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There has been limited research on the experience of young people entering into work. Our study indicates that younger workers may experience a decline in mental health, unless they are entering into a job characterized by high psychosocial work qualities. This suggests that promoting high-quality psychosocial work for younger workers will protect and promote their mental health.

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Psychosocial job quality and mental health among young workers: a fixed-effects regression analysis using 13 waves of annual data

by Allison Milner, PhD,¹ Lauren Krnjacki, MPH,² Anthony D LaMontagne, ScD^{1, 2}

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Objectives Entry into employment may be a time when a young person's well-being and mental health is challenged. Specifically, we examined the difference in mental health when a young person was "not in the labor force" (NILF) (ie, non-working activity such as participating in education) compared to being in a job with varying levels of psychosocial quality.

Method The data source for this study was the Household Income and Labor Dynamics in Australia (HILDA) study, and the sample included 10 534 young people (aged ≤30 years). We used longitudinal fixed-effects regression to investigate within-person changes in mental health comparing circumstances where individuals were NILF to when they were employed in jobs of varying psychosocial quality.

Results Compared to when individuals were not in the labor force, results suggest a statistically significant decline in mental health when young people were employed in jobs with poor psychosocial working conditions and an improvement in mental health when they were employed in jobs with optimal psychosocial working conditions. Our results were robust to various sensitivity tests, including adjustment for life events and the lagged effects of mental health and job stressors.

Conclusions If causal, the results suggest that improving the psychosocial quality of work for younger workers will protect and promote their wellbeing, and may reduce the likelihood of mental health problems later on.

Key terms longitudinal study; mental ill-health; mental well-being; psychosocial working condition.

Adolescence and early adulthood is the peak age of onset for many mental disorders, with 75% of lifetime cases of mental illness having their first onset by age 24 (1). However, people in this age group are less likely than others to seek professional help (2). This is problematic because early-age onset of mental disorder is associated with a longer duration of untreated illness and poorer long-term outcomes (3).

The development of a mental health problem also impairs participation in the labor force (4). However, evidence suggests that this relationship is likely to be bidirectional, whereby not participating in work contributes to mental health problems and vice versa (5). Across all age groups, research is also emerging that poor quality employment is worse for mental health than having no job at all (6, 7). Thus, poor quality jobs may damage mental health even to the extent that a person may leave employment all together, while high quality jobs may

promote mental health and wellbeing as well as workforce engagement. High quality work promotes positive interactions with others (colleagues, supervisors, etc) and skill development and learning, as well providing benefits such as pay and security (8). These factors have been found to be associated with greater job satisfaction among young workers, which in turn, is related to a reduced likelihood of them leaving the workforce (9).

Currently, young people in Australia aged 15–24 years comprise about 30% of all employed persons (10), with a proportion of these people also studying, and being employed in part time and casual work. Younger workers may face a number of challenges when entering the workforce (11). A recent study analyzing the Household Income and Labor Dynamics in Australia (HILDA) cohort showed that younger workers consistently report lower job control than their older counterparts (12). Earlier working population-based studies have also shown higher

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prevalence of job strain (low control jobs with high psychological demands), higher prevalence of unwanted sexual advances at work, and higher prevalence of casual and temporary employment among younger workers (13–16). Other studies have shown that young workers are particularly vulnerable to bullying and conflict with supervisors and colleagues (17) and perceive greater inequity in their treatment at work compared to other workers (18). There is also some evidence that the adverse employment circumstances young people find themselves in are associated with the risk of depression or anxiety (19). Further, early adversities experienced at work may have negative effects on well-being and depressive symptoms years after they are experienced (20). Conversely, positive early experiences at work can present an opportunity for young people to develop resilience and the ability to adapt to challenges at work (20, 21). As mentioned above, positive experiences in the workplace – such as support from colleagues and supervisors and the opportunity for skill development and learning – have been found to predict greater retention of young people in the workforce (9).

Recently, we published an article using an existing longitudinal data source showing that the relationship between job stressors and mental health is mainly contemporaneous (22). In the present article, we specifically focus on young workers in the same cohort to examine the impact of young people's entry into paid work on their mental health. We were specifically interested in the difference in mental health when a person moved into a job with an optimal psychosocial environment, and the difference in mental health when a person moved into a job with a poor psychosocial work environment.

Hypotheses

We hypothesized that young persons (≤ 30 years) in jobs with high psychosocial job quality will have an improvement in mental health compared to when they are not in employment, while young persons in work with poor psychosocial job quality will experience a decline in mental health compared to when they are not in employment. A cut-off of 30 years of age was chosen given that young people may be undertaking tertiary education well into their mid or late 20s.

Methods

Data source

The HILDA survey is a longitudinal, nationally representative study of Australian households established in 2001, with 13 years of data currently available for analysis. The first wave collected detailed information from

>13 000 individuals within >7000 households (23). The response rate to wave 1 was 66% (23). The survey covers a range of dimensions including social, demographic, health, and economic conditions using a combination of face-to-face interviews with trained interviewers and a self-reporting questionnaire. Although data are collected on each member of the household, interviews are only conducted with those >15 years of age.

The initial wave of the survey began with a large national probability sample of Australian households occupying private dwellings (23). Interviews were sought in later waves with all persons in sample households who had attained 15 years of age. Additional persons have been added to the sample as a result of changes in household composition with a top-up sample of 2000 people added to the cohort in 2011 to allow better representation of the Australian population using the same methodology as the original sample (ie, a three-stage area-based design) (24). The response rates for new respondents who join the HILDA survey are >70% and the (wave-to-wave) retention rate for respondents who continue in the survey is >90% (23). The Australian Department of Social Services approved this study.

The analytic sample can be seen in figure 1. We first selected people <30 years of age only. Following this, people who had information on mental health and psychosocial job quality and other covariates were selected (described further below).

Outcome variable: mental health

The Mental Component Summary (MCS) of the Short Form 36 (SF-36) measure was used as the primary outcome measure. The SF-36 is a widely used self-completion measure of health status and has been validated for use in the Australian population and to detect within-person change over time (25). The MCS score represents a summary measure of mental health and well-being constructed from the eight subscales but with strongest factor loadings on the mental health, vitality, and emotional and social role functioning scales (25). Thus, this is an integrated measure of overall mental health, rather than a scale measuring clinical factors. The SF-36 in the HILDA survey has been shown to be psychometrically sound, with good internal consistency, discriminant validity, and high reliability (25). The mean score on the MCS in HILDA was approximately 49.8, with a standard deviation (SD) of 10.3. Higher scores represent better mental health. The range of the MCS is 1–100, with 100 representing optimal functioning. All of the SF-36 scales demonstrated acceptable internal consistency, with Cronbach's alpha ranging from 0.82 (mental and general health) to 0.93 (physical functioning). These reliability scores are similar to those reported in previous Australian research (25).

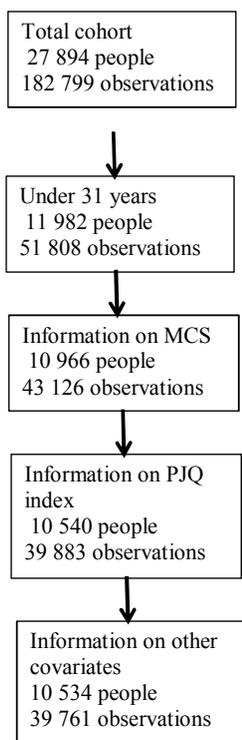


Figure 1. Analytic sample.

Main exposure variable: psychosocial job quality

A multidimensional measure of psychosocial job quality was constructed using the measures of psychosocial job characteristics available in the HILDA survey (job control, job demands and complexity, job insecurity, and unfair pay). Full details of the construction and validation of the job quality measure are presented elsewhere (6, 26, 27) and the measure is strongly related to widely used measures of job demands and control (6). In brief, factor analysis and structural equation modelling identified three separate factors: job demands and complexity (three items); job control (three items); and perceived job security (three items). An additional single item assessing whether respondents considered that they were paid fairly for their efforts at work was included as a fourth factor measuring an important aspect of the effort–reward imbalance model (28). The individual scales were associated with more widely used measures of job demands and control, and other employment conditions such as casual status, hours worked and shift work. Each factor was dichotomized to identify the quartile experiencing the greatest adversity and the composite measure constructed by summing the number of adverse psychosocial job conditions (high job demands and complexity, low job control, high job insecurity and unfair pay). Because of the small number of respondents reporting all four job adversities in a single year/wave, this composite scale was top-coded at three and, thus, produced four categories ranging from optimal jobs to ≥ 3 psychosocial adversities

(poorest quality jobs). This measure has been used in other studies on mental health (6), physical health (26), and sickness absence (29). Our reference category was “not in the labor force” (NILF). Undertaking education was the main reason for being NILF in the sample.

Other covariates

We include time-varying potential confounders in regression models and descriptive tables: age (measured continuously); highest level of education (postgraduate, bachelor, certificate or diploma, year 12, less than year 12); presence of disability or long term health condition (yes/no) and household structure (couple or single adult residing with dependents, couple without dependents, single person without dependents, and a group or multiple person household), and household equalized income. Household equalized household income is an indicator of the economic resources available to a standardized household. Values are centered around the mean income per year, and divided by AU\$10 000. We also considered the following life events as possible risk factors for changes in mental health in sensitivity analysis: separated from spouse; got married/got back together with spouse; self/close family member went to jail; birth/pregnancy; death of a close friend/relative or family member/spouse or child.

Analytical approach

Longitudinal linear fixed-effects regression models were used to estimate the association between psychosocial job quality (exposure) and mental health (outcome). Fixed effect models show that MCS for the i th of N individuals is predicted by time-varying psychosocial job quality (optimal, 1 adversity, 2 adversities, ≥ 3 adversities, compared to the reference NILF) ($\beta_1 \text{JobQuality}_{it}$) and time-varying covariate (X_{it}). In equation A, μ_i refers to the unit-specific error term (eg, person-specific error term) that differs between persons, whereas ϵ_{it} is the error term associated with all regression models (eg, varies across individuals and over time) (30, 31). The term μ_i is included in the formula because it allows researchers to explicitly state that the persons-units are a source of error and controlled in the model as well as normal sources of error that vary across time and person (ϵ_{it}).

Equation A. Fixed-effect model

$$MCS_{it} = \beta_0 + \beta_1 \text{JobQuality}_{it} + \beta_2 X_{it} + \mu_i + \epsilon_{it}$$

Fixed-effect analysis takes the mean of the observations when a person was “exposed” to NILF (eg, the years when a person was not employed) over time, and compares these the mean of observations when a person was employed in poor/good psychosocial job quality

over time. Hence, these models provide an indication of within-person effects, where each individual acts as their own control and estimates are not confounded by personal, demographic and environmental factors that do not change over time (time-invariant) (32). Fixed-effects models are particularly useful where time-invariant confounding is likely to cause bias in causal estimates. For example, both mental health and perceived psychosocial working conditions may be affected by within-person factors such as personality, early childhood experiences, or medical history (each of which are time invariant in the analyses conducted). As mentioned above, we controlled for time-varying (or variant) confounding in equation A by including a number of relevant covariates (age, household structure, health status, and education) in the fixed-effects models. Each variable in the analysis was available from 2001–2013.

With respect to the time between exposure and outcome, psychosocial job quality and mental health were analysed in the same year. This is based on evidence from a previous panel study of four annual waves showing that changes in job stressors were associated with changes in mental health over a one-year time frame (33) as well as previous analyses in the HILDA dataset showing that most of the effect of job stressors on scaled measures of mental health was contemporaneous (22, 34).

We conducted a sensitivity analysis excluding those who were still in part- or full-time education. The rationale for this was that those who were still studying while also working may be less psychologically invested in their jobs than those not studying, and thus be less exposed to or concerned about what was happening in the workplace. We then conducted a sensitivity analysis including life events as possible confounders as well as a further analysis assessing the relationship between each of the four psychosocial job stressors in the psychosocial job quality scale with mental health. This provided information about the extent to which results were driven by specific job stressors. Last, we assessed the impact of lagged mental health and job stressors on mental health using an Arellano-Bond model. As we have previously described (22), this model uses the first-difference model and applies a generalized method of moments (GMM) estimator where earlier lagged values of the explanatory and outcome variables are used as instrumental variables for the lagged change in the outcome variable. Analysis was conducted using Stata 14.1 (StataCorp, College Station, TX, USA).

Results

Table 1 describes the frequency of persons and observations in each of the employment states while table 2

shows the key demographics of the sample. We include summary measures from each individual's first and last contributed waves (not necessarily same calendar years) in HILDA to describe how the sample changes over time. The average age at the entry to the study was 20.5 years, and the average age at the last recorded observation was 24 years. The income in the initial wave was approximately AUS\$36 500, and this rose to approximately AUS\$44 000 in the final wave. There were equal numbers of men and women in the sample, and this remained consistent over time. Household structure changed over time, with an increase in couple and single-person households. This probably reflects the shift from young people living with their family ("couple with children") to on their own or with others. There was an increase in the proportion of people employed from 60.6% to 71.6%, and a corresponding reduction in those who were NILF, falling from 29% to 20%. Of those who were employed, there was an increase in permanent jobs (45% to 55%) and a decrease in casual jobs (42% to 30%). Those in high-skill occupations also increased (21% to 28%). Participants in the sample were slightly more likely to move into optimal (no adversities such as low control, high demands, low security, and unfair pay) work (26% to 27%) and less likely to move into work with adversities over the course of the study. For the entire sample, education levels increased over time, with the proportion of observations reporting a certificate/diploma rising from 18% to 25%, and bachelor degrees from 10% to 15%. The presence of long-term health conditions/disability was relatively stable, with only a 0.7% increase in final waves reporting the presence of a health issue.

Table 3 shows descriptive results for overall mean levels of mental health associated with different employment states (average of all contributed waves in that state) and, among the employed, the overall mean score of mental health associated with being in jobs with different levels of psychosocial job stressors. Overall, the greatest disparities in mental health were found in relation to psychosocial job quality. Compared to those employed in jobs with optimal psychosocial working conditions, people working in a job with ≥ 3 adversities report levels of mental health close to six points lower. It should be noted that this descriptive analysis pools

Table 1. Frequency of NILF ("not in the labor force") and employment by psychosocial job quality, people, and observations. The sample only included those aged ≤ 30 years.

	People	Observations
Not in the labor force	5018	11 189
Psychosocial job quality (number of adversities)		
0	4247	8393
1	7624	18 627
2	4227	7082
≥ 3	1800	2449

Table 2. Description of key demographics and employment characteristics of persons in the analytic sample. [SD=standard deviation.]

	First contributed wave			Last contributed wave		
	Mean	SD	%	Mean	SD	%
Age	20.73	5.02		24.07	4.94	
Income	37 137	22 025		44 671	26 699	
Gender						
Male			48.22			48.22
Female			51.78			51.78
Household structure						
Couple			21.36			24.05
Couple with children			47.97			42.25
Single parent			13.18			11.04
Single person			4.35			10.58
Other			13.14			12.80
Employment status						
Employed			67.63			76.66
Not in the labor force			32.37			23.34
Psychosocial job quality ^a (number of adversities)						
0			26.03			27.13
1			42.33			43.24
2			23.44			21.62
≥3			8.21			8.00
Occupational skill level ^a						
High			41.4			30.1
Medium			38.56			42.04
Low			20.04			27.87
Education (highest level)						
Postgraduate			2.89			5.16
Bachelor			10.9			15.7
Certificate or diploma			17.76			24.75
Year 12			19.29			26.03
Less than year 12			49.16			28.35
Disability or long-term health condition						
Yes			13.33			14.1
No			86.67			85.9

^a Percentage of those employed; the sample only included those aged ≤30 years. Based on 10 534 individuals with 39 761 observations.

across people and time, and therefore does not provide information on within-individual effects.

Table 4 shows the results of the longitudinal fixed-effects (within-persons) regression analyses, where we compared the average effects of being out of the labor force (eg, in education) to employment in jobs with optimal versus suboptimal psychosocial working conditions. The multivariate results show that, compared to when they are not in work (eg, education or the period just following school), being in optimal employment is associated with a slight improvement in mental health within persons. In comparison, there is a stepwise decrease in mental health when a person was employed in a job with ≥2 adversities. There was no statistical significant difference for individuals who moved from not being in the labor force to jobs with 1 adversity.

Results also show a slight decrease in mental health as people aged closer to 30 years (the upper age limit of the sample) and for those living without a partner or in a mixed household (eg, with those that are not family) compared to living as part of a couple. Those without

Table 3. Mean and standard deviation (SD) of mental health score by selected employment and individual characteristics.^a

	Mean	SD
Employment type		
Employed	48.20	9.72
Not in labor force	46.30	11.60
Psychosocial job quality (number of adversities)		
0	50.06	8.69
1	48.48	9.55
2	46.73	10.06
≥3	44.48	11.16
Gender		
Male	49.18	9.55
Female	46.49	10.62
Age		
<20	48.10	10.25
20–25	47.48	10.16
26–30	47.73	10.25
Occupational skill level		
Low	48.14	10.01
Medium	48.08	9.80
High	48.47	9.15

^a Numbers in this descriptive table are pooled across people and time, and therefore do not provide information on within individual effects. Based on 10 534 individuals with 39 761 observations.

long-term health conditions had significantly better mental health compared to when they reported a long-term health condition.

We conducted a further analysis removing those who were still studying while also working and found similar effects (supplementary table A, www.sjweh.fi/index.php?page=data-repository). Another analysis excluding NILF waves showed a clearer stepwise pattern between declining psychosocial job quality and declining mental health (supplementary table B, www.sjweh.fi/index.php?page=data-repository). Our sensitivity analysis including life events as possible confounders did not influence the relationship between employment and mental health (supplementary table C, www.sjweh.fi/index.php?page=data-repository). Further, results of the Arellano-Bond modelling can be seen in supplementary table D, www.sjweh.fi/index.php?page=data-repository). Please note that the sample is smaller (5240 people, 17 861 observations) than in the models in the paper proper due to the restrictions necessary to perform this analytic procedure, limiting generalizability and power. This likely explains the fact that some of the results fall out of significance. Although, we would note that all the results are in the same direction. As can be seen, there is a small effect of lagged mental health. Further analysis revealed that job insecurity (coefficient -1.43, 95% CI -1.69– -1.17, P<0.001) was associated with the greatest decline in mental health for young people, followed by low fairness of pay (coefficient -1.17, 95% CI -1.42– -0.92, P<0.001), high job demands (coefficient -0.48, 95% CI -0.73– -0.23, P<0.001), and low job control (coefficient -0.77, 95% CI -1.02– -0.51, P<0.001).

Table 4. Association of within-person changes in psychosocial job quality and time-varying covariates with changes in mental health score. Fixed-effects regression analyses based on 10 534 individuals with 39 761 observations. [95% CI=95% confidence interval]

Time-varying covariates	Unadjusted			Mutually adjusted ^a		
	Coefficient	95 % CI	P-value	Coefficient	95 % CI	P-value
Not in the labor force	0			0		
Psychosocial job quality (number of adversities)						
0	0.74	0.40–1.07	<0.001	0.75	0.40–1.10	<0.001
1	0.19	-0.13–0.51	0.242	0.21	-0.12–0.54	0.219
2	-0.62	-0.98– -0.26	0.001	-0.60	-0.97– -0.23	0.001
≥3	-1.65	-2.15– -1.16	<0.001	-1.68	-2.18– -1.17	<0.001
Age	-0.02	-0.06–0.02	0.368	-0.03	-0.07–0.02	0.299
Income	0.11	0.06–0.17	<0.001	0.05	-0.01–0.10	0.137
Household structure						
Couple	0			0		
Couple with children	-0.24	-0.57–0.09	0.16	-0.20	-0.54–0.14	0.242
Single parent	-1.16	-1.73– -0.59	<0.001	-1.11	-1.68– -0.53	<0.001
Single person	-1.38	-1.82– -0.93	<0.001	-1.25	-1.71– -0.79	<0.001
Other	-0.87	-1.35– -0.38	<0.001	-0.77	-1.25– -0.28	0.002
Education (highest level)						
Postgraduate	0			0		
Bachelor	-0.36	-1.29–0.57	0.452	-0.36	-1.28–0.56	0.444
Certificate/ diploma	-1.55	-2.65– -0.45	0.006	-1.74	-2.84– -0.64	0.002
Year 12	-1.43	-2.41– -0.45	0.004	-1.59	-2.60– -0.59	0.002
Less than year 12	-0.90	-1.91–0.11	0.081	-1.28	-2.37– -0.19	0.022
Disability or long-term health condition						
Yes	0			0		
No	2.20	1.76–2.64	<0.001	2.20	1.76–2.64	<0.001

^a All variables are included in the analysis.

Discussion

We observed declines in mental health for people in jobs with ≥ 2 psychosocial adversities (low control, high demands, low security, and unfair pay) compared to when individuals were not in the labor force, while young people entering into high psychosocial quality work had a modest improvement in mental health. Put another way, these results indicate that young people working in poor psychosocial quality jobs may experience a small but statistically significant decline in mental health relative to when they were not in the labor force, but when in jobs with high psychosocial job quality, they experience an improvement in mental health. This suggests that promoting high quality psychosocial work for younger workers will protect and promote their well-being and may reduce the likelihood of later mental health problems, particularly if this sets the young person up for a working life characterized by good psychosocial quality jobs.

As the MCS of the SF-36 is not a clinical measure, it is difficult to draw conclusions regarding clinical significance. However, we would note that a difference of three points on one of the most dominant subscales (the 5-item Mental Health Inventory [MHI], which primarily assesses symptoms of depression and anxiety) has been suggested to reflect a minimally important difference (34) and a difference of four or more on the unstandardized scale has been characterized as indicating a moderately

clinically significant effect (35). The MHI has reasonable validity and is an effective screening instrument for mood disorders or severe depressive symptomatology in the general population (36–39). The difference across levels of psychosocial job quality observed in our study was relatively small (2–3 points). Nevertheless, when combined with the observed stepwise dose–response by levels of psychosocial job quality, this suggests a causal relationship between psychosocial job quality and mental health among young workers.

There is limited quantitative research internationally with which to compare our findings on the experience of young people going into paid work. One of few we were able to find was a Swiss study on young adults entering the workforce after vocational training into five different occupational groups (21). Results suggest the factors that contributed to well-being among younger workers included improved job control and feeling appreciated at work (21). Data from the Queensland-based Young Workers Advisory Service (YWAS) in 2007 showed that young workers frequently seek help from the YWAS for three main reasons: (i) low level of pay and conditions (pay/remuneration); (ii) a high level of precariousness in employment (dismissal/redundancy), and; (iii) a high level of vulnerability to exploitation (employment conditions) (18). Two further areas of concern included the low quality of many young workers' jobs (including their lack of access to training and skills upgrading) and workplace bullying, which constituted one-fifth of all

employment-related concerns reported to YWAS. These findings are consistent with previous research showing that jobs with high job strain (low control combined with high demands) have an adverse effect on job-related learning (40) as well as our previous research that younger workers have lower levels of job control than their older counterparts (12).

Our research also extends previous Australian research on psychosocial job quality and mental health (6, 41), in particular strengthening causal inference with the fixed-effects approach. Our research has also demonstrated the importance of psychosocial job quality for the mental health of young workers. Using the US National Longitudinal Survey of Youth (NLSY), Zimmerman et al (42) has shown that jobs with higher "social and occupational status" are associated with lower depressive symptoms for young employed males, while physically uncomfortable or dangerous jobs are associated with more depressive symptoms for young women. Other studies have highlighted the importance of psychosocial job quality on the wellbeing on young people over the course of their working life (43).

There are a number of factors that need to be taken into consideration in assessing these results. First, our outcome and exposure variables are self-reported; thus there is a possibility for dependent misclassification (common method variance), whereby errors in the exposure and outcome are correlated; to the extent the drivers of dependent misclassification (such as negative affect) are time invariant, they will be controlled for by the fixed-effects approach. In addition to the stressors contributing to the job quality measure used in this study, there are many other important psychosocial aspects of the work environment that were not included that could also have an influence on mental health (eg, social support and bullying at work), suggesting our findings provides a conservative estimate of the influence of workplace psychosocial stressors on mental health. We were also not able to ascertain other potential confounders, such as the young person's role in their household, so we could not accurately measure their living arrangements or capture the transition from living at home with parents to living with others, which is another potentially important influence on mental health.

As exposure to psychosocial job quality and mental health were modelled contemporaneously in our models (measured in the same wave), we acknowledge the potential for reverse causality (ie, poor mental health could influence psychosocial job quality). Previous research assessing the potential for reverse causation between job demands and control and mental health has found some evidence for reciprocal causal relationships between work characteristics and mental health, but the effects of work characteristics on mental health were causally dominant (32). Recent research we have con-

ducted also suggests that the relationship between job stressors and mental health in mainly contemporaneous (22). The sensitivity analysis including lagged effects suggested results in the same direction as the main tables reported in the manuscript (albeit being non-significant). Finally, there may be differences in the relationship between job quality and mental health by gender, and thus we would suggest this as an area of future research.

In stating these limitations, there were a number of strengths in this study. These included the ability to examine the relationships between psychosocial working conditions and mental health over time using a large representative national sample. We were able to use a previously validated measure of psychosocial job quality. The fixed-effects analytical approach allowed us to examine causally-robust within-person associations controlling for both measured and unmeasured time-invariant confounders that may have otherwise biased results even though the estimates obtained, strictly speaking, are generalizable only to those participants reporting changes in exposure over their contributed waves (and not to the entire source population). Our study provides a novel contribution to research as it is among the first to assess the relationships between employment, mental health, and psychosocial quality of jobs among young Australian workers. Specifically, this paper simultaneously assesses both the potential harmful aspects of working conditions, as well as the benefits of good quality work for mental health.

Work can provide many benefits to life satisfaction, well-being, and the development of resilience, including the promotion of self-efficacy and self-esteem, a sense of structure and meaning, the development of social connections, support to extend family and neighborhood networks, and the provision of income (44). Having a healthier workforce also holds the potential to result in better productivity outcomes for employers, and lower reliance on social welfare. Thus, promoting high quality psychosocial work for younger workers acts to protect and enhance their well-being, and may subsequently reduce the likelihood of later mental health problems, particularly if this sets the young person up for a working life characterized by good psychosocial quality jobs. This involves a combination of reducing the presence of psychosocial job stressors at the same time as promoting the positive aspects of work (44). Addressing both these factors is recognized as the most integrated and long-term beneficial way of improving workplace mental health.

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Competing interests

The authors declare no conflicts of interest.

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