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Invited Commentary

Invited Commentary: Linking Job Security and Mental Health—Challenges and Future Directions

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Research in the social and health sciences has linked job insecurity to poorer mental health but relies on observational data and faces challenges of causal inference. LaMontagne et al. (*Am J Epidemiol*. 2021;190(2): 207–215) innovate by using both within-person fixed-effects and random-effects regression to analyze data from 14 annual waves of an Australian survey spanning 2002–2015. Using this more rigorous design, they find that improvements in perceived job insecurity were associated with improvements in Mental Health Inventory–5 scores in a large, nationally representative panel study. By using each respondent as their own control, fixed-effects models remove the influence of time-invariant confounders. Innovative new approaches are still needed to address the causal directionality of the association and to capture both those whose exposure changes as well as those for whom it persists. Future work should also consider potential modifying factors including societal conditions, macroeconomic and other period effects, and characteristics of individuals, as well as drawing on multidisciplinary approaches that consider jobs as a combination of multiple health-relevant exposures and embed individual workers in families and communities to assess the full reach and consequences of perceived job insecurity.

causality; fixed effects; job insecurity; longitudinal studies; mental health

Abbreviation: HILDA, Household Income and Labour Dynamics in Australia.

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An important research tradition in the social and health sciences has linked job insecurity to poorer mental health. One strand has focused on experiences of job insecurity, in the form of dislocations including job loss and unemployment, and has found consistent links with elevated depressive symptoms, anxiety, and other social-psychological problems (1). A largely separate strand of research has examined perceived job insecurity—the perceived threat of job loss. A systematic review and meta-analysis of prospective studies conducted in the United States and Europe found that perceived job insecurity and unemployment were significantly related to a higher risk of depressive symptoms, with the association modestly larger for job insecurity than for unemployment (2). This evidence is important because job loss is common and perceived job insecurity might be even more widespread in a contemporary economy increasingly characterized by precarious employment relationships (3).

However, both strands of research are vulnerable to the threat that reverse causation or confounding accounts for the association, because of the reasonable possibilities that individuals with poor mental health might be less able to keep their jobs and might have more pessimistic perceptions of their job security. Some researchers have focused on plant closures or mass layoffs to isolate a more exogenous form of job insecurity that is harder to attribute to an individual worker's health or other characteristics (e.g., Hamilton et al. (4)). While these studies provide more internally valid estimates of the impact of an exposure that is difficult to experimentally manipulate, plant closures are relatively rare events that typically affect blue-collar workers in specific industries and regions (1). Additionally, job losses and unemployment involve material losses and changes in time

use and social networks, and there are policy mechanisms to address displaced workers in many societies. Thus estimates from these relatively rigorous studies of a particular type of job displacement are not directly applicable to the experiences of workers across the occupational spectrum who feel their job security to be threatened.

In this issue, LaMontagne et al. (5) provide important new evidence, addressing this fundamental critique by using 14 waves of the Household, Income and Labour Dynamics in Australia (HILDA) study to estimate fixed-effects regression models linking within-person change in perceived job insecurity to change in mental well-being. By using each respondent as their own control, fixed-effects models remove the influence of time-invariant characteristics, such as earlier life experiences, that could predict both the focal exposure of perceived insecurity and subsequent mental health. Several other aspects of the study design enhance its contribution to the literature. HILDA is a nationally representative sample large enough to provide sufficient cases of within-person change over time in exposure and outcome necessary for the fixed-effects approach, and it includes men and women from across the occupational spectrum. The authors use a 3-component measure of perceived insecurity that captures 2 key elements relevant for workers in the contemporary labor market: beliefs about the secure future of their job (asked in 2 different ways) and beliefs about the survival of their firm over the next 5 years. Using these items to create a graded score allows assessment of change across a range of levels of perceived job insecurity, rather than relying on more commonly used and blunter dichotomous indicators. Finally, the authors adjust for whether the respondent changed jobs over the period of observation, and they confirm that it does not account for their findings about perceived job insecurity. This adjustment is important because job changes, whether due to an involuntary loss or a voluntary change, are likely accompanied by changes in material rewards, social networks, and other factors that could themselves catalyze a change in mental health. Explicitly accounting for job changes allows the authors to estimate the focal association for workers in a variety of situations: those who stay in the same job, but face changing circumstances that cause them to revise their perceptions of job security, and those who change jobs, potentially altering their perceived job security because external conditions have changed. It is encouraging to see these more robust and representative estimates of the link between changes in perceived job insecurity and changes in mental health. To the extent that perceived job insecurity is modifiable by intervention, these findings imply the potential for population health improvements in a socially and economically costly health outcome. However, we still need to consider a few key issues that this intriguing study raises and extensions that will strengthen the grounds for and impact of intervention.

Despite its strengths, the analytical strategy used by LaMontagne et al. (5) does not eliminate all challenges to causal inference. In addition to the remaining possibility of residual confounding by time-varying characteristics, a core issue is their choice to focus on estimates derived from models that assess how change in outcome is related to change in exposure over the same period, when it is not possible to know which change occurred first. The estimated impact of perceived job security measured one wave earlier was considerably weaker than that of contemporaneous exposure, whether considered alone or in addition to contemporaneous exposure. In other studies by these authors, they verify much weaker associations when using lagged exposure measures in a range of models, using the same HILDA cohort (6) as well as a Swedish cohort (7). It might be that better measurement—using more frequent measurements or even momentary assessment techniques—could help to unravel the nature of this association. Broader questions arise, however. Assuming the causal directionality proposed by these and other researchers, how long do perceptions of job security take to influence mental health? And how long does this impact last? To what degree do the impacts captured here cascade into longer-lasting mental or physical health consequences? Estimates of the population health impact of perceived job insecurity will likely depend on the answers to questions like these.

Fixed-effects estimation is a powerful approach and increasingly useful as a greater range of multiwave panel studies of working-aged people becomes available. However, worth consideration are the workers who might be obfuscated in estimates from these models. Fixed-effects estimates are derived from those who change in exposure and/or outcome and thus are appropriate for a study that asks how change in an individual's perceived insecurity is associated with change in their reported mental health. However, previous evidence has suggested that the worst health is found among the chronically insecure (8–10). Workers whose perceived job security remains steady over time are captured in the random-effects estimates presented here, and results from those models are similar to the main results obtained with fixed-effects regressions (5). However, neither modeling approach captures the potentially cumulative impact of persistent exposure. LaMontagne et al. report on a supplemental analysis showing that respondents with the greatest accumulation of security across waves have substantially higher mental health scores than those who accumulated the least, but the main estimates do not incorporate these cumulative effects. To understand the total population health impact of job insecurity, researchers will need to devise strategies that capture those with variable and stable perceived job security. This is challenging because all methods that rely on repeat measures of perceived job security depend on respondents being employed, such that they will be asked to report on their job characteristics. Arguably, individuals who previously perceived their jobs to be insecure and were proven correct are an important group, but they are underrepresented in studies of perceived job insecurity unless any period of unemployment they experienced was relatively brief and they did not decide to leave the paid labor force.

Future research also could usefully expand the contexts to which the findings of LaMontagne et al. (5) can be compared, considering among other potential modifying factors societal conditions, macroeconomic and other period effects, and characteristics of individuals. First, while HILDA well represents contemporary working-age Australians, and these findings might generalize to other wealthy economies, social

welfare provisions for workers and those displaced from their jobs differ across societal contexts, potentially altering the consequences of job loss and the intensity of threat felt by those who perceive insecurity. Moreover, we know little to nothing about the association between perceived job security and mental health in less-wealthy economies (2). Second, HILDA respondents were observed during 2002–2015, a period that included the major global recession of 2007–2009 as well as stronger macroeconomic periods. Macroeconomic conditions have been shown in some cases to alter the association between an individual's perceived job security and their well-being (11). Third, the authors consider effect modification by sex, an important factor due to gendered socialization around the employment role and variation in the prevalence of diagnosed affective disorders. Future work should also explore potential variation across age and socioeconomic position because of the normativity and household consequences of job insecurity at different life-course stages and resource levels (10, 12).

Finally, researchers could draw on several allied disciplines to broaden the scope of studies of perceived job insecurity and health. First, researchers typically examine perceived job security as a sole, focal exposure measure. However, workers who perceive a threat of job loss or question the survival of their firm might also concurrently be experiencing other job conditions known to be associated with health. Strong traditions in occupational epidemiology and occupational psychology have shown the power of multidimensional measures of work conditions, as exemplified by the job demand-control-support (13, 14) and effort-reward imbalance (15, 16) models. Considering jobs as a "package deal" of characteristics could provide a context to elucidate how perceived insecurity is influential relative to other characteristics. It could also reveal distinct clusters of workers, some of whom voluntarily accept low perceived job security in exchange for other compensating factors, such as pay or promotional opportunity, while others would prefer higher job security and might also face other health-compromising job conditions.

Second, sociological perspectives push researchers beyond a singular focus on individuals toward considering how they are embedded in families and communities. Families pool resources; make joint labor-market, migration, and investment decisions; and are sources of social and instrumental support, making them an essential unit for understanding how people cope with perceived job insecurity. The mental health consequences might be greater if multiple members of the household perceive job insecurity, and one household member's perceived insecurity could affect the well-being of other household members. Sociologists have also considered how longer-term structural declines in employment opportunity at the community level might influence the outlook and life chances of residents (17) and how communities were drastically affected by shocks to job security due to acute events such as the Great Depression (18) or shorter-term community-level changes, such as recent trajectories of unemployment rates (19). These contexts shape the exposure to perceived job insecurity of residents and could condition their responses to it. In sum, triangulation of evidence from different types of studies carried out in diverse settings and using different measurement strategies and disciplinary lenses will be vital to generating clear and actionable evidence about the link between perceived job insecurity and the health of people and populations.

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