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The Long-Term Impact of Antidepressant Pharmacotherapy in India

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8 months of antidepressants in India lead to faster remission, no extra relapse, but no mental health or income gains 7 years later. However: greater long-term awareness & treatment-seeking.

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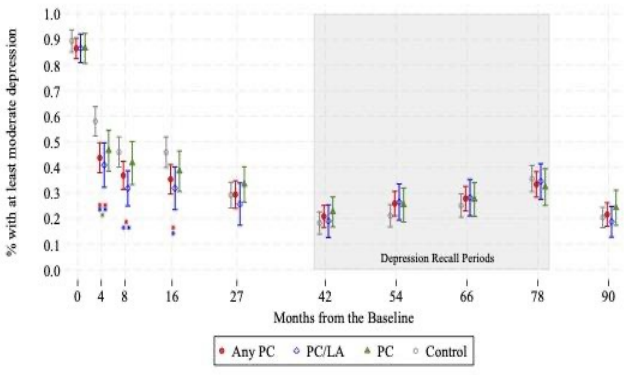
Topic at a Glance

Depression is a leading cause of disability and especially prevalent among low-income populations, where it may also perpetuate poverty. Despite the availability of effective treatments like antidepressants, most people in low- and middle-income countries (LMICs) do not receive care, due to provider scarcity, stigma, and low awareness. Antidepressants are potentially scalable in LMICs, but little is known about their long-term effects. We study the seven-year impacts of an eight-month SSRI intervention offered in 2017 to 1,000 mildly to moderately depressed adults in Karnataka, India. The intervention accelerated remission by over two years without increasing relapse, but mental health and economic outcomes converged by year seven, likely due to natural recovery in the control group. However, pharmacotherapy improved participants' awareness of treatment, beliefs about depression, and care-seeking during later episodes. Our findings suggest short-term medication can yield lasting behavioral changes, even without long-term clinical effects.



Caption: The figure shows the prevalence of depression. The PC/LA and PC arms received pharmacotherapy. "Any PC" pools these arms. Depression is measured with the PHQ-9 in the non-shaded region and using recall in the shaded region.

New Insights

This study provides long-term evidence on the effects of a short course of antidepressant treatment in a low-resource setting. While pharmacotherapy is widely used for depression and may be scalable in low- and middle-income countries (LMICs), most research has focused on short-term outcomes. By contrast, we track individuals in Karnataka, India, seven years after an 8-month course of SSRI treatment. Our findings show that although pharmacotherapy accelerated remission by up to 27 months, depression rates eventually equalized across treatment and control arms, so that no lasting mental health or economic gains were observed. However, the intervention improved participants' awareness of effective treatments, reduced stigma-related beliefs, and increased care-seeking during subsequent episodes of depression. These behavioral shifts may be critical for long-run mental health, even if clinical outcomes do not persist. Importantly, the intervention did not increase depression recurrence, despite concerns that brief courses might lead to relapse. Thus, short courses may be a viable option in settings with limited resources. However, despite improved knowledge, many depressive episodes remained untreated, highlighting persistent barriers to care. Our findings suggest that demand-side constraints such as stigma and lack of guidance continue to limit treatment uptake. Addressing these barriers through regular screening, patient support, and public messaging may be essential to closing the mental health care gap in LMICs.

Policy Recommendations

This study provides clear policy implications for expanding mental health care in LMICs. While pharmacotherapy is a promising treatment modality due to its low cost and limited provider time requirements, our findings suggest that expanding access to antidepressants alone will not close the mental health care gap. The intervention accelerated depression remission without increasing recurrence, suggesting that short courses of SSRI are clinically safe and potentially scalable in resource-constrained settings. However, by year seven, mental health and economic

outcomes had equalized between treatment and control groups, indicating that a single course of pharmacotherapy does not yield durable improvements without continued engagement.

Importantly, participants exposed to pharmacotherapy showed better understanding of treatment options, held less stigmatizing beliefs, and were more likely to seek care in subsequent depressive episodes. These findings show that brief contact with the mental health system can induce long-term behavioral changes. Still, many individuals remained untreated despite experiencing depression, revealing persistent demand-side barriers such as stigma, limited knowledge, and lack of care navigation. These findings support the use of regular depression screening and structured referral systems, as well as integration with community health workers or digital tools to guide patients toward effective treatment.

Policymakers should view pharmacotherapy not as a standalone solution, but as one component in a larger system of care. A holistic approach that includes education, stigma reduction, and patient follow-up will be needed to fully realize the potential of depression treatment in LMICs.

Limitations

A few limitations qualify the interpretation of this study's findings. First, the intervention consisted of a single offer of pharmacotherapy, with most participants completing shorter courses. This reflects real-world constraints but may understate the benefits of longer or sustained treatment. Second, depression prevalence fell in the control group over time, likely due to spontaneous remission. As a result, long-term differences between treatment and control may be muted. The use of recalled depression histories from 2020-2023 may introduce recall bias, though analyses suggest this bias is limited in later years. Finally, the sample is 86% female and drawn from one Indian region, which may limit generalizability to other populations.

These limitations suggest that the long-term impact of pharmacotherapy may depend on context, continued support, and integration with broader mental health systems. They also caution against interpreting the null economic findings as evidence that depression lacks lasting consequences.

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