

The impact of income on mental health



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Decades of research have shown the relationship between income and mental health.¹ However, it has been difficult to draw inferences about causality between income and mental health, which has hampered opportunities to inform public policy.^{2,3} In this issue of *The Lancet Public Health*,⁴ Rachel M Thomson and colleagues help to narrow this knowledge gap by systematically assessing the evidence for a causal relationship between income, wellbeing, and mental health. The direction of causality evaluated by the authors is that a change in income is followed by a subsequent change in wellbeing and mental health, suggesting a unidirectional causal effect of income on mental health and wellbeing. Specifically, the authors find evidence that an increase in income is followed by an improvement in wellbeing of 0.274 standardised mean difference (SMD; 95% CI 0.143 to 0.405). This finding is important because it suggests that policies directed towards income security have meaningful effects on wellbeing.

Several other findings in this review have profound implications for policy making and future research. First, the authors looked at both the relationship between income and wellbeing, and between income and mental health. They found that increases in income were associated with a 0.084 SD [ASMD (95% CI 0.038 to 0.130) improvement in mental health, and reported an effect size of -0.21 SMD (95% CI -0.30 to -0.13) related to a drop in mental health following a reduction in income. These findings suggest that the effect of income loss is more detrimental to mental health than an increase in income is for improving mental health, which has important implications for those living just above or below the poverty line for whom a drop in income can represent a substantial risk to income security and mental health. Addressing the adverse effect of income loss is especially relevant amidst the current economic climate, which has been affected by external shocks such as the COVID-19 pandemic,⁵ climate change,⁶ and the war in Ukraine; all of which potentially contribute to income insecurity through job and income losses. Even without any income loss, increased prices for energy, food, and housing have eroded the buying power of households. The findings in Thomson and colleague's

review therefore highlight the importance of focusing on income security in public (health) policy, including policy measures such as debt relief, minimum wage, and income supports including (but not only) tax credits.

Second, evidence of a causal relation between income and mental health does not rule out the possibility of more complex dynamics, such as bidirectional or looped causality. An improvement in income can lead to improved mental health, which in turn can further propel benefits to livelihood or financial security, as mental health is associated with increased productivity, participation in the labour market, and decreased household spending on health care.⁷ Conversely, income loss can drive deterioration in mental health, which in turn can further threaten income security, perpetuating a cycle of poverty or income insecurity and mental ill-health.^{2,8} The effect sizes reported in this systematic review and meta-analysis give new insights into causality, but might underestimate the true long-term effects of income security on mental health.

Third, this review highlights the need for well powered, longitudinal, large datasets that can be used for rigorous study designs such as natural experiments that apply causal inference methods, allowing for robustly estimating causal relationships in real-world settings in which randomised controlled trials might not be feasible. Available data analytical techniques that help determine causal effects in non-randomised data are instrumental variable and difference-in-difference analysis. Studies are increasingly applying these methods to look at the effects of income on mental health.^{9,10} Application of these methods allows for the ability to better infer causality, which can guide public policies seeking to improve population mental health.

Thomson and colleagues have produced a robust synthesis of the evidence that is a welcome and timely contribution to the field. The findings inform future research study designs and public policy, particularly the notion that investing in income security and the alleviation of poverty is crucial in improving mental health, as are policies that can aid in breaking the cycle between poverty and mental illness.

We declare no competing interests.

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*Laura Shields-Zeeman, Filip Smit

lshields-zeeman@trimbos.nl

Department of Mental Health Prevention, Trimbos Institute, Utrecht 3521, Netherlands (LS-Z, FS); Department of Interdisciplinary Social Science, Faculty of Social Sciences, Utrecht University, Utrecht, Netherlands (LS-Z); Department of Clinical Epidemiology and Department of Epidemiology and Biostatistics, Amsterdam University Medical Centres, Amsterdam, Netherlands (FS)

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