The Role of Cash Transfers in Preventing Suicides in Low- and Middle-Income Countries

May 2020

By Lukas Hensel

Globally, an estimated 264 million individuals in low- and middle-income countries (LMICs) suffer from depression (OurWorldinData, 2020). While there is growing awareness that mental health conditions in poor countries have economic and social effects, in many developing countries less than 10% of common mental health disorders are treated (Chisholm et al. 2016). This is despite increasing evidence that cost-effective treatments are possible LMICs (Lund et al. 2020; Patel et al. 2009). One particularly dire consequence of such disorders are suicides which amount to 800,000 deaths per year globally (WHO 2014). This brief examines the available evidence on type of economic intervention -- conditional cash transfers (CCTs) -- and its effects on suicides.

Evidence Overview

There is a consensus in the academic literature that mental health disorders are influenced by the economic circumstances faced by individuals (Adhvaryu, Fenske, and Nyshadham 2019; Lund et al. 2010; Patel, 2003; Ridley et al. 2020). At the same time, anti-poverty programmes, including cash transfer programmes, can alleviate mental health disorders such as depression (Baird, De Hoop, and Özler 2013; Haushofer, and Shapiro 2016; Ridley et al. 2020). Emerging literature suggests that these effects also extend to reducing suicides. Christian, Hensel, and Roth (2019) and Alves, Machado, and Barreto (2018) both find that government administered CCT programmes targeted at poor households with pregnant women or children led to a reduction in suicides in Indonesia and Brazil, respectively. Their results suggest that the effects of CCTs on suicides are large, long-lasting, and stronger for poor individuals and, potentially, women.

Key Takeaways From Existing Evidence

Christian, Hensel, and Roth (2019) study the impact of the Program Keluarga Harapan CCT, which was targeted at the poorest 10% of the Indonesian population (Nazara et al. 2013). They find that the programme reduced suicides by 0.36 per 100,000 individuals or 18% of the mean suicide rate. Alves, Machado, and Barreto (2018) study the impact of Brazil's Bolsa Família Programme (BFP) which similarly targeted disadvantaged segments of the population. They estimate that the BFP caused a reduction in suicides of between 3.4% and 7.9%.

1. The effects of CCTs are large given that the programmes were targeted at the poorest part of society.

The effect sizes in both studies either imply extremely large effects on the target population or an important role for spillovers in the reduction of suicides from transfer recipients to non-recipients. This is in line with a longstanding literature on the contagiousness of suicides (Hedström et al. 2008).

Furthermore, when compared to the impact of rainfall induced consumption shocks equivalent to the average CCT payment, the effect size of the CCT in Christian, Hensel, and Roth (2019) was 12 times larger.

Other factors beyond the immediate cash payment play a role in explaining the large effect size in the discussed studies. For example, the security associated with regular payments for multiple years could have reduced stress and more generally improved mental health. Similarly, the conditionalities attached to the cash transfer such as prenatal health checks, vaccinations, and regular school attendance could also have played a role. More research is needed to understand to what extent these factors contribute to the observed reduction in suicides.

2. The effects of CCTs also do not decrease over time.

Christian, Hensel, and Roth (2019) find no changes in the effect size over the duration of the programme of six years. Alves, Machado, and Barreto (2018) even find an increase of treatment effects in the duration of exposure to the CCT programme. This suggests that individuals do not adapt to the new income level but that the CCTs permanently increased their well-being. This is in line with positive long-term effects of CCT programmes on other dimensions (e.g. Cahyadi et al. 2018).

3. The effects of CCTs improving mental health are strongest for the poorest part of the population.

Alves, Machado, and Barreto (2018) find the strongest effect for towns and villages with less than 10,000 inhabitants which are generally poorer. Similarly, Christian, Hensel, and Roth (2019) find that effects are strongest in times of droughts, where poverty is most acute. This suggests that very targeted transfers will be more effective at reducing the suicide rate compared to more broadly administered benefits. Another implication is that CCT programmes can serve as an insurance against negative income shocks such as droughts and heat waves. This is particularly important in LMICs where large parts of the population rely on agriculture for their livelihoods.

4. CCTs might be more effective in helping women.

Alves, Machado, and Barreto (2018) find that the reduction in suicides is concentrated among women. This could be because Bolsa Família was preferentially awarded to women and the conditionalities of the programme being targeted at female health (e.g. prenatal check-ups) and child wellbeing (e.g. vaccinations and school attendance).

Open research questions

The evidence base of the impact of poverty alleviation programmes on suicides is somewhat limited to date. While the converging findings from two studies of CCTs in Brazil and Indonesia are encouraging, more research is needed to assess whether the findings translate to other settings programmes. Open questions

also remain about the role of conditionalities, predictability of transfers, and targeting to households with children. This is particularly important in further understanding the impact such programmes have on gender given that men are much more likely to commit suicide. Finally, researchers do not know whether the observed impacts last beyond the duration of the programmes. Further research to answer these questions is important and can help to optimize the design of poverty alleviation programmes with respect to suicide prevention.

Policy implications

The available evidence suggests that CCT programmes do save lives by preventing suicides. They likely do so through an improvement in mental health of respondents. Given the lack of readily available mental health treatment, this is an important side effect of such programmes and should be considered in any cost-benefit calculations. However, such consideration should not distract from the focus of CCTs on education, economic well-being, and physical health. Poverty alleviation programmes are not going to solve all mental health issues. Even with more and better social security systems in place in LMICs, expanding treatment capacity remains a high priority.

One method of implementing such programmes, to improve cost-effectiveness and during the COVID-19 pandemic, could be to administer treatments over the phone. Researchers at the Mind and Behaviour Research Group are currently preparing a large-scale trial of a behavioural activation intervention to fight depression in adolescents in South Africa. Other promising approaches include the training of laymen to administer simple treatments following standardized manuals (e.g. Patel et al. 2017).

References

Adhvaryu, A., Fenske, J., & Nyshadham, A. (2019). Early Life Circumstance and Adult Mental Health. *Journal of Political Economy*, *127*(4), 1516–1549.

Alves, F. J. O., Machado, D. B., & Barreto, M. L. (2018). Effect of the Brazilian cash transfer programme on suicide rates: a longitudinal analysis of the Brazilian municipalities. *Social Psychiatry and Psychiatric Epidemiology*.

Baird, S., De Hoop, J., & Özler, B. (2013). Income shocks and adolescent mental health. *Journal of Human Resources*, *48*(2), 370-403.

Cahyadi, N., Hanna, R., Olken, B. A., Prima, R. A., Satriawan, E., & Syamsulhakim, E. (2018). Cumulative Impacts of Conditional Cash Transfer Programs: Experimental Evidence from Indonesia. *NBER Working Paper 24670*.

Chisholm, D., Sweeny, K., Sheehan, P., Rasmussen, B., Smit, F., Cuijpers, P., & Saxena, S. (2016). Scaling-Up Treatment of Depression and Anxiety: A Global Return on Investment Analysis. *The Lancet Psychiatry*, *3*(5), 415–424.

Christian, C., Hensel, L., & Roth, C. (2019). Income Shocks and Suicides: Causal Evidence From Indonesia. *The Review of Economics and Statistics*, *101*(5), 905–920.

Lund C., Orkin K., Witte M., Davies T., Haushofer J., Bass J, … Patel V. (2020). Economic Impacts of Mental Health Interventions in Low and Middle Income Countries: A Systematic Review and Meta-Analysis. *Working Paper.*

Haushofer, J., & Shapiro, J. (2016). The Short-Term Impact of Unconditional Cash Transfers to the Poor: Experimental Evidence. *The Quarterly Journal of Economics*, *4*, 1973–2042.

Hedström, P., Liu, K.-Y., & Nordvik, M. K. (2008). Interaction Domains and Suicide: A Population-based Panel Study of Suicides in Stockholm, 1991-1999. *Social Forces*, *87*(2), 713–740.

Lund C, Breen A, Flisher AJ, et al. Poverty and Common Mental Disorders in Low and Middle Income Countries: A Systematic Review. *Social Science & Medicine* 2010; 71(3): 517- 28.

Nazara, S., & Rahayu, S. K. (2013). Program Keluarga Harapan (PKH): Indonesian Conditional Cash Transfer Program. *The International Policy Centre for Inclusive Growth Research Brief 42*.

Patel V, Kleinman A. Poverty and Common Mental Disorders in Developing Countries. *Bulletin Of The World Health Organization* 2003; 81(8): 609-15.

Patel, V., Weobong, B., Weiss, H. A., Anand, A., Bhat, B., Katti, B., … Fairburn, C. G. (2017). The Healthy Activity Program (HAP), a Lay Counsellor-Delivered Brief Psychological Treatment for Severe Depression, in Primary Care in India: a Randomised Controlled Trial. *The Lancet*, *389*(10065), 176–185.

Patel, V., Simon, G., Chowdhary, N., Kaaya, S., & Araya, R. (2009). Packages of Care for Depression in Low- and Middle-Income Countries. *PLoS Medicine*, *6*(10).

Ridley, M. W., Rao, G., Schilbach, F., & Patel, V. H. (2020). Poverty, Depression, and Anxiety: Causal Evidence and Mechanisms. *NBER Working Paper 27157*.

WHO. 2014. "*Preventing Suicide: A Global Imperative.*" Geneva: World Health Organization