (mentally overemphasizing small problems) and propose strategies to "disrupt" this pattern of thinking in favor of ones that are better for the patient's mental well-being. If people living in poverty are especially vulnerable to mental distress, this strategy may be particularly impactful for improving mental health in poor communities. It may also address the problem of limited "bandwidth" that can occur regardless of mental distress, resulting in improved decision-making and economic outcomes. Most of past evidence on CBT's impact on mental health or economic outcomes, however, comes from studies with exclusively participants who have a common mental health-related difficulty.[3]

Context of the Evaluation

This evaluation took place in rural communities in the Northern, Upper East, Ashanti, Bono, and Bono East regions of Ghana. The evaluation was done in conjunction with the Graduating the Ultra Poor in Ghana project, but concluded before the announcement and implementation of that project's other interventions, allowing the CBT program's impacts to be considered in isolation. Participants in the overall "Graduation" study were substantially more likely to live on less than $1.25 per day than Ghana's population as a whole at the beginning of the project. Innovations for Poverty Action (IPA), Heifer International, and local government officials selected communities to participate in the broader study if they had over 50 compounds (groups of dwellings), adequate road accessibility for project staff, and did not have a program similar to the Graduation program already in operation.

Low-income individuals in this context were vulnerable to psychological distress: 55 percent of study participants reporting symptoms associated with some degree of psychological distress prior to the evaluation. These levels of distress also varied over time, with 43 percent of individuals who initially reported no distress then reporting some form of distress three months later (without receiving any program).

Details of the Intervention

In Ghana, researchers partnered with IPA to design and implement a group CBT curriculum and evaluate its impacts on participants living in extreme poverty who were identified through the broader “Graduation” economic program.

The curriculum was specifically designed for, and was run by, recent Ghanaian college graduates with a degree in psychology or a related field, but no further qualifications, through the University of Ghana Medical School’s Psych Corps Ghana program. All counsellors received two weeks of classroom training, and performed one week of practice sessions, prior to the start of the program.

Participants received weekly group counselling sessions for 12 weeks. Each session lasted 90 minutes, was held with a group of ten participants, and took place in the participants’ home communities. Sessions involved a mixture of counselors introducing concepts, participants discussing hypothetical scenarios, and thinking about how to apply CBT tools to their own lives. Participants also completed homework assignments in between each session. The sessions were grouped around four distinct modules: healthy thinking; solving problems at home and at work; managing relationships; and goal-setting and goal-directed behavior.

To evaluate the impact of the curriculum, the research team divided randomly divided the 258 participating communities into three groups:

1. **CBT Group (20 communities):** Participants in these communities were further divided into two subgroups. Half of the participants in these communities were randomly chosen to receive the full CBT program, while the other half did not receive any CBT. Of the communities that received CBT, half were randomly assigned to only have the CBT delivered to men, while the other half only delivered it to women.
2. **Full Program Group (141 communities):** Participants in these communities received either CBT, the “Graduation” program, both, or neither.
3. **Comparison Group (97 communities):** Participants in these communities did not receive any program.

Researchers measured the impacts of CBT by comparing individuals that only received CBT with individuals that received no intervention at all across all three groups. After an initial survey before the intervention, researchers conducted a follow-up survey two to three months after the CBT curriculum concluded to measure its impacts on participants’ mental health, physical health, mental “bandwidth” as reflected through socioemotional skills and cognitive skills, and economic outcomes.

In addition to receiving ethical review and approvals from institutional review boards, researchers made efforts to address and account for ethical questions by implementing protocols for responding to sensitive issues and distress that emerged during or as a result of the CBT sessions. In particular, anyone identified in surveys as in distress was directed to the community psychiatric nurse for help regardless of which arm they were randomized into. In addition, participants were not required to attend CBT sessions, and there was no

consequence to them for non-attendance. For more on the researchers' discussion of ethical considerations, see the original research paper, Appendix D, pg. 28.

Results and Policy Lessons

Overall, CBT reduced participants' psychological distress, improved their self-reported mental and physical health, increased their mental "bandwidth", and improved their short-term economic well-being. The results held true whether participants had reported mental distress at the beginning of the evaluation or not, suggesting that CBT can broadly improve outcomes in poor communities by addressing both vulnerability to deteriorating mental health and limits to mental "bandwidth."

CBT program participants' mental health improved, relative to the comparison group's. For example, CBT participants reported, on average, 0.53 more days per month with good mental health, and experienced statistically significant increases along indices measuring mental and physical health.

The program also improved participants' cognitive and socio-emotional skills and improved economic outcomes. CBT participants experienced, on average, improvements in cognition and socio-emotional skills–or mental "bandwidth"–and economic outcomes, scoring more highly on cognitive tests and self-reporting higher economic statuses.

Results did not differ by gender.

Communities where men received the curriculum saw similar impacts as those where women received the curriculum, on average.

These results suggest CBT can have positive impacts when delivered to a general population, for both members experiencing mental distress and those who are not.

Participants experienced positive impacts on mental and physical health, cognitive skills, and socio-emotional skills whether they reported mental health distress before the CBT program began or not. The research team also developed a tool to measure participants' vulnerability to future mental health distress and found that the results of the CBT program were larger for those predicted to be more vulnerable. This result suggests, when it comes to mental health, that CBT was able not only to address people actively experience mental health difficulties, but also to preemptively alleviate them.

Sources

[1] Chemin, Matthieu, Joost De Laat, and Johannes Haushofer. 2013. "Negative rainfall shocks increase levels of the stress hormone cortisol among poor farmers in Kenya." SSRN, 2294171.

[2] Mullainathan, Sendhil, and Eldar Shafir. 2013. Scarcity: Why having too little means so much. Macmillan.

[3] Blattman, Christopher, Julian C Jamison, and Margaret Sheridan. 2017. “Re-ducing crime and violence: Experimental evidence from cognitive behavioral therapy in Liberia.” American Economic Review, 107(4): 1165–1206.

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