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Does disability modify the relationship between labour force status and psychological distress among young people?

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Abstract

Objective: To examine the association between employment status, including young people who were unemployed and having problems looking for work, and psychological distress one year later. We then assessed whether this association is modified by disability status.

Methods: We used three waves of cohort data from the Longitudinal Surveys of Australian Youth. We fitted logistic regression models to account for confounders of the relationship between employment status (employed, NILF, unemployed and having problems looking for work) at age 21 years, and psychological distress at age 22 years. We then estimated whether this association was modified by disability status at age 21.

Results: Being unemployed and having problems looking for work at age 21 was associated with odds of psychological distress that were 2.48 (95% CI 1.95, 3.14) times higher than employment. There was little evidence for additive effect measure modification of this association by disability status (2.52, 95% CI -1.21, 6.25).

Conclusions: Young people who were unemployed and having problems looking for work had increased odds of poor mental health. Interventions should focus on addressing the difficulties young people report when looking for work, with a particular focus on supporting those young people facing additional barriers to employment such as young people with disabilities.

Keywords: young people, unemployment, mental health, disability

Key messages

1. **What is already known about this subject?**

    - Previous research has shown that unemployment is associated with poorer mental health among young people.
    - There is little information on whether this association varies based on disability status.

2. **What are the new findings?**

    - Being unemployed and having problems looking for work at age 21 was associated with odds of psychological distress at age 22 that were 2.48 times higher than employment.
    - There was little evidence of additive or multiplicative effect measure modification of this association by disability status.

3. **How might this impact on policy or clinical practice in the foreseeable future?**

    - Government interventions should focus on addressing the difficulties young people report when looking for work to prevent unemployment and decreased mental health.
    - Well-designed interventions to facilitate employment would improve the mental health of young people with and without disabilities, but may not reduce the mental health inequality experienced by young people with disabilities.

INTRODUCTION

As of February 2020, over 11% of young people across OECD countries were unemployed, more than twice the rate (4.4%) of workers aged 25 years and over. (1) As a consequence of COVID-19 youth unemployment has risen further, (1) with recent data indicating that young people are likely to be hit hardest, globally, by the economic challenges arising from responses to COVID-19. (2)

Addressing high rates of youth unemployment is critically important for population health as employment is a key social determinant of health, (3,4) providing numerous benefits to workers such as income, regular activity, and a collective purpose and goal. (5,6) Additionally, unemployed individuals are at risk of poorer physical health outcomes (7) and may experience a scarring effect on their future experiences extending to wage penalties, (8) life satisfaction, (9) the quality of future employment, (10) and mental health. (11)

While some young people are temporarily unemployed, nearly half of unemployed young Australians were looking for work for three months or more as of early March 2020, suggesting difficulties looking for work. (12) Experiencing problems looking for work may extend and exacerbate the unemployment period and its adverse impacts on the mental health of young people. However, there is a paucity of research examining the mental health consequences of being unemployed and having difficulty looking for work as a young person. This specific group of young people is particularly relevant to government intervention as they are already engaged with the labour force but require additional supports to enter work. Therefore, the main aim of this paper is to assess whether intervening on the labour force status of young people, with a focus on individuals who are unemployed and having problems looking for work, could improve mental health one year later.

The effect of labour force status on mental health is unlikely to be the same across the whole population of young people. In particular, people with disabilities experience poorer mental health (13) and may be particularly vulnerable to experiencing barriers to finding work. (14) Disability, as defined by the

International Classification of Functioning, Disability and Health (ICF), results from interactions between an individual's condition and societal barriers (e.g. discrimination) (15) and there is increasing evidence that the mental health inequalities experienced by people with disabilities are socially determined and avoidable. (16) A growing body of research has shown a causal relationship between labour force status and changes in mental health among people with disabilities, including individuals with disabilities related to a mental health condition. (17,18) It is plausible, therefore, that intervening on labour force status could improve the mental health of young people with disabilities. As such, the second aim of this paper is to assess whether the effect of labour force status on mental health is modified by disability.

METHOD

Data source

Data for this study was taken from the nationally representative Longitudinal Surveys of Australian Youth (LSAY). Australian students are recruited into LSAY at age 15 and are followed up annually until age 25. Information is collected on their transitions through school, further study, work, and adult life. The selection of the LSAY sample is described in more detail elsewhere, (19–21) but briefly, all three cohorts used in this analysis were selected as part of the Programme for International Student Assessment (PISA). The PISA sample consisted of a random selection of students from various schools located in all states and territories of Australia. In 2003, students who completed a phone interview following PISA were included in the LSAY, for a total of 10,370 participants in the 2003 Cohort. All participants in the 2006 (n=14,170) and 2009 (n=14,251) PISA survey answered a self-completed background questionnaire and were included in their cohort's first wave of LSAY. After the completion of Wave 1 in all three cohorts, participants completed annual computer-assisted telephone interviews to answer questions about their post-school destinations. Since 2012, participants have been able to complete their questionnaires online. (19–21) We used three waves of data (Wave 1, Wave 7, Wave 8) from each of the 2003, 2006, and 2009 cohorts. (22–24) We used data from the following years from each cohort: years 2003, 2009, 2010 for 2003 Cohort; years 2006, 2012, 2013 for 2006 Cohort; years 2009, 2015, 2016 for 2009 Cohort.

Exposure

Our key exposure variable was labour force status, which was measured at Wave 7, when participants were approximately 21 years old. This ensured participants were likely to have finished secondary education and be engaging with the labour market. Participants were classified as employed if they worked in a job, business, or farm at the time of interview. Participants were classified as being not in the labour force (NILF) if they were not working and had not actively looked for work in the past four weeks (e.g. students, people with caring responsibilities, individuals on disability pension).

Individuals who had been actively seeking work in the previous four weeks and who were not currently employed were categorized as unemployed. All LSAY participants who were unemployed were asked if, and what kind, of problems looking for work they encountered. We used this question to further refine the unemployment category used in our analysis by excluding individuals who did not report any problems when looking for work.

Outcome

The Kessler-6 Psychological Distress Scale (K6) was measured in Wave 8, when participants were approximately 22 years of age. The K6 has strong validity and is widely used to screen for psychological distress. (25) The K6 is a six-item scale which measures symptoms of anxiety and depression. Specific questions probe how often in the past four weeks participants have felt nervous, hopeless, restless or fidgety, so depressed that nothing could cheer them up, that everything was an effort, and worthless. (25) Responses are summed to produce a score of between 6-30, with higher scores indicative of serious symptom severity. We created a binary cutoff using Australian scoring norms, with scores of 6-18 indicating none or minimal symptom severity, and scores >=19 suggesting a serious symptom severity. (26)

Confounders

We used baseline data from Wave 1 to control for potential confounders of the exposure and outcome, including: sex (male, female), Indigenous Australian identity (Non-Indigenous, Aboriginal or Torres Strait Islander), participant country of birth (Australia, born elsewhere), highest parent occupational skill level (professional, medium, low), parents' country of birth (both born in Australia, one or both born overseas), highest parent education (at least one parent completed Year 12, neither parent completed Year 12). When information from only one parent was available, we used that to classify parent characteristics. Additionally, we controlled for participants' Year 12 completion status, measured in Wave 7 when participants were aged 21 (completed Year 12, didn't complete Year 12). We also controlled for cohort (2003, 2006, 2009).

Effect modification

We tested for effect measure modification of the association between labour force status at age 21 and mental health at age 22 by disability reported in Wave 7 at age 21 (yes, no). Disability status was ascertained by a single question. In the 2003 Cohort, this question was phrased as: Do you have any disability or health problem, which limits the amount or type of work you can do? In the 2006 and 2009 Cohorts, this question was phrased as: Do you have any disability or health problem, that has lasted six months or more, which limits the amount or type of work or study you can do? A follow-up question asked participants what disability or health problems they had, and they were able to select from a list of 13 options including depression/bad nerves (in the 2003 Cohort) and mental health, nervous, or emotional condition (2006 and 2009 Cohorts).

Directed Acyclic Graph

The assumptions included in our analysis are detailed in the directed acyclic graph (DAG) shown in Figure 1. The DAG shows that there is not a variable explicitly measuring baseline mental health at age 21; the disability question will identify a group that includes individuals with mental health conditions.

We assume that a large amount of the effect of a mental health condition on employment and psychological distress one year later will operate through the group of people with disabilities, although there may be residual confounding from unmeasured mental health conditions. Sensitivity analyses to test the robustness of our results were included, and are detailed below.

-Insert Figure 1-

Sample

The flow of individuals into the analytic sample is shown in Supplementary Figure 1. Individuals were considered part of the eligible sample if they responded to the K6 questions in Wave 8 (n=13,128). Participants were excluded if they were missing information on employment status (n=153) or did not report any problems looking for work while unemployed (n=73). Individuals were further excluded if they were missing information on confounders (n=565). A total of 12,337 individuals were included in the analysis, constituting 94.0% of the eligible sample. The composition of the analytic and eligible samples were very similar, please see Supplementary Table 1. Information on missing data on the effect modifier and confounders is included in Supplementary Table 2.

Analysis

We first considered descriptive characteristics of the three cohorts. We then fitted a logistic regression model to estimate the association between labour force status at age 21 (Wave 7) and mental health measured at age 22 (Wave 8). In adjusted models, we controlled for the confounders outlined above measured at age 15 (Wave 1) and age 21 (Wave 7). To assess whether there was evidence of Effect Measure Modification (EMM), we added interaction terms between disability and labour force status. We estimated EMM on both the multiplicative and additive scales. For multiplicative measures, which are based on a cross-product term in the regression model, the null value is equal to one. To assess the additive measure of effect modification, we calculated the relative excess risk of interaction (RERI). The

additive measure is particularly useful for public health as it suggests which subgroup could benefit most from an intervention applied to the whole population of interest. (27)

To test the robustness of our findings, we conducted a sensitivity analysis wherein individuals who reported a mental health-related condition as their disability in Wave 7 were excluded from the logistic regression and EMM analysis, as these individuals may experience poorer mental health related to their disability irrespective of their exposure to unemployment and problems looking for work. We calculated the E-value as an additional sensitivity analysis. The E-value reflects the minimum strength of association that an unmeasured confounder would need to have with both the exposure and outcome to completely explain the estimated association between the exposure and outcome, conditional on included confounders. (28)

All analysis was completed using Stata v.15. (29)

RESULTS

Description of the sample

A description of the sample is shown in Table 1. In Wave 7, 84% of the participants in the sample were employed. 6% were unemployed and having problems looking for work, and 10% were NILF. The proportion of individuals who were unemployed who were experiencing psychological distress (14.5%) was more than double that of those who were employed (5.4%), and higher than individuals who were NILF (8.1%). The proportion of males and females was similar across the three labour force categories. A similar proportion of young Aboriginal or Torres Strait Islander people were unemployed or NILF. Participants who had not completed Year 12 represented a greater proportion of unemployed individuals, while a greater proportion of individuals born outside of Australia, or who had one or both parents born outside of Australia, were NILF. A greater proportion of those who were unemployed had parents who did not complete Year 12, and parents who were in low skill occupations.

Table 1: Characteristics of the analytic sample (n = 12 337)

	Employed	Unemployed and Having Problems Looking for Work	Not in the Labour Force
	n=10 406, 84%	**n=708, 6%**	**n=1 223, 10%**
	n (%)	n (%)	n (%)
K6 Distress			
Yes	559 (5.4)	103 (14.5)	99 (8.1)
No	9 847 (94.6)	605 (85.5)	1 124 (91.9)
Sex			
Male	4 919 (47.3)	343 (48.5)	573 (46.9)
Female	5 487 (52.7)	365 (51.6)	650 (53.2)
Indigenous Australian identity			
Non-Indigenous	10 061 (96.7)	674 (95.2)	1 163 (95.1)
Aboriginal or Torres Strait Islander	345 (3.3)	34 (4.8)	60 (4.9)
Country of birth			
Australia	9 530 (91.6)	635 (89.7)	1 055 (86.3)
Born elsewhere	876 (8.4)	73 (10.3)	168 (13.7)
Year 12 Completion			
Finished Year 12	9 365 (90.0)	616 (87.0)	1 131 (92.5)
Didn't finish Year 12	1 041 (10.0)	92 (13.0)	92 (7.5)
Disability			
No	9 879 (95.0)	617 (87.2)	1 093 (89.4)
Yes	527 (5.0)	91 (12.9)	130 (10.6)
Highest parent education			
Finished Year 12	9 304 (89.4)	619 (87.4)	1 093 (89.4)
Didn't finish Year 12	1 102 (10.6)	89 (12.6)	130 (10.6)
Highest parent occupation skill level			
Professional	6 280 (60.4)	382 (54.0)	773 (63.2)
Medium	3 218 (30.9)	221 (31.2)	330 (27.0)
Low	908 (8.7)	105 (14.8)	120 (9.8)
Parent country of birth			
Both Australia	6 514 (62.6)	404 (57.1)	674 (55.1)
One or both born elsewhere	3 892 (37.4)	304 (42.9)	549 (44.9)
Cohort			
2003	3 986 (38.3)	230 (32.5)	472 (38.6)
2006	3 366 (32.4)	229 (32.3)	415 (33.9)
2009	3 054 (29.4)	249 (35.2)	336 (27.5)

Table 2 shows the nine kinds of problems participants encountered when unemployed and having problems looking for work. Across all cohorts, over two-thirds of unemployed participants reported a lack of work experience and lack of available jobs as barriers to gaining employment. Between a third to nearly a half of participants reported that they lacked the right kind of education.

Table 2: Description of problems participants experienced when unemployed and having problems looking for work, Wave 7

	2003 Cohort	**2006 Cohort**	**2009 Cohort**
	n=230	**n=229**	**n=249**
	n (%)	**n (%)**	**n (%)**
Health problems or disability[a]	26 (11.3)	20 (8.7)	30 (12.1)
Don't have suitable transport	49 (21.3)	46 (20.1)	65 (26.1)
Not enough of right kind of education	111 (48.3)	85 (37.1)	119 (47.8)
Don't have enough work experience	159 (69.1)	163 (71.2)	197 (79.1)
Not enough jobs available	167 (72.6)	165 (72.1)	190 (76.3)
Lack confidence	41 (17.8)	63 (27.5)	74 (29.7)
Don't have good interview skills	32 (13.9)	47 (20.5)	55 (22.1)
Lack of skills in writing job applications	24 (10.4)	37 (16.2)	33 (13.3)
Age discrimination "Because employers think you are too young (or too old)"	33 (14.4)	61 (26.6)	88 (35.3)

*Multiple response question: Participants could report having multiple problems looking for work
[a] Not all respondents with disabilities reported their health problem or disability as a problem when unemployed and looking for work.

Regression results

Results of the regression analyses are shown in Table 3; we focus on the adjusted results. After including all confounders in the model, the adjusted odds ratio attenuated slightly from the unadjusted model. The odds ratio of 2.48 (95% CI 1.95, 3.14) indicated that the odds of experiencing psychological distress one year later for those who were unemployed and having problems looking for work were 2.48 (148% higher) compared with those in work (the reference group). Being NILF was associated with odds of psychological distress one year later that were 1.37 (95% CI 1.09, 1.73) times higher than those in employment.

Table 3: Logistic regression analysis of the association between labour force status in Wave 7 and psychological distress in Wave 8, after adjusting for possible confounders (n=12 337)

	Unadjusted			Adjusted		
	OR	95% CI	p-value	OR	95% CI	p-value
Labour force status						
Employed	(ref)			(ref)		
Unemployed and Having Problems Looking for Work	3.00	2.39, 3.76	<0.001	2.48	1.95, 3.14	<0.001
Not in the Labour Force	1.55	1.24, 1.94	<0.001	1.37	1.09, 1.73	0.007
Sex						
Male				(ref)		
Female				1.91	1.62, 2.24	<0.001
Indigenous Australian identity						
Non-Indigenous				(ref)		
Aboriginal or Torres Strait Islander				1.40	0.99, 1.98	0.055
Country of birth						
Australia				(ref)		
Born elsewhere				1.11	0.83, 1.48	0.478
Year 12 Completion						
Finished Year 12				(ref)		
Didn't finish Year 12				1.41	1.11, 1.78	0.004
Disability						
No				(ref)		
Yes				4.18	3.43, 5.11	<0.001
Highest parent education						
Finished Year 12				(ref)		
Didn't finish Year 12				1.05	0.83, 1.34	0.667
Highest parent occupation skill level						
Professional				(ref)		
Medium				1.05	0.88, 1.24	0.606
Low				1.12	0.86, 1.46	0.392
Parent country of birth						
Both Australia				(ref)		
One or both born elsewhere				1.01	0.85, 1.20	0.906

Cohort				
	2003	(ref)		
	2006	1.35	1.10, 1.65	0.004
	2009	2.16	1.79, 2.62	<0.001

Effect measure modification

The results of the EMM analysis are shown in Table 4. The estimate of the additive interaction was 2.52 (95% CI -1.21, 6.25). The 95% confidence interval contains negative values, and the p-value is (about) 0.2, so there is little evidence against the null hypothesis of no additive interaction in the corresponding population. Compared to the reference group (no disability and employed), young people with disabilities had increased odds of psychological distress both when employed and when unemployed and having problems looking for work. However, young people with disabilities who were unemployed had increased odds of psychological distress compared to their peers with disabilities who were in employment. Additionally, being unemployed and having problems looking for work was associated with increased odds of psychological distress among young people without disabilities compared to the reference group.

Table 4: Effect measure modification of labour force status and mental health by disability status

	Employed OR (95% CI)[a]	**Unemployed and having problems looking for work OR (95% CI)[a]**	**Unemployed and having problems looking for work within strata of disability, OR (95% CI)[b]**
No disability	1.00	2.65 (2.03, 3.45) <0.001	2.65 (2.03, 3.45) <0.001
Disability	3.71 (2.89, 4.75) <0.001	7.88 (4.96, 12.51) <0.001	2.13 (1.28, 3.53) 0.004
EMM on multiplicative scale: 0.80 (0.45, 1.42), p-value=0.453			
EMM on additive scale: 2.52 (-1.21, 6.25), p-value=0.185			

[a] The odds ratio in each cell represents the odds of psychological distress in the corresponding population.
[b]The final column provides the odds ratio of psychological distress comparing the unemployed and having problems looking for work to the employed within the row of disability status.

Sensitivity analysis

In the sensitivity analysis, we excluded participants who reported a mental health condition as their disability in Wave 7, reducing the number of individuals with disabilities from n=748 to n=529. Results

remained largely consistent with the main findings and are shown in Supplementary Table 3. Unemployment and experiencing problems looking for work was associated with odds of psychological distress that were 2.54 (95% CI 1.98, 3.27) times higher than those in employment. The association for those not in the labour force was slightly attenuated.

The results of the EMM sensitivity analysis are shown in Supplementary Table 4 and are consistent with the main EMM results shown in Table 4. The estimate of the additive interaction was 0.84 (95% CI -2.68, 4.35), indicating little evidence against the null hypothesis of no additive interaction in the corresponding population. While young people with disabilities had increased odds of psychological distress both when employed and when unemployed and having problems looking for work compared to the reference group, the odds ratios for young people with disabilities have attenuated somewhat from the main EMM analysis.

Based on the adjusted logistic regression results in Table 3, the E-value for the observed association between unemployment and psychological distress was E=4.39 for the estimate and E=3.31 for the lower level of the confidence interval. This suggests that the observed odds ratio of 2.48 could be explained by an unmeasured confounder that was associated with both labour force status and psychological distress by an odds ratio of 4.39 each, above and beyond the included confounders, but weaker confounding could not do so.

DISCUSSION

Our analysis of data from three LSAY cohorts showed that being unemployed and experiencing problems looking for work at age 21 was associated with psychological distress the following year, at age 22, after controlling for a range of confounders. While we found little evidence against the null hypothesis of no interaction in the corresponding population, we did find that young people with disabilities experienced increased odds of psychological distress compared to young people without disabilities, both when in employment and when unemployed and struggling to find work.

Our findings are congruent with previous work, suggesting unemployment is associated with poorer mental health among young people. (30) Importantly, this analysis compares young people who are unemployed and having problems looking for work to their employed peers, a more specific group that has not been the focus in other studies. As the COVID-19 economic downturn may increase both the prevalence of poor mental health and employment barriers among young people, this particular group of young people should be a focus of targeted interventions as part of economic recovery efforts.

While young people with and without disabilities have different needs with regards to interventions to help them find jobs, both groups would likely benefit from interventions to target barriers to looking for work that are unique to young people. Well-designed and accessible work experience programs, such as internships, may provide young people with the experience they need to find jobs. (31) Enhanced transition planning through counselling and career planning services in secondary school may help young people with and without disabilities make more realistic and relevant educational choices to help them find suitable work in the future. (32)

We found little evidence against the null hypothesis of no effect measure modification by disability status of the relationship between unemployment and having problems looking for work and psychological distress. As both labour force status and disability status are associated with mental health outcomes, this is likely due to a lack of statistical power resulting from the sample size in the strata of the exposure and effect modifier. Therefore, our results suggest that a well-designed intervention to facilitate employment among young people experiencing problems looking for work would improve the mental health of young people with and without disabilities, but may not reduce the mental health inequality experienced by young people with disabilities.

This study has several important limitations. This study may be biased due to unmeasured confounding. A key unmeasured confounder in our model was prior mental health. This likely has strong impacts on both labour force status and future mental health, although we were unable to control for this using LSAY data. However, the results of our logistic regression model were robust to the sensitivity analysis

excluding people who reported a mental health condition as their disability. The estimated E-value was also large (E=4.39, LL=3.31). This suggests that an unmeasured confounder, such as baseline mental health, would need to have a very strong association with both the exposure and outcome to completely explain the estimated association. Other combinations of unmeasured confounders, such as individual-level socioeconomic status measures in more recent waves of data could, in conjunction with baseline mental health, potentially remove the observed exposure-outcome relationship. While we cannot be certain our sensitivity analyses eliminate the risk that unmeasured confounding from baseline mental health biases our results, we are confident that the effect of labour force status on mental health one year later is unlikely to be completely biased.

Additionally, our measure of disability was only related to work-limiting disability, and we had limited information on the type of disability individuals experienced. Finally, LSAY suffers from attrition. Individuals who were male, who were Aboriginal or Torres Strait Islander, and who were from lower socio-economic positions were more likely to drop out of the cohort. These patterns of non-response are consistent with the literature. (33,34) However, attrition of individuals who may have been more likely to experience poorer mental health and unemployment and problems looking for work may have led to an underestimation of the association between labour force status and psychological distress.

Despite these limitations, a strength of this study is the use of longitudinal data from three LSAY cohorts. We used a validated measure of mental health, and our results were robust to sensitivity analysis excluding individuals who had reported a mental health condition as a disability. A further strength of this study is the inclusion of young people with mental health conditions as their work-limiting disability or health condition in the main analysis. This acknowledges that people with mental health conditions, like other individuals with and without disabilities, have a desire to work. (35) As the prevalence of mental health conditions among young people is increasing, (36,37) including individuals with such conditions in our analysis is appropriate in reflecting the reality for young people, and our results are of greater policy relevance.

Future work should consider different definitions of unemployment. In LSAY, unemployment was defined in the context of the past four weeks. Therefore, some individuals who have recently or frequently experienced unemployment are likely unrepresented in our study. Frequent spells of unemployment are associated with poorer mental health, (38) and individuals who move between poor-quality jobs and unemployment may experience poorer mental health. Additionally, we did not assess the duration of unemployment young people experienced. The number of young Australians facing long-term unemployment is also rising, (39) and experiences of long-term unemployment have been found to be associated with poorer mental health outcomes. (40) Further work elucidating these more nuanced measures of unemployment and their relationships with mental health will inform policy-relevant intervention modelling.

In conclusion, this study shows that being unemployed and having problems looking for work can have deleterious impacts on the mental health of young people and suggests that young people need adequate supports when looking for jobs. Helping young people with and without disabilities to overcome barriers and gain suitable employment will facilitate better mental health outcomes and more productive, satisfactory working lives.

Contributors: MS and AM conceived and designed the study. MS performed the analysis and drafted the manuscript. SD, TK, AK, MJS, and GD contributed to the interpretation of the findings and writing and revision of the manuscript. SD, TK, AK, MJS, and GD provided critical feedback on the manuscript. MS, SD, TK, AK, MJS, and GD contributed to the manuscript revisions. MS, SD, TK, AK, MJS, and GD approved the final manuscript.

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Ethics approval statement: The LSAY study adheres to the guidelines set out by the National Health and Medical Research Council's National Statement on the Ethical Conduct of Human Research. The fieldwork, conducted by Wallis Market & Social Research, is compliant with the international ISO 20252 market research standard. Participants gave informed consent before taking part in the LSAY study. Ethics approval was not required to access and use the LSAY data.

Data availability statement: LSAY unit record files are held by the Australian Data Archive (ADA) at the Australian National University. Access to the data is free via a formal request and registration with the ADA.

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