Original research

Does employment status mediate the association between disability status and mental health among young adults? Evidence from the Household, Income and Labour Dynamics in Australia (HILDA) survey

Marissa Shields, Matthew J Spittal, Zoe Aitken, Stefanie Dimov, Anne Kavanagh, Tania Louise King

ABSTRACT
Objective Young adults with disabilities are less likely to be employed and more likely to have poor mental health than peers without disabilities. Growing evidence shows that social determinants of health may be causally related to mental health outcomes of people with disabilities. We aimed to assess if the disability to mental health association was mediated by employment status among young adults aged 20–35 years.

Methods Four consecutive years (2016–2019) of data from the Household, Income and Labour Dynamics in Australia survey were used to conduct a causal mediation analysis. We decomposed the total causal effect of disability status on mental health (Short Form-36 Mental Health Inventory-5) into the natural direct effect from disability to mental health and the natural indirect effect representing the pathway through the employment mediator (being employed; being unemployed or wanting to work).

Results 3435 participants (3058 with no disabilities, 377 with disabilities) were included in the analysis. The total causal effect of disability status on mental health was an estimated mean decrease in mental health of 4.84 points (95% CI −7.44 to −2.23). The indirect effect, through employment status, was estimated to be a 0.91-point decline in mental health (95% CI −1.50 to −0.31).

Conclusions Results suggest disability has an effect on the mental health of young adults; a proportion of this effect appears to operate through employment. The mental health of young adults with disabilities could potentially be improved with interventions to improve employment outcomes among this group, and by supporting individuals with disabilities into suitable employment.

INTRODUCTION
Young adulthood, considered to range from age 18 years until the thirties,1 2 is a time of transition from primary involvement in education to being primarily engaged in the labour force, a process characterised by economic and social instability.3 This transition has become longer and more difficult, as young adults face poorer job options and fewer opportunities to establish themselves in the labour force.4 Some groups, such as young adults with disabilities, may face greater difficulties when moving into the labour force, ranging from discrimination,5 negative employer attitudes and lack of knowledge of how to accommodate workers with disabilities,6 to lack of transition planning7 that collectively contributes to lower employment opportunities for young adults with disabilities.8

WHAT IS ALREADY KNOWN ON THIS TOPIC
Young people with disabilities have lower employment rates and poorer mental health than their peers without disabilities.9 Some existing evidence shows employment is associated with the mental health of young people with disabilities, although there is a lack of causal evidence among this population.

WHAT THIS STUDY ADDS
We used causal mediation analysis to explore the effect of having consistent disabilities on mental health among young adults, and if employment status mediated this relationship.10 The total causal effect of consistent disability status on the Short Form-36 Mental Health Inventory (MHI)-5 was a 4.84-point decline in mental health.11 The natural indirect effect showed 19% of this decline was due to being unemployed or not in work when employment is wanted (0.91-point decline in MHI-5 score).

HOW THIS STUDY MIGHT AFFECT RESEARCH, PRACTICE OR POLICY
These results suggest that some of the poorer mental health experienced by young adults with consistent disabilities may be due to not being employed when employment is desired. Well-designed interventions to improve employment rates among young adults with disabilities may improve mental health outcomes among this group and reduce mental health inequalities. Further studies should be undertaken to understand the role of other key social determinants of health in the disability to mental health relationship among young adults.
rates than for other groups. This is borne out in the pre-
adults aged 20–34 years in Australia. Among young adults with
disabilities, just over half were employed (55%), 1 in 10 were
unemployed (10%), and the remaining one-third (35%) were
not in the labour force. These outcomes are notably poorer
than their peers without disabilities, among whom 82% were
employed, 4.5% were unemployed and only 13% were not in
the labour force. These statistics are particularly concerning
given the importance of employment to outcomes throughout
life, ranging from impacts on mental health, to the quality and
likelihood of future employment.

International evidence also shows that people with disabili-
ties have poorer mental health than their peers without disabil-
ities, and it is possible that the lower levels of employment
that people with disabilities experience could be contributing to
these mental health inequalities. Previous research has shown
longitudinally that periods of unemployment and not in the
labour force were associated with decreases in self-rated mental
health among people with and without disabilities although the
magnitude of the reduction in mental health was greater among
those with disabilities. There is a paucity of research focusing
specifically on young people with disabilities. Initial analyses
assessing interaction between labour force status and disability
on the mental health of young people have indicated that young
people with disabilities have greater levels of psychological
distress compared with their peers without disabilities, and that
distress levels are elevated when young people with disabilities
are unemployed.

This evidence suggests that employment is associated with
mental health among young adults with disabilities, although
the lack of causal research among this population limits the strength
of evidence supporting employment interventions which could
potentially improve mental health. However, there is a growing
evidence that social determinants of health, particularly labour
force status, may have a causal relationship with mental health
among the broader population of working-age people with
disabilities. It is, therefore, possible that this relationship
holds for young people with disabilities, although this is yet to
be established empirically. Additionally, quantifying the effect of
a single social determinant which may play a role in the disability
to mental health relationship will allow researchers to begin to
gain a more comprehensive understanding of how a complex set
of social determinants impact mental health outcomes among
this population.

To fill this knowledge gap, we used causal mediation analysis
and 4 years of data from the Household, Income and Labour
Dynamics in Australia (HILDA) survey. We aimed to answer the
following two questions:

1. What is the total effect of having consistent disabilities on
   mental health among young adults aged 20–35 years?
2. By comparing people who are employed to people who
   are unemployed or who otherwise want to work, is there
evidence that the disability to mental health relationship is
mediated by employment status?

We focus specifically on individuals who report two waves of
disability, both to address potential confounding and because
these individuals may experience greater difficulty establishing
themselves in the workforce. Additionally, we focus on individ-
uals who have a desire to work, a group which is amenable to
potential employment supports and programmes.

METHODS

Data source

Data were taken from the HILDA survey, a longitudinal, nation-
ally representative survey. HILDA began in 2001 with a large
national probability sample of private dwellings, with 66% of
contacted households agreeing to participate, representing
13,969 individuals from 7,682 households. In 2011, a top-up
sample was included to ensure representativeness of the Austra-
lian population. HILDA is conducted annually, with annual data
releases referred to as waves. The survey collects information
on a wide range of topics relating to economic, social, demographic
and health characteristics. HILDA includes many young people
in each wave, meaning it is well suited to investigate associations
between disability, employment and mental health among this
group.

The response rate has remained high: 82% of the original
sample and 74% of the top-up sample responded in Wave 19,
the most recent wave used in this analysis. This study uses data
from wave 16 (collected in 2016) to wave 19 (collected in 2019;
four consecutive years) to establish temporal ordering between
variables of interest.

Measures

Longitudinal data are needed to establish temporal ordering and
measure causal associations, with confounding and exposure
variables drawn from earlier waves of data and preceding the
measurement of the mediator and outcome. In this analysis, we
have included confounding variables from wave 16, the expo-
sure variable has been measured at waves 17 and 18, the medi-
ator measured at wave 18, and the outcome measured at wave
19.

Exposure: disability status

Disability status is included in every wave of HILDA; the ques-
tion asks participants if they have any long-term health condi-
tion, impairment or disability that restricts them in their everyday
activities, cannot be corrected by medication or medical aids,
and has lasted or is likely to last for 6 months or more. We measured
consistent disability, which refers to two consecutive years of
reporting a disability, and was defined using disability informa-
tion from wave 17 and wave 18. This group was compared with
individuals who did not report a disability at either wave. Indi-
viduals who reported an intermittent disability at wave 17 only
or wave 18 only were excluded from the analysis.

Outcome: mental health

Mental health was measured at wave 19 using the Mental Health
Inventory (MHI-5) subscale from the Short Form-36 (SF-36)
general health scale. The MHI-5 includes five items relating to
mental health over the previous 4 weeks, assessing major mental
health domains related to anxiety, depression, psychological well-
being and loss of emotional control. Responses on the MHI-5
are summed and transformed into a score ranging from 0 to 100,
with higher scores indicating better mental health. The SF-36,
including the MHI-5, has been validated in Australian popula-
tions and has been shown to be an effective screening tool for
mood and anxiety disorders. Small changes (eg, 2 points on the
100-point transformed MHI-5 scale) are considered to indicate
better or poorer health outcomes in a population. Changes of
3–5 points on the transformed MHI-5 scale are considered to
represent socially relevant changes in mental health status and
may indicate clinically significant changes in mental health.
Mediator: employment status

Employment status was ascertained at wave 18 and was defined as individuals who were employed (ie, working in a paid job for one or more hours per week) compared with a combined group of individuals who were either unemployed (ie, not working ≥1 hour in the reference week, actively looking for work in the past 4 weeks, and available to start work in the reference week) or not in the labour force but reported wanting to work (eg, discouraged workers). Respondents who were not in the labour force and did not want to work were excluded from the analysis.

Confounders

Potential confounders of the exposure, mediator and outcome are shown in the directed acyclic graph in figure 1. Confounders were measured at wave 16. Theorised confounders included country of birth (Australia, elsewhere), age (years), gender (male, female), geographical remoteness (major city, inner regional, outer regional/remote), labour force status (employed, unemployed, not in the labour force), year 12 completion (completed yes/no), disability information (yes/no), labour force status (employed, not in the labour force), and MHI-5 mental health (continuous).

Eligibility criteria

HILDA participants were eligible for inclusion in this study if they participated in all four waves of data used in this analysis (2016–2019, waves 16–19), were aged 20–35 years at wave 17 when the exposure was first measured, and were compatible with the consistent disability exposure measure and the employment status mediator measure.

Sample eligibility

As shown in figure 2, a total of 4243 individuals had complete disability information, with 3730 participants reporting disability information aligning with the consistent disability status measure. No individuals were missing labour force status participation, however, we excluded 295 individuals who were not in the labour force and did not want to work; a total of 3435 participants had values on our measure of employment status. A total of 533 individuals were missing information on the MHI-5 outcome and/or confounders, representing 15.5% of the eligible sample.

Statistical analysis

We used a causal mediation approach to quantify the total causal effect (TCE) of having consistent disabilities (the exposure) on mental health (the outcome). We decomposed the TCE into the natural direct effect (NDE) and the natural indirect effect (NIE). The NDE represents the pathway between the exposure and outcome, operating through pathways other than employment. The NIE reflects the extent to which the exposure impacts the outcome through the mediator, in this case employment status. Online supplemental file S1 includes additional information related to causal mediation analysis.

We used a regression approach to estimate the TCE, NDE and NIE, and applied stabilised inverse probability weights (IPW) to the regression models to ensure exchangeability between the exposure groups and therefore to account for potential confounding of the exposure–mediator and exposure–outcome associations in our analysis.

To create the IPW we estimated propensity scores using disability status as the outcome and all confounders as predictors. The stabilised IPW were then calculated by dividing the proportion exposed in each exposure group by the propensity score, for example, stabilised IPW in the exposed=proportion exposed/propensity score; stabilised IPW in the unexposed=proportion unexposed/(1−propensity score). The weights were stabilised to reduce the variance in the effect estimate and were capped at the 99th percentile to address any additional extreme weights; the distribution of the propensity scores, stabilised weights, and stabilised and capped weights are shown in online supplemental file S2.

To assess the propensity scores and IPW, we compared overlap in the exposed and unexposed disability groups graphically before and after weighting, and assessed the standardised differences before and after weighting. Applying the IPW achieved good covariate balance between the two exposure groups as shown in online supplemental file S2.

After generating the stabilised weights, we applied them to the two regression models as person weights, using the propensity scores to weight individuals to ensure that the confounding variables are balanced between the exposure groups. Coefficients from the weighted linear regression model (ie, for the mental health outcome, including the disability exposure and an interaction term for the employment mediator in the model) and the weighted logistic regression model (ie, for the mediator, including disability as an exposure) were combined to estimate the natural direct effect (NDE) and the natural indirect effect (NIE). The NDE represents the pathway between the exposure and outcome, operating through pathways other than employment. The NIE reflects the extent to which the exposure impacts the outcome through the mediator, in this case employment status. Online supplemental file S1 includes additional information related to causal mediation analysis.

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The NDE compared the effect on mental health of being exposed (A=1) (ie, having disabilities) to being unexposed (A=0) (ie, not having disabilities) while setting the mediator to the value it would take when unexposed (M=0) (ie, the counterfactual mediator for those who are exposed, effectively equalising employment between the exposure groups). The NIE represents the estimated mean difference in mental health between two hypothetical scenarios in which all individuals were exposed (A=1, ie, had a disability) and had the mediator (employment status) value that would naturally occur if they had a disability (M=1), and a counterfactual scenario in which individuals did not have a disability (A=0) but had the mediator value (employment status) that they would have had had they had a disability (M=1). The TCE captures the total effect of exposure status changing from unexposed (A=0) to exposed (A=1) on mental health.

After generating point estimates for the TCE, NDE and NIE, bootstrapping with 50 replications was used to calculate a 95% CI.

Missing data: multiple imputation
A total of n=533 individuals who otherwise met the inclusion criteria had missing data on confounders and/or the MHI-5 outcome. We compared the distribution of wave 16 characteristics among participants with and without missing data, and found that individuals who were male, living in regional or remote areas, who had not completed year 12, lived in lone person households and had lower MHI-5 scores had increased odds of missingness, as shown in online supplemental file S3. This suggested that data were not missing completely at random, but may be missing at random. Therefore, we used multiple imputation using chained equations with 50 imputations to improve the validity of the results.
The imputation models included all analytical variables and additional auxiliary variables to improve the imputation procedure. The mediation analysis was performed on each imputed dataset, with results combined using Rubin’s rules. Further information on the multiple imputation procedure is provided in online supplemental file S3. As a sensitivity analysis, we additionally performed the mediation analysis on the complete case dataset.

All analyses were performed in Stata V.16.28

**RESULTS**

**Descriptive characteristics**

Table 1 shows the wave 16 characteristics of the n=3435 individuals included in the analysis. Compared with participants without disabilities, a greater proportion of individuals with consistent disabilities were born in Australia, were female, lived in inner regional geographic areas, were unemployed or not in the labour force and did not complete year 12. The mean age of participants with and without consistent disabilities was similar, as was household structure. Participants without disabilities had higher mean MHI-5 scores (73.9, SD 15.7), indicating better mental health, compared with those with consistent disabilities (mean 59.4, SD 21.6).

**Causal mediation analysis**

Results of the causal mediation analysis are shown in Table 3. The TCE of the effect of consistent disability status on mental health was an estimated 4.84-point mean difference in MHI-5 score (95% CI –7.44 to –2.23). This was decomposed into the NDE, representing a 3.93-point difference in mean MHI-5 score (95% CI –6.74 to –1.12) not operating through employment status. The NIE, representing the pathway operating through the employment status mediator, was estimated to be a 0.91-point difference in MHI-5 score (95% CI 1.50 to –0.31), explaining 19% of the total effect of consistent disability on mental health.

**Sensitivity analysis**

Results of the complete case analysis are shown in online supplemental file S4. The causal mediation results from this analysis substantiated the findings from the main analysis. However, there was some attenuation of the effect compared with the findings using multiple imputation.

**DISCUSSION**

In this study, we found evidence that employment status contributed to the relationship between consistent disability status and mental health in young adults. Having a consistent disability had a detrimental effect on mental health outcomes, such that young adults with disabilities had MHI-5 scores that were, on average,

<table>
<thead>
<tr>
<th>Table 1</th>
<th>Baseline characteristics (wave 16) of sample by consistent disability status (n=3435)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No disabilities n=3058</td>
</tr>
<tr>
<td>Country of birth</td>
<td></td>
</tr>
<tr>
<td>Australia</td>
<td>2625</td>
</tr>
<tr>
<td>Elsewhere</td>
<td>431</td>
</tr>
<tr>
<td>Missing</td>
<td>n=2</td>
</tr>
<tr>
<td>Gender</td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>1553</td>
</tr>
<tr>
<td>Female</td>
<td>1505</td>
</tr>
<tr>
<td>Remoteness</td>
<td></td>
</tr>
<tr>
<td>Metro</td>
<td>2188</td>
</tr>
<tr>
<td>Inner regional</td>
<td>544</td>
</tr>
<tr>
<td>Outer regional/remote</td>
<td>326</td>
</tr>
<tr>
<td>Employment status</td>
<td></td>
</tr>
<tr>
<td>Employed</td>
<td>2590</td>
</tr>
<tr>
<td>Unemployed</td>
<td>167</td>
</tr>
<tr>
<td>Not in the labour force</td>
<td>301</td>
</tr>
<tr>
<td>Year 12 completion</td>
<td></td>
</tr>
<tr>
<td>Completed</td>
<td>2380</td>
</tr>
<tr>
<td>Did not complete</td>
<td>672</td>
</tr>
<tr>
<td>Missing</td>
<td>n=6</td>
</tr>
<tr>
<td>Household structure</td>
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</tr>
<tr>
<td>Couple with no children</td>
<td>872</td>
</tr>
<tr>
<td>Couple/lone parent with children</td>
<td>1555</td>
</tr>
<tr>
<td>Lone person</td>
<td>458</td>
</tr>
<tr>
<td>Other</td>
<td>173</td>
</tr>
<tr>
<td>Mental Health Inventory-5</td>
<td></td>
</tr>
<tr>
<td>Mean</td>
<td>73.9</td>
</tr>
<tr>
<td>Missing</td>
<td>n=270</td>
</tr>
<tr>
<td>Age, years</td>
<td>27.8</td>
</tr>
</tbody>
</table>

*Calculated using a χ² test for categorical variables and univariate linear regression for continuous variables.

<table>
<thead>
<tr>
<th>Table 2</th>
<th>Distribution of mediator and outcome by consistent disability status (n=3435)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No disabilities</td>
</tr>
<tr>
<td>Wave 18</td>
<td>n</td>
</tr>
<tr>
<td>Employment status</td>
<td></td>
</tr>
<tr>
<td>Employed</td>
<td>2825</td>
</tr>
<tr>
<td>Unemployed/wants to work</td>
<td>233</td>
</tr>
<tr>
<td>Mental Health Inventory-5</td>
<td></td>
</tr>
<tr>
<td>Mean</td>
<td>72.5</td>
</tr>
<tr>
<td>Missing</td>
<td>n=312</td>
</tr>
</tbody>
</table>

*Calculated using a χ² test for categorical variables and univariate linear regression for continuous variables.

<table>
<thead>
<tr>
<th>Table 3</th>
<th>Results of causal mediation analysis showing TCE, NDE and NIE of consistent disability status on mental health with mediation through employment status</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Coefficient</td>
</tr>
<tr>
<td>TCE</td>
<td>−4.84</td>
</tr>
<tr>
<td>NDE</td>
<td>−3.93</td>
</tr>
<tr>
<td>NIE</td>
<td>−0.91</td>
</tr>
</tbody>
</table>

NDE, natural direct effect; NIE, natural indirect effect; TCE, total causal effect.
4.84-points lower than young adults without disabilities, which represents a socially relevant, and potentially clinically relevant, difference in mental health score.21–22 Employment mediated a part of the difference in mental health, with our analysis suggesting approximately 19% of the effect of disability on mental health was explained by employment. Our results indicate 0.91-point of the difference in mental health score between young adults with and without disabilities could be ameliorated if young people with disabilities had the same rates of employment as their peers without disabilities. The remaining 3.93-point difference in MHI-5 score is likely to be further explained by the direct effect of disability on mental health, as well as numerous other factors related to other components of employment (eg, employment quality) as well as the social determinants of health (eg, low education, experiences of discrimination), which mediate the disability to mental health relationship.

These findings support and extend the results of previous causal mediation studies among the working-age population.14–15 Of particular relevance, Aitken et al’s study using causal mediation analysis to estimate interventional effects using HILDA data found that employment status (comparing those who are employed with a combined ‘unemployed and not in the labour force’ group) mediated approximately 10% of the effect of disability acquisition on mental health, equivalent to a −0.5 point change in mean MHI-5 score,14 findings which are similar to the NIE estimated in our study.

Results from an earlier analysis of HILDA using propensity score matching have shown that disadvantages related to the social determinants of health largely explain the mental health inequalities experienced by young people with disabilities.29 Our finding, that employment may be causally linked to the mental health inequalities experienced by young people with disabilities, is congruent with this. Given that employment provides tangible (ie, income) and intangible benefits (eg, social contact, time structure) which are conceptually and empirically linked to better mental health, it is logical that improvements to employment rates would improve the mental health of young people with disabilities.

Limitations
Causal mediation analysis requires strong assumptions regarding no confounding of the exposure–mediator and exposure–outcome relationships, and no unmeasured confounding.23 While our study adjusted for a range of confounders using stabilised weights, there may be other unmeasured factors influencing the association. Other limitations include possible measurement error of included variables, as data in HILDA are self-reported. Further, stabilising and capping the IPW to balance issues surrounding positivity with reductions in variance may introduce bias.30 Additionally, our measure of consistent disability status itself is likely a mediator of earlier disability to mental health associations. There may also be residual confounding of the estimates, as some of the time-varying confounders (eg, household structure, labour force status, year 12 completion) may not be common causes of the consistent disability exposure as onset of disability may have occurred at any time from birth. Future studies with larger numbers of young participants may permit the use of a disability acquisition measure, which would help to address issues pertaining to confounding.

We also used multiple imputation in our primary analysis to address potential issues related to missing data. However, the implementation of multiple imputation requires strong assumptions and issues such as misspecification of the imputation model or departure from the missing at random missing data structure may lead to biased results. Including appropriate variables in the imputation model (eg, the outcome, auxiliary variables) helped to bolster the assumptions made in our imputation procedure. Additionally, we note that the results of our sensitivity analysis aligned with the results from our analysis using multiple imputation. The decreased sample size in the complete case analysis, and ensuing reduction in power, may have contributed to attenuation of effects, including an NIE that contains the null value.

There are also several limitations with regard to the use of disability in this study. Individuals with severe or profound disabilities are underrepresented in HILDA due to the nature of the sampling and interview process. Further, the consistent disability status measure excludes individuals with intermittent disabilities, who may experience mental health inequalities that are mediated by employment status. Due to small numbers, we were unable to explore the disability construct at a more granular level, such as by type or severity, and to conduct sensitivity analyses excluding individuals with psychosocial disabilities, who may have poorer mental health outcomes. This may lead to differential misclassification and would likely bias the current findings towards the null. However, previous studies have shown that, though larger in magnitude for people with psychosocial disabilities, the effect of disability on mental health is consistent across disability groups.15

Additionally, the employment status measure does not reflect job quality or suitability. People with disabilities are more likely to experience poorer psychosocial job quality,31 and poor job quality among people with disabilities is associated with reduced mental health at levels similar to being unemployed or not in the labour force.32 This indicates the importance of examining the role of employment quality when considering the benefits of employment for mental health. Future studies should investigate how more or less suitable employment conditions may lead to better or poorer mental health outcomes among young adults with disabilities. Such studies could also use other data sources which include different measures of mental health outcomes, such as the presence of symptoms of different mental health conditions, to triangulate findings. Finally, our measurement of employment status focuses on individuals who want to work. While useful from the perspective of hypothetical interventions, individuals who want to work may differ systematically from individuals who do not want to work.

Despite the limitations, this study has considerable strengths. This is the first analysis we are aware of to use causal mediation methods to assess if employment status mediates the mental health inequalities experienced by young adults with consistent disabilities. We used advanced epidemiological methods to quantify potential causal pathways, incorporating weighting to achieve exchangeability and multiple imputation to increase the validity of our results. The mediator, employment status, is an intervention-relevant measure with real-life policy ramifications. Additionally, we used data from a nationally representative longitudinal study and included a validated measure of mental health.

Implications
Future research could use other advanced epidemiological methods, such as interventional effects causal mediation analysis. Interventions effects can be identified under weaker confounding assumptions and may permit the use of a more realistic disability exposure, such as intermittent disability.33 The use of interventional effects would permit the exploration


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of potential interventions to the employment status mediator, such as by simulating effects of government programmes targeting employment rates, or by introducing quota schemes for the hiring of people with disabilities. Disability is a complex construct, and individuals with different types, severity and trajectories of disability throughout early life will have different labour force and mental health outcomes. Using other data sources which include large numbers of young adults may permit more nuanced exploration of disability in this context.

Additionally, not all paid employment is of the same quality or is suitable for the worker. Refining the mediator could shed light on whether and how better or poorer jobs mediate the disability to mental health relationship. Finally, our analysis was conducted using data prior to the COVID-19 pandemic; the extent to which employment influenced mental health may have changed during the pre-vaccination portion of the pandemic, when lockdowns and other restrictions were commonplace. Future research could explore the complex interactions between the pandemic and work and mental health. The greater barriers to gaining and maintaining work that young adults with disabilities experience may be addressed at numerous points along the pathway when transitioning into the workforce, and include policy and programmatic changes targeted at different levels such as young adults themselves, schools, employers and employment service providers. For example, prior to beginning the transition into the labour force, young people with disabilities would benefit from improved school programmes, including tailored and appropriate career guidance and opportunities for relevant work experience.34 When young adults with disabilities are trying to gain work, they may be disadvantaged by the negative attitudes of potential employers, or by employers who lack an awareness of how to support workers with disabilities.35 36 Greater education and assistance for employers to hire and accommodate young adults with disabilities may improve hiring and retention rates.3 Finally, government-funded employment programmes, which are sometimes perceived to be punitive, may not be appropriate for young adults and people with disabilities and should be improved to ensure that services meet the needs of attendees.37 Programmes which provide a suite of services, including training and counselling, will likely provide better employment outcomes for young adults with disabilities.38

Conclusion
The results of our study indicate that some of the poorer mental health that young adults with consistent disabilities experience may be due to not being in employment when employment is desired. Considering the prevalence of disability among younger adults (eg, 16.6% among 18–44 years old in the USA,39 8% of 20–34 years old in Australia), intervening to improve the employment status of people with disabilities could feasibly improve the mental health of many people. Employment is a human right—including for people with disabilities40—and given the significant costs of unemployment and poor mental health to the economy, working to improve employment outcomes among young adults with disabilities may improve the mental health of young adults with disabilities and reduce mental health inequalities.

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