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Influence of work hours and commute time on food practices: a longitudinal analysis of the Household, Income and Labour Dynamics in Australia Survey

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ABSTRACT

Objectives Work hours and commute time are key contributors to time scarcity, with potential detrimental implications for healthy eating. This study examined (1) associations between work and commute hours with food practices and (2) within-individual associations between changes in work and commute hours with changes in food practices.

Setting Australia

Participants Data were from 14 807 respondents in waves 7 (2007), 9 (2009), 13 (2013) and 17 (2017) of the Household, Income and Labour Dynamics in Australia Survey. The sample for this analysis included individuals who were in paid employment in at least one of the four waves.

Primary and secondary outcome measures Outcomes included frequency of out-of-home food purchasing for breakfast, lunch, dinner and all three summed eating occasions, and fruit and vegetables consumption.

Results Results indicated the longer individuals spent working and commuting, the more likely they were to purchase out-of-home foods (frequency of total out-of-home food purchasing: incidence rate ratio (IRR)=1.007 (95% CI 1.007 to 1.008)), and the less they consumed fruit and vegetables, although reductions in fruit and vegetables servings were minimal (fruit: β=−0.002 (95% CI −0.003 to −0.001), vegetables: β=0.002 (95% CI 0.003 to 0.001)). Similar results regarding associations with out-of-home food purchasing were observed when examining within-individual changes (IRR=1.006 (95% CI 1.005 to 1.007)).

Conclusions Results suggest employment-related time demands push towards more frequent out-of-home food purchasing. In the long term, this may have negative health consequences as out-of-home foods tend to be less healthy than home-prepared foods.

INTRODUCTION

Time scarcity refers to people lacking enough time (or the perception that they do not have enough time) to undertake day-to-day activities. Work patterns, including paid work hours and commute time, are key contributors to time scarcity. This is of critical importance as demonstrated by a meta-analysis which found that in 2016 over 745 000 deaths could be attributed to long work hours. In Australia, over 40% of adults report feeling scarce for time, with paid work reported as the main source of time scarcity. While average work hours have remained stable in high-income countries, time spent commuting has increased, primarily due to urban sprawl and traffic congestion.

Time scarcity can reduce the time left to individuals to engage in health-related activities and may monopolise attention at the expense of other activities, such as engagement in healthy food practices (i.e., the selection, purchasing, preparation and consumption of food). Over time, evidence suggests changes in work-related time demands have been paralleled by changes in food practices. For example, prior studies have demonstrated a trend towards less time spent preparing and cooking at home and that this was concurrent with decreased spending on unprocessed foods and ingredients, and increased spending on meals outside the home. Out-of-home meals are potentially associated with poorer diet quality.
the impact of suboptimal diet on health problems such as obesity, type II diabetes and cardiovascular disease. However, the current evidence on the role of work hours and commute time in food practices is mixed and mainly drawn from cross-sectional studies and mostly from the USA. Very few prior studies have explored associations between work hours and commute time with food practices in Australia. One study suggested minimal differences in dietary intakes between women living with children working different hours, with findings indicating greater alcohol and caffeine intake but no differences in intake of most nutrients when comparing those working 25 hours or more per week to those working less hours or not working. Another study found no association between work hours and commute time with diet quality among dieters in Australia. That study only considered work hours and commute time separately and used hourly wage as a proxy for work hours, so any conclusions drawn from this analysis need to be interpreted cautiously, since its measure of work hours reflects income rather than hours worked.

This study aims to longitudinally examine associations between both work hours and commute time with food practices, using data from the nationally representative Household, Income and Labour Dynamics in Australia (HILDA) Survey. The study first examines associations between work and commute hours with out-of-home food purchasing and fruit and vegetables consumption across individuals. It then assesses whether changes in an individual’s work and commute hours over time are associated with changes in out-of-home food purchasing and fruit and vegetables consumption. The findings of this study will enhance our understanding of food practices among working individuals, potentially informing strategies and policies related to workers’ health and flexible work arrangements.

METHODS

Data source
This study used data from the HILDA Survey. HILDA is a longitudinal study of a nationally representative sample of Australian households randomly selected through a multi-stage sampling approach. The survey has been conducted annually since 2001, collecting information on aspects of life in Australia relating to household and family life, employment, education, income, expenditure, health and well-being. Information is also collected less frequently on other topics including food practices. HILDA collects data using a combination of face-to-face interviews with trained interviewers and self-reported questionnaires. Between 2001 and 2010, over 13 000 persons (from over 7000 households) were interviewed each year. From 2011 onwards, this figure increased to over 17 000 persons (from over 9 000 households) due to the inclusion of a top-up sample, allowing immigrants who had arrived after 2001 to enter the survey sample.

Sample
The data used in this study were from waves 7 (2007), 9 (2009), 13 (2013) and 17 (2017) of the HILDA Survey. These were the only waves that captured the food practices outcomes of interest in this study. The sample of this study included individuals who were in paid employment in at least one of the four waves. Therefore, all participants included in the study had positive work hours in at least one of the four waves. If participants had 0 work hours at one (or up to three) wave(s), they were classified as not working (0 hours) for that (or those) particular wave(s). Those who had 0 work hours at all four waves were not part of the analysed sample. Figure 1 provides a flowchart of the HILDA participants included in the study.

Outcome variables
Six self-reported variables were used to measure food practices. Four variables assessed weekly frequency of out-of-home food purchasing (i.e., food bought from restaurant, café, fast food outlet or any other place that prepares...
Table 1  Descriptive characteristics of participants across all four waves

| Variables                                      | Wave 2007 n=7701 | Wave 2009 n=8083 | Wave 2013 n=10 779 | Wave 2017 n=11 456 |
|------------------------------------------------|-------------------|-------------------|-------------------|-------------------|
| Weekly frequency of oohf purchasing for breakfast | 0.00 (0.00, 0.00) | 0.00 (0.00, 0.00) | 0.00 (0.00, 0.00) | 0.00 (0.00, 0.00) |
| Wave 2009                                      | (n=7701)          | (n=8083)          | (n=10 779)        | (n=11 456)        |
| Weekly frequency of oohf purchasing for lunch   | 1.00 (0.00, 3.00) | 1.00 (0.00, 2.00) | 1.00 (0.00, 2.00) | 1.00 (0.00, 2.00) |
| Wave 2009                                      | (n=7701)          | (n=8081)          | (n=10 777)        | (n=10 452)        |
| Weekly frequency of oohf purchasing for dinner  | 1.00 (0.00, 2.00) | 1.00 (0.00, 1.00) | 1.00 (0.00, 1.00) | 1.00 (0.00, 1.00) |
| Wave 2009                                      | (n=7701)          | (n=8080)          | (n=10 777)        | (n=10 452)        |
| Total weekly frequency of oohf purchasing (breakfast, lunch and dinner) | 2.00 (1.00, 4.00) | 2.00 (1.00, 4.00) | 2.00 (1.00, 4.00) | 2.00 (1.00, 4.00) |
| Wave 2009                                      | (n=7701)          | (n=8077)          | (n=10 774)        | (n=10 451)        |
| Average daily fruit servings                    | 1.00 (0.43, 2.00) | 1.00 (0.43, 2.00) | 1.00 (0.43, 2.00) | 1.00 (0.43, 2.00) |
| Wave 2009                                      | (n=7700)          | (n=8081)          | (n=10 777)        | (n=10 451)        |
| Average daily vegetable servings                | 2.00 (1.43, 3.00) | 2.00 (1.29, 3.00) | 2.00 (1.29, 3.00) | 2.00 (1.29, 3.00) |
| Wave 2009                                      | (n=7700)          | (n=8080)          | (n=10 776)        | (n=10 452)        |
| Weekly work hours                              | 38.00 (19.00, 44.00) | 38.00 (15.00, 42.00) | 37.00 (15.00, 40.00) | 37.00 (15.00, 40.00) |
| Wave 2009                                      | (n=7582)          | (n=7905)          | (n=10 601)        | (n=11 236)        |
| Weekly commute hours                           | 2.00 (0.50, 5.00) | 2.00 (0.50, 5.00) | 2.00 (0.50, 5.00) | 2.00 (0.50, 5.00) |
| Wave 2009                                      | (n=7393)          | (n=7770)          | (n=10 445)        | (n=10 061)        |
| Combined weekly work and commute hours         | 40.50 (20.50, 50.00) | 40.00 (18.00, 48.00) | 40.00 (16.00, 48.00) | 40.00 (17.00, 48.00) |
| Wave 2009                                      | (n=7379)          | (n=7747)          | (n=10 439)        | (n=11 040)        |
| Age (years)                                    | 39.00 (26.00, 49.00) | 39.00 (26.00, 50.00) | 40.00 (27.00, 53.00) | 42.00 (29.00, 55.00) |
| Wave 2009                                      | (n=7701)          | (n=8083)          | (n=10 779)        | (n=11 456)        |

Categorical work hours

| Not working (0 hours) | 787 (10.2) | 1046 (12.9) | 1635 (15.2) | 1701 (14.8) |
| Working up to full-time (1–38 hours/week) | 3447 (44.8) | 3559 (44.0) | 4795 (44.5) | 5107 (44.6) |
| Working overtime (>38 hours/week) | 3348 (43.5) | 3300 (40.8) | 4171 (38.7) | 4428 (38.7) |
| Missing | 119 (1.5) | 178 (2.2) | 178 (1.7) | 220 (1.9) |

Sex

| Male | 3824 (49.7) | 4059 (50.2) | 5358 (49.7) | 5722 (49.9) |
| Female | 3877 (50.3) | 4024 (49.8) | 5421 (50.3) | 5734 (50.1) |

Education

| No tertiary education | 5739 (74.5) | 5952 (73.6) | 7601 (70.5) | 7772 (67.8) |
| Tertiary education | 1961 (25.5) | 2128 (26.3) | 3174 (29.4) | 3681 (32.1) |
| Missing | 1 (<1) | 3 (<1) | 4 (<1) | 3 (<1) |

Household composition

| Single person† | 952 (12.4) | 1035 (12.8) | 1409 (13.1) | 1614 (14.1) |
| Single parent‡ | 131 (1.7) | 139 (1.7) | 169 (1.6) | 190 (1.7) |
| Multi-person without children§ | 3780 (49.1) | 4246 (52.5) | 5799 (53.8) | 6236 (54.4) |
| Multi-person with children¶ | 2838 (36.9) | 2663 (32.9) | 3402 (31.6) | 3416 (29.8) |

Remoteness

| Major cities of Australia | 5150 (66.9) | 5428 (67.2) | 7548 (70.0) | 7857 (68.6) |
| Inner regional Australia | 1614 (21.0) | 1707 (21.1) | 2110 (19.6) | 2405 (21.0) |
| Outer regional Australia | 799 (10.4) | 791 (9.8) | 978 (9.1) | 1045 (9.1) |
| Remote or very remote Australia | 138 (1.8) | 157 (1.9) | 142 (1.3) | 147 (1.3) |
| Missing | 1 (<1) | 3 (<1) | 4 (<1) | 3 (<1) |

Neighbourhood SES

| Lowest decile SES | 543 (7.1) | 561 (6.9) | 768 (7.1) | 889 (7.8) |
| 2nd decile | 677 (8.8) | 701 (8.7) | 1011 (9.4) | 1011 (8.8) |
| 3rd decile | 749 (9.7) | 802 (9.9) | 987 (9.2) | 1072 (9.4) |
| 4th decile | 715 (9.3) | 738 (9.1) | 980 (9.1) | 1102 (9.6) |
| 5th decile | 771 (10.0) | 851 (10.5) | 1139 (10.6) | 1244 (10.9) |
| 6th decile | 750 (9.7) | 819 (10.1) | 1158 (10.7) | 1150 (10.0) |
| 7th decile | 798 (10.4) | 846 (10.5) | 1115 (10.3) | 1227 (10.7) |
and sells meals) for (1) breakfast (0–7 times/week), (2) lunch (0–7 times/week), (3) dinner (0–7 times/week) and (4) a derived variable representing the total of all three eating occasions (0–21 times/week). Two variables examined average daily intake of fruit and vegetables (0–6 serves/day). The corresponding HILDA questions are detailed in online supplemental file 1.

Exposure variables

Exposure variables included continuous measures of self-reported weekly work hours, commute hours, and the combination of the two (online supplemental file 1).

Confounders

Potential confounders included age, sex, education, work schedule, household composition, remoteness area and neighbourhood socioeconomic status (SES) (online supplemental file 1).

Statistical analysis

Mixed effects models with random intercepts for study participant and robust SEs were fitted to examine associations between each of the three exposures with each of the six food practices. Exposure and outcome at the same time point were used in the mixed effects models. Poisson mixed models were fitted for the out-of-home food purchasing outcomes and linear models for the fruit and vegetables outcomes. Change in exposure represents a difference in exposure within the same individual across waves (e.g., increase or decrease of their work hours) as opposed to no change, where the exposure remains constant across waves (e.g., same work hours across waves). We did not manually compute a variable capturing change versus no change. Fixed effects models automatically capture whether an individual’s exposure has changed as well as the magnitude and direction of that change. Fixed effects models assess within-individual change, where each respondent acts as their own control. Therefore, fixed effects models controlled for all stable (i.e., ‘fixed’) measurable and non-measurable characteristics of the respondent.

In the fixed effects models, the estimate of each exposure represents the average change in outcome (i.e., IRR for frequency of out-of-home food purchasing, and number of servings for fruit and vegetables intake) for a one-unit (hour) within-individual change in exposure. Both the mixed and fixed models were fitted with robust SEs, therefore correcting for any potential overdispersion in the Poisson regressions. Linearity assumption of the linear models was assessed by examining scatterplots of the relationship between continuous outcome and exposure. All models were adjusted for the aforementioned potential confounders. As a sensitivity analysis, we explored associations between work hours and food outcomes, comparing those not working (0 hours) to those working up to full-time (1–38 hours/week) and those working overtime (>38 hours/week), with cut-off points guided by the Australian Government Fair Work’s definition of full-time and overtime hours. Additional analyses included models also adjusting for household income (results not shown).
Analyses were conducted in Stata V.16 using the commands `mepoisson`, `mixed`, `xtpoisson` and `xtreg` with `fe` option for the fixed effects models. Sample sizes for each analysis are shown in online supplemental file 2.

**Patient and public involvement**

Patients or public were not involved in the design, conduct or reporting of this study.

**RESULTS**

Table 1 presents the sample characteristics across the four waves. Online supplemental file 3 presents the within-individual variation in exposures and outcomes across waves.

**Associations between work and commute hours with food practices**

Figure 2 shows the estimates and CIs from the adjusted mixed models. Greater work hours was associated with a higher IRR for the frequency of total out-of-home food purchasing by a factor of 1.008 (95% CI 1.007 to 1.009). Greater commute hours was associated with a higher IRR for the frequency of total out-of-home food purchasing by a factor of 1.020 (95% CI 1.017 to 1.022). When considered in combination, greater work and commute hours was associated with a higher IRR for the frequency of total out-of-home food purchasing by a factor of 1.008 (95% CI 1.007 to 1.009). Overall, similar results were obtained when exploring out-of-home food purchasing for eating occasions separately, although IRRs were larger for out-of-home food purchasing for breakfast than for lunch and dinner (figure 2).

When looking at fruit and vegetables intake, greater work hours was associated with fewer daily servings of fruit (−0.002, 95% CI −0.003 to −0.001) and vegetables (−0.002, 95% CI −0.003 to −0.001) (figure 2E,F). Similar results regarding lower fruit and vegetables intakes were observed when considering work hours in combination with commute hours. When exploring commute hours separately, greater commute hours was associated with fewer daily servings of fruit (−0.006, 95% CI −0.009 to −0.003) and vegetables (−0.009, 95% CI −0.012 to −0.005) (figure 2E,F). The IRRs from the adjusted Poisson mixed effects models for each out-of-home food outcomes and the estimates from the adjusted linear mixed effects models for fruit and vegetables are presented in online supplemental file 4.

Sensitivity analysis examined associations between work hours and food outcomes, comparing those not working (0 hours) to those working up to full-time (1–38 hours/
week) and those working overtime (>38 hours/week) (table 2). Similar patterns were observed for out-of-home food behaviours as for analysis modelling continuous work hours. Those working up to full-time and those working overtime consistently had a higher IRR for the frequency of out-of-home food purchasing for each eating occasion, although when comparing out-of-home food purchasing for breakfast among those not working to those working up to full-time the CI contained the null. Estimated effects also suggested fewer daily servings of vegetables among those working up to full-time and those working overtime compared with those not working, although the CI included the null. No differences were observed for fruit intake.

Figure 3 shows the predicted weekly frequency of out-of-home food purchasing for different eating occasions and the predicted number of daily servings for fruit and vegetables intake. For example, while those working 15 hours per week were predicted to, on average, eat out about two times per week, those working 40 hours per week were predicted to, on average, eat out more than three times each week.

**Associations between changes in work and commute hours with changes in food practices**

Table 3 presents the results of the Poisson and linear fixed effects models. As weekly work hours increased by 1 hour within individuals over time, the IRR for the frequency of total out-of-home food purchasing changed by a factor of 1.006 (95% CI 1.005 to 1.007). When combined work and commute hours increased by 1 hour within individuals over time, the IRR for the frequency of total out-of-home food purchasing changed by a factor of 1.006 (95% CI 1.005 to 1.007). When exploring out-of-home food purchasing for eating occasions separately, similar results were observed, although IRRs were larger for out-of-home food purchasing for breakfast than for lunch and dinner. No associations were found between changes in work and commute hours over time and changes in fruit and vegetables consumption. Online supplemental file 5 presents the results for all analyses including estimates for covariates included in the adjusted models.

**DISCUSSION**

This study investigated longitudinal associations between both work hours and commute time with food practices. Results indicated that the longer individuals spent working and commuting, the more likely they were to purchase out-of-home foods and the less they consumed fruit and vegetables, although reductions in servings of fruit and vegetables were minimal. Overall, effect estimates for each outcome were small. However, figure 3 demonstrated what they meant in real terms (i.e., equated to weekly purchasing frequency and daily servings for given work hours and commute time), suggesting behaviours accumulate as work and commute hours increase, particularly for out-of-home food purchasing. Similar results.
regarding associations between work hours and commute time with out-of-home food purchasing were observed when looking at changes within individuals over time. For example, individuals whose weekly work hours increased by 10 hours over time were estimated to have an increased IRR for the frequency of total out-of-home food purchasing of 1.06, that is, a 6% increase compared with individuals whose work hours did not change. However, no associations were observed between changes in work hours and commute time and changes in fruit and vegetables consumption.

Results of this study support previous cross-sectional findings suggesting links between longer work hours and a higher frequency of restaurant and fast food visits, more takeaway meals and eating out at least once per week. Previous studies have identified quickness, busyness and the need to minimise time and efforts for meals as common reasons for buying takeaway and fast-food meals. Long work hours and commute times may therefore lead to potentially less healthy food practices through mechanisms including scarcity of time available for preparation of and access to healthy foods. In addition to work-related time demands, additional household-related time demands (e.g., housekeeping, caring for children) may further exacerbate negative impacts on food practices.

Additional mechanisms of the influence of longer work hours on increased out-of-home food purchasing may relate to more income owing to longer work hours increasing affordability of out-of-home foods. This may not always be the case. Long work hours may not necessarily mean high income. One could argue household income may influence individual work hours. For example, in a multi-person household, if one person earns enough to provide for the whole household, other people in the household may not need to work at all or only work short hours. However, additional analyses included models also adjusting for household income as a confounder, and no differences in magnitude or direction of effects were observed (results not shown).

Changes in out-of-home food purchasing did not translate into changes in fruit and vegetables consumption. This may be because food habits relating to fruit and vegetables are formed early in life and maintained regardless of changes in work hours or commute time. In other words, individuals’ changes in employment-related time demands may not be associated with fruit and vegetables intake changes because people adapt to maintain the same behaviours around their time demands.

With increasing work-related time demands and the health implications of food practices, policy efforts...
to promote healthy eating and healthy living among working individuals are timely and warranted. Potential strategies to deter negative impacts of work-related time demands on food practices may include changes in work arrangements such as employers offering flexible work hours and the opportunity to work from home to take the pressure of the roads and transport networks.44 However, governments may find it hard to encourage employers to be more flexible with work hours, and have long struggled with shortening commute times.45 Another possible response from governments may be to ensure environments do not facilitate unhealthy food choices in the first place, and encourage healthy eating among those looking for quick and convenient food options. Research suggests that access to healthy food options at the worksite is often limited compared with the myriad of unhealthy food options available in cafeterias, onsite shops and vending machines.46 Given the length of time workers spent at their workplace and the health implications of healthy eating, employers should consider improving the healthfulness of the worksite food environment by ensuring healthy foods are available to employees onsite as well as limiting the availability of unhealthy food options in the workplace.47 48

As a result of the COVID-19 pandemic, many workers around the world were forced to work from home for the greater part of 2020 and some of 2021, temporarily reducing, if not eliminating commute times.49 The consequences of this change on food practices remain largely unknown, however, the impact of COVID-19 and working from home can be examined in future releases of the HILDA data.50

A strength of this study is its use of data from a nationally representative sample with a high participation rate.34 The study is also strengthened by its strong methodological approach, using two complementary sets of regression analyses. Further, most studies have focused on work hours, with little research exploring links between work hours and commute time separately. This study examined work hours and commute time separately, providing a more accurate assessment as well as combined work and commute time.48

Table 3  Poisson and linear fixed effects models* of weekly out-of-home food purchasing and daily fruit and vegetables consumption

|                     | Work hours | Commute hours | Combined work and commute hours |
|---------------------|------------|---------------|---------------------------------|
|                     | IRR 95% CI | P value       | IRR 95% CI                      | P value                      | IRR 95% CI                      | P value                      |
| Breakfast           | 1.010 (1.007 to 1.013) | <0.001       | 1.026 (1.017 to 1.036)          | <0.001           | 1.010 (1.007 to 1.013)          | <0.001                      |
| Lunch               | 1.005 (1.004 to 1.007) | <0.001       | 1.014 (1.010 to 1.018)          | <0.001           | 1.006 (1.004 to 1.007)          | <0.001                      |
| Dinner              | 1.006 (1.005 to 1.007) | <0.001       | 1.009 (1.005 to 1.013)          | <0.001           | 1.006 (1.004 to 1.007)          | <0.001                      |
| Total food out      | 1.006 (1.005 to 1.007) | <0.001       | 1.014 (1.011 to 1.017)          | <0.001           | 1.006 (1.005 to 1.007)          | <0.001                      |
| Fruit               | 1×10–5 (−0.001 to 0.001) | 0.977       | –0.001 (−0.002 to 0.000)       | 0.784           | −7×10–5 (−0.001 to 0.000)       | 0.899                      |
| Vegetables          | –3×10–4 (−0.002 to 0.001) | 0.675       | –0.003 (−0.007 to 0.002)       | 0.186           | −1×10–4 (−0.002 to 0.000)       | 0.802                      |

Sample size for each analysis is presented in online supplemental file 2. The estimate of each exposure represents the average change in outcome (i.e., IRR for frequency of out-of-home food purchasing, and number of servings for fruit and vegetables intake) for a one-unit (i.e., 1 hour) within-individual change in exposure.

*Models adjusted for age, education, household composition, remoteness, neighbourhood socioeconomic status and work schedule. Coef., coefficient; IRR, incidence rate ratio.
longer hours may still be able to eat healthy home-prepared meals if another household member is responsible for food preparation and cooking. The HILDA Survey also lacks an indicator for the days of the week out-of-home purchasing occurs. Therefore, it is impossible to differentiate between those buying out-of-home foods at weekends (or non-working days) as a potential treat or way to socialise from those purchasing out-of-home foods to save time due to long work hours and commute times on working days. We were also unable to determine if respondents worked at a single location or at multiple locations. Food intake such as fruit and vegetables consumption in our sample is slightly lower than national trends, with for example respondents in the sample consuming on average 1.3 serves of fruit and 2.3 serves of vegetables each day in 2017, compared with an average of 1.7 and 2.4, respectively, at the national level in 2017–2018. However, our findings are only representative of the sample at hand. No inferences are made at the population-level.

This study enhances our understanding of food practices among working individuals, with results suggesting that work-related time demands push individuals towards purchasing out-of-home foods more often. In the long term, this may have negative health consequences as out-of-home foods tend to be generally less healthy than foods prepared at home. Potential solutions to reduce work-related time demands may lay in work arrangements such as flexible work hours and telecommuting.

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Patient consent for publication Not applicable.

Ethics approval The HILDA Survey was approved by the Human Research Ethics Committee of the University of Melbourne. An ethics exemption for secondary data analysis was approved by the Deakin University Human Research Ethics Committee.

Provenance and peer review Not commissioned; externally peer reviewed.

Data availability statement Data are available for approved users from the Australian Data Archive Dataverse system. This paper uses unit record data from the Household, Income and Labour Dynamics in Australia (HILDA) Survey. The HILDA Project was initiated and is funded by the Australian Government Department of Social Services (DSS) and is managed by the Melbourne Institute of Applied Economic and Social Research (Melbourne Institute). The findings and views reported in this paper, however, are those of the author and should not be attributed to either DSS or the Melbourne Institute. The authors requested access to the data through the Australian Data Archive Dataverse system.

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