

Peer Review Report

Review Report on Can Targeted Poverty Alleviation program reduce depression? Evidence from China

Original Article, Int J Public Health

Reviewer: Pedro Goldberg

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EVALUATION

Q 1 Please summarize the main findings of the study.

This article examines whether the Targeted Poverty Alleviation (TPA) program in China mitigates depression and identifies the channels through which it affects individuals' depression levels. Using data from the China Family Panel Studies (CFPS) survey from 2012 to 2020 and employing a Difference-in-Difference (DID) model, the study reveals that the TPA program significantly reduces individuals' depression levels. The TPA program is found to decrease depression by 0.116 points, which accounts for 6.82% of the standard deviation of depression scores. Mechanism analyses indicate that the TPA program affects individuals' depression levels through: improving local medical conditions, cutting down household healthcare spending, increasing household entertainment expenses, and increasing the likelihood of living at home. The TPA program improves local medical conditions, which in turn reduces individuals' depression levels. The program leads to a reduction in household healthcare spending, which is associated with lower levels of depression. Household entertainment expenses increase as a result of the TPA program, and higher entertainment spending is negatively associated with depression levels. The TPA program increases the probability of individuals living at home, which contributes to lower levels of depression.

Q 2 Please highlight the limitations and strengths.

I believe the paper has many strengths, some that stood out to me were the following. The use of longitudinal data, this gives a comprehensive view over time, which allows for robust analysis of the impact of the TPA program on depression levels. The large and diverse sample size (129,713 individual-year observations covering 13,405 households in 551 counties from 31 provinces in China) enhances the generalizability of the findings. The use of a Difference-in-Difference model helps isolate the causal effect of the TPA program on depression levels and compares the changes over time between treatment and control groups. Lastly, the study goes beyond establishing a correlation by delving into the mechanisms through which the TPA program influences depression levels, providing insights into the pathways of impact.

Although the study is very strong, I find there is some room for improvement in the following areas. Although the study suggests a causal relationship between the TPA program and reduced depression levels, without experimental design or strong instrumental variables, establishing causality remains challenging. Additionally, the TPA program may not be randomly assigned to individuals or households, leading to potential selection bias. Those who participate in the program might differ systematically from those who do not, which could confound the estimated impact on depression levels. Lastly, while the DID model helps mitigate endogeneity concerns to some extent, there may still be unobserved factors that influence both the implementation of the TPA program and depression levels, leading to biased estimates.

Q 3 Please provide your detailed review report to the authors. The editors prefer to receive your review structured in major and minor comments. Please consider in your review the methods (statistical methods valid and correctly applied (e.g. sample size, choice of test), is the study replicable based on the method description?), results, data interpretation and references. If there are any objective errors, or if the conclusions are not supported, you should detail your concerns.

Major Comments:

The statistical methods employed in the study appear appropriate, including the use of the Difference-in-Difference (DID) model to assess the impact of the Targeted Poverty Alleviation (TPA) program on depression levels. However, there are concerns regarding potential endogeneity and selection bias. It would be beneficial for the authors to discuss these issues explicitly and explore sensitivity analyses or alternative identification strategies to strengthen the causal interpretation of the findings. While the study provides detailed information about the sample size and data sources, there is limited discussion on the assumptions underlying the DID model and potential threats to validity. A more thorough discussion of identification assumptions and sensitivity analyses would enhance the robustness of the results.

The mechanism analysis conducted in the study is a valuable contribution to understanding the pathways through which the TPA program may influence depression levels. However, the interpretation of the results should be cautious, as correlation does not imply causation. It is essential to acknowledge the possibility of reverse causality or omitted variable bias in the mediation analysis and discuss the limitations accordingly. The study provides evidence suggesting that the TPA program affects depression levels through various channels, such as improving local medical conditions and reducing household healthcare spending. While these findings are insightful, it would be helpful for the authors to discuss the implications for policy and practice in more detail. How can policymakers leverage these insights to design more effective poverty alleviation programs that address mental health needs?

Minor Comments:

The study provides a detailed description of the methods and data sources used, which enhances the replicability of the research. However, it would be beneficial for the authors to provide additional information on model specification and robustness checks, such as sensitivity analyses or alternative model specifications considered. This would allow readers to better assess the robustness of the findings. In the mechanism analysis section, the authors describe the mediation model used to explore the pathways through which the TPA program influences depression levels. While the theoretical framework is well-articulated, more information on the specific variables included in the mediation analysis and their operationalization would improve clarity and transparency.

Overall Assessment:

This paper represents a significant and powerful contribution to the literature on poverty alleviation and mental health in China. It stands out as one of the first studies to comprehensively examine how China's Targeted Poverty Alleviation (TPA) program impacts depression levels among the poor. By using longitudinal data from the China Family Panel Studies (CFPS) survey spanning nearly a decade, the study provides a robust analysis of the TPA program's effects on mental health outcomes.

The use of rigorous statistical methods, including the Difference-in-Difference (DID) model, adds to the credibility of the findings, allowing for a nuanced understanding of the causal relationship between the TPA program and depression levels. The inclusion of mechanism analysis further benefits the study, shedding light on the pathways through which the TPA program influences individuals' mental well-being.

Despite the challenges associated with identifying causal effects in observational studies, the authors have taken commendable steps to address potential sources of bias and confounding, enhancing the internal validity of the research. The comprehensive review of the literature and thoughtful discussion of the implications for policy and practice underscore the broader significance of the study.

In summary, this paper represents a pioneering effort to fill a critical gap in the literature on poverty alleviation and mental health in China. With its methodological rigor, comprehensive analysis, and clear policy implications, the study offers valuable insights for researchers, policymakers, and practitioners alike. It is poised to make a substantial impact on both academic discourse and real-world efforts to improve the well-being of the poor in China and beyond.

Q 4 Is the title appropriate, concise, attractive?

The title is appropriate, concise, and attractive. It effectively communicates the main focus of the study. Overall, the title successfully captures the essence of the research and is likely to generate interest among readers interested in poverty alleviation and mental health.

Q 5 Are the keywords appropriate?

Yes the keywords are appropriately. These keywords provide a comprehensive overview of the study's main themes and findings, making them appropriate for indexing and search purposes.

Q 6 Is the English language of sufficient quality?

Yes, the English language used in the text is of high quality. The sentences are well-structured, clear, and grammatically correct. The terminology and phrasing are appropriate for an academic context.

Q 7 Is the quality of the figures and tables satisfactory?

Yes.

Q 8 Does the reference list cover the relevant literature adequately and in an unbiased manner?)

The reference list adequately covers relevant literature on poverty alleviation and mental health, providing a solid foundation for the study and demonstrating a thoughtful approach to reviewing existing research.

QUALITY ASSESSMENT

Q 9 Originality	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Q 10 Rigor	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Q 11 Significance to the field	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Q 12 Interest to a general audience	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Q 13 Quality of the writing	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Q 14 Overall scientific quality of the study	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

REVISION LEVEL

Q 15 Please make a recommendation based on your comments:

Minor revisions.