ABSTRACT

Background

People with disabilities are socio-economically disadvantaged and have poorer health than people without disabilities; however, little is known about the way in which disadvantage is patterned by gender and type of impairment.

Objectives

1. To describe whether socio-economic circumstances vary according to type of impairment (sensory and speech, intellectual, physical, psychological and acquired brain injury)

2. To compare levels of socio-economic disadvantage for women and men with the same impairment type

Methods

We used a large population-based disability-focused survey of Australians, analysing data from 33,101 participants aged 25 to 64. Indicators of socio-economic disadvantage included education, income, employment, housing vulnerability, and multiple disadvantage. Stratified by impairment type, we estimated: the population weighted prevalence of socio-economic disadvantage; the relative odds of disadvantage compared to people without disabilities; and the relative odds of disadvantage between women and men.

Results

With few exceptions, people with disabilities fared worse for every indicator compared to people without disability; those with intellectual and psychological

impairments and acquired brain injuries were most disadvantaged. While overall women with disabilities were more disadvantaged than men, the magnitude of the relative differences was lower than the same comparisons between women and men without disabilities, and there were few differences between women and men with the same impairment types.

Conclusions

Crude comparisons between people with and without disabilities obscure how disadvantage is patterned according to impairment type and gender. The results emphasise the need to unpack how gender and disability intersect to shape socio-economic disadvantage.

INTRODUCTION

In Australia and internationally people with disabilities are socio-economically disadvantaged compared to people without disabilities (1, 2). From a health perspective, this is important as there is now a well-established evidence-base demonstrating a causal relationship between socio-economic circumstances and health, with health deteriorating with increasing disadvantage (3). Thus the disadvantaged circumstances in which people with disabilities live are likely to have flow on effects for their health. In Australia, and internationally, people with disabilities have poorer health than people without disabilities including a worse profile of risks factors and behaviours (e.g. obesity, participation in breast and cervical cancer screening) and health conditions (e.g. diabetes) (4, 5). While few studies have assessed the relative contribution of disadvantage to the poorer health of people with disabilities, research among young Australians suggests that it is likely to be substantive (6).

International agencies including the World Health Organization (WHO), the World Bank and the United Nations have identified the need to improve educational, economic, social, and health outcomes for people with disabilities through policy reform and service development (2, 7). Similar recommendations have been made in the Australian National Disability Strategy (8). However, these international agencies and the Australian government recognise the limitations of current data for informing and monitoring interventions, as results are rarely disaggregated by demographic characteristics such as age, sex and ethnicity (2, 8-10).

This paper addresses some of these gaps. First, we describe socio-economic inequalities (e.g. education, employment) between people with and without disabilities according to the type of impairment (e.g. physical, intellectual), and

second, to assess whether there are gender-based inequalities among people with disabilities, we compare the socio-economic circumstances of women and men with the same types of impairments.

Social and economic disadvantage and disability

Australians with disabilities have higher levels of socio-economic disadvantage than people with disabilities in economically similar countries. For example, adult Australians with a disability earn on average 68% of the income of those without disabilities - the lowest relative income of the 27 countries in the Organisation for Economic Cooperation and Development (OECD) (1).

Type of impairment and disadvantage

Previous research has paid scant attention to the ways in which socio-economic disadvantage (measured by indicators such as education, income, labour force participation and housing) varies for people with different impairments. In relation to education, one Australian study reported variation in secondary school completion rates by the type of impairment, with students with mental illness having the lowest rates and students with sensory impairments having the highest rates (but five percent lower than for students with no impairment) (11).

No Australian research that we are aware of has examined whether income varies for people with different types of impairments.

An analysis of the 2003 Australian Survey of Disability, Ageing and Carers (SDAC) showed large discrepancies in labour force participation rates according to impairment type, with people with a mental illness reporting the lowest overall labour force participation rates (12) - a finding that is consistent with other countries (13-15).

In terms of housing, people with disabilities are more likely to experience housing-related disadvantage, such as affordability problems (16) and housing insecurity (17), and are over-represented within Australia's welfare housing sector (18). People with psychological disabilities have the most housing problems, including prolonged periods of homelessness while those with sensory impairments have housing profiles similar to the general Australian population (17, 19).

There are many reasons why we might expect to observe differences in socio-economic circumstances for people with different types of impairments. Differences may arise because of limitations related to the impairment itself as well as environmental barriers. For example, lack of wheelchair access to office buildings precludes participation in the workforce for some people with physical impairments, and endemic discriminatory attitudes towards people with mental illness may make it difficult for people with psychological impairments to secure and retain jobs (20, 21). Employment opportunities by impairment type may occur due to changes in Australia's industrial base from a manufacturing-based economy to one focused on services. There may be differences in the amenability of manufacturing compared to service businesses in making work available for people with physical versus psychological or intellectual disabilities.

Gender and disability

Although the overall prevalence of disabilities is similar for women and men in Australia (women 19%, men 18%) (22), disabilities are gendered in their acquisition and possibly their enactment (23). For example, dominant norms of masculinity, such as risk-taking, place men at higher risk of accidents that may result in physical impairments. Men are more likely to be employed in manual jobs and so have higher risk of exposure to physical and chemical hazards (24). Women have higher rates of depression and anxiety which has been attributed to a range of gender-related factors including experiences of gender-based discrimination and violence (25), the increased likelihood that women's work is unstable and low paid (26), poorer psychosocial working conditions (higher prevalence of job strain, sexual harassment, and low job control) (27-29), and the challenges of combining paid work and family roles (30-32).

Gender, disability and socio-economic disadvantage

Gender-based discrimination occurs across a number of levels - institutional, community, interpersonal relationships and family life, as well as intrapersonally (33). In Australia, women are less likely to be in parliament or have high level positions, receive lower incomes for the same work, are more likely to be employed in poorly-remunerated caring professions, have reduced access to economic resources within households, are more likely to live in poverty, and as a consequence live in insecure housing and experience food insecurity (34, 35). While there is clear evidence that women are more disadvantaged than men across a range of socio-economic indicators it is less clear whether these gender differences are found for people with disabilities. In the 2009 SDAC survey the unemployment rate for women with

disabilities was 7.8% compared to 7.3% for men with disabilities and labour force participation rates were lower (49.0% versus 58.9%) (22). However, data have not been sex-disaggregated in the reporting of other socio-economic outcomes.

The limited evidence on gender-based disadvantage among people with disabilities has been interpreted as the 'double disadvantage' that women with disabilities face on account of both their gender and disability (35-37). It has been argued that while men with disabilities experience discrimination due to their disability they are still able to access the privileges that arise from being a man, while women with disabilities are discriminated against on both fronts (35). However, there may be a much more complex interplay between gender and disability. First, differences in the prevalence of types of impairments may explain observed gender differences in disadvantage. For example, boys are more likely to have developmental impairments than girls(38) which are likely to be associated with poorer socio-economic outcomes than other types of impairments. Second, men with disabilities may not have the same access to male privilege as men without disabilities. Qualitative studies have shown that both women and men with disabilities may be construed as weak, dependent and childlike, potentially reducing the capacity of women and men to enact dominant forms of femininity and masculinity (37, 39, 40).

Gender may also play out differently for women and men with different impairment types. For example, it has been argued that for people with intellectual disabilities, which are usually lifelong, expectations regarding conformity to dominant gender norms may be less than for other types of impairments (40). By contrast, people who acquire a physical disability such as paraplegia later in life may have already

established gender practices and identities and will need to renegotiate these in the context of their acquired disability (40). Men who have physical impairments may be excluded from male-dominated blue-collar jobs, and women with physical disabilities may be less able to be employed in feminised caring professions such as nursing (41).

In this paper, we use data from the Australian SDAC survey conducted in 2009, to address two questions:

1. Does type of impairment (sensory and speech, intellectual, physical, psychological and acquired brain injury) affect the likelihood of living in socio-economic disadvantage (using indicators including education, income, employment, housing vulnerability and multiple disadvantage)?
2. Do gender-based socio-economic inequalities exist for people with disabilities and, if so, to what extent, for what types of impairment, and for which indicators?

METHODS

Data source

We analysed the Confidentialised Unit Record File (CURF) of the 2009 SDAC survey, a cross-sectional national survey conducted by the Australian Bureau of Statistics (ABS) from April to December 2009 (42). The primary objective of the survey was to collect data on people who had a disability or long-term health condition and people aged 60 years and over, through face-to-face interviews with trained interviewers. The SDAC was conducted using a stratified multi-stage sample of individuals living in both private and non-private dwellings. Non-private dwellings (including cared accommodation) were sampled separately to private dwellings to ensure they were adequately represented. The response rate of the survey was 89.9%.

The survey included 72,075 people, with a population weighted estimate of the prevalence of disability of 18.6%. We restricted our analysis to working-age adults, defined as 25 to 64 year olds (37,641 people excluded), and excluded 845 people living in cared accommodation as there were limited data collected on this subgroup). We also excluded 488 people who reported an impairment type classified as 'other' and no other impairment type.

Disability measures

The ABS uses the WHO International Classification of Functioning, Disability and Health (2001) to identify disability and the associated level of restriction (43). Participants were defined as having a disability if they had a limitation, impairment or restriction in everyday activities that had lasted, or was likely to last, for six months or

more. One hundred and forty nine questions were used to identify whether a participant had a disability, and the underlying conditions causing the disability. The impairments were collapsed into six categories: sensory and speech (sight problems not corrected by glasses, hearing or speech problems); intellectual (difficultly learning or understanding things); physical (including problems such as blackouts, difficulty gripping things, limited use of legs or feet and chronic pain); psychological (mental illness or a nervous or emotional condition), acquired brain injury (head injury, stroke or other brain damage), and other impairment (health conditions such as migraines). Those classified as having no disability may have reported long-term health conditions (e.g. hypertension or asthma) that did not satisfy the definition of disability.

Socio-economic outcomes

Four individual indicators of socio-economic disadvantage were used: low education, low income, not in paid employment and a measure of housing vulnerability. All outcomes were categorised as binary variables. Low education was defined as not completing secondary education (year 12 in Australia). Participants were categorised as low income if their personal income was in the lowest 30% of the income distribution. Not being in paid employment included people who were either unemployed or not in the labour force. Housing vulnerability referred to low income private renters, defined as people who were in the private rental market and had a personal income in the lowest 30% of the income distribution. In the Australian housing market, where almost 70% of the population are home owners or mortgage holders, private rental housing represents a comparatively small proportion of the

market (~25%)(44), and low income private renters have been highlighted as a group especially vulnerable to housing stress (45).

Multiple disadvantage was defined as people experiencing three or more of the individual indicators. For all analyses, the more advantaged category was used as the reference category.

Statistical analysis

Descriptive analyses

First, we calculated population weighted estimates of the prevalence of overall disability and each impairment type for women and men separately. We then estimated the population weighted prevalence of each socio-economic indicator according to disability status, impairment type and gender.

Regression analyses

We used population weighted unconditional univariate logistic regression models to estimate associations between disability and each of the socio-economic indicators. To assess the relative effects of different impairment types we conducted separate regression analyses of the associations between each impairment type (where the reference category was people without a disability) and each of the socio-economic indicators. Because there was evidence of a statistically significant interaction between gender and disability, analyses were conducted separately for women and men.

We used the same approach to assess whether there were gender inequalities among people with disabilities, calculating the relative odds of socio-economic disadvantage comparing women to men, among all people with disabilities and within each impairment type. Finally, we provided the estimates of the relative odds of disadvantage for each indicator for women compared to men, among people without disabilities, as a point of comparison.

The results of the regression analyses are presented in graphs as odds ratios and 95% confidence intervals. Analyses were conducted in Stata 12.1 using survey commands, person weights and jackknife replicate weights (46).

RESULTS

The sample consisted of 33,101 people (16,533 women and 16,568 men).

Prevalence of disability and types of impairments

Nearly 16% of the population reported a disability and the prevalence was similar for women (15.7%) and men (15.4%). The most common types of impairments were physical impairments, followed by sensory and speech impairments, psychological impairments, intellectual impairments and acquired brain injuries. Women had a lower prevalence of sensory and speech and intellectual impairments and a higher prevalence of physical and psychological impairments than men (Table 1). The prevalence of multiple impairments in the population was estimated to be 4.2%.

--- Please insert Table 1 ---

Disability and socio-economic disadvantage

Figure 1 shows that people with disabilities had higher levels of disadvantage across all socio-economic indicators.

Impairment type and disadvantage

The prevalence of all indicators of disadvantage was higher for women and men with disabilities (for all impairment types) compared to their same-sex counterparts without disabilities (Table 2). Among people with disabilities, women and men with sensory and speech impairments tended to experience the lowest levels of socio-economic disadvantage, followed by women and men with physical impairments, whereas women and men with intellectual impairments, psychological impairments and acquired brain injuries had the highest prevalence of disadvantage.

--- Please insert Table 2 ---

Figure 2 (columns 1 & 2) shows the results of the logistic regression analyses comparing the relative odds of socio-economic disadvantage between people with disabilities and people with no disability, by impairment type. This reaffirms the results described above, but additionally provides an estimate of the extent of the socio-economic inequalities. The odds of disadvantage were higher among people with a disability and, in general, appeared to be highest in those with psychological and intellectual impairments and acquired brain injuries. Of particular note were the low levels of paid employment. The odds ratios of not being in paid employment ranged from 4.0 (95% CI 3.3, 4.8) for women with sensory and speech impairments to 11.1 (95% CI 8.9, 13.9) for women with psychological impairments compared to women with no disability; and for men the odds ratios ranged from 7.0 (95% CI 5.9, 8.3) for men with sensory and speech impairments to 27.9 (95% CI 21.2, 36.7) for men with psychological impairments compared to men with no disability.

--- Please insert Figure 1 ---

With the exception of low education, the magnitude of the associations between impairment types and socio-economic disadvantage was greater in men than in women (higher odds ratios) (Figure 2). However, this is likely to be due to the fact that among people without disabilities, women are more likely to be disadvantaged than men (Table 2).

Gender, disability and socio-economic disadvantage

The odds ratios in Figure 2 (column 3) show the gender differences in socio-economic outcomes among people with disabilities (and for each impairment type) and, as a comparison, among people with no disability. Overall, women with disabilities had slightly elevated odds of living on a low income, not being in paid work and experiencing multiple disadvantage compared to men with disabilities, but experienced similar levels of low education and housing vulnerability.

In general, women and men with the same impairment types experienced similar levels of socio-economic disadvantage, although there were some gender differences in not being in paid employment in which women fared worse than men. As a comparison, among people with no disability the gender gap was more pronounced. Women had higher odds of living on low income, not being in paid work, housing vulnerability and experiencing multiple disadvantage compared to men.

DISCUSSION

Statement of Principal Findings

People with disabilities fared worse for every indicator of socio-economic disadvantage compared to people without disability, with the exception of housing vulnerability for women and men with sensory and speech impairments, and low income for women with intellectual impairments. Women and men with intellectual and psychological impairments and acquired brain injuries were at particularly high risk of disadvantage. There were extremely high levels of inequality in paid employment; for example men with psychological impairments and acquired brain injuries had nearly 30 times the odds of not being in paid employment compared to men without disability. Another major concern is the high prevalence of multiple disadvantage for people with all types of impairments, ranging between 17.9% and 35.4%. The intersections between different domains of disadvantage may have multiplicative effects on the long-term health of people with disabilities (47).

With the exception of the indicators of low education and housing vulnerability, we replicate previous research showing that overall women with disabilities are more disadvantaged than men with disabilities. However, the magnitude of these relative differences was much lower than the same comparisons between women and men without disabilities. This suggests that gender may be operating in different ways when disability is present. This hypothesis is further supported by our findings that, in the main, gender differences in socio-economic outcomes were not evident when women and men with the same impairment types were compared.

Comparisons to other studies

Our findings are similar to other studies, with people with psychological impairments having higher prevalence of non-participation in paid employment than those with physical and sensory impairments (13, 15). Differences in levels of low income were less pronounced but showed a similar pattern, with those with intellectual impairments or acquired brain injuries faring the worst. This is most likely due to low rates of workforce participation as well as these groups having lower wages when employed (13, 15). With respect to completion of secondary education, we found similar patterns as have been observed previously, with people with physical or sensory and speech impairments having the highest completion rates and people with intellectual or psychological impairments having the lowest (11). As most intellectual impairments are lifelong the lower levels of educational achievement are perhaps not surprising. Psychological impairments tend to become manifest in youth and early adulthood potentially disrupting educational trajectories. In terms of housing vulnerability, our findings are consistent with those of Beer and Faulkner (17, 19) who also found those with psychological impairments had poor housing outcomes such as housing insecurity.

Strengths and limitations

Our analysis has important strengths. We examined socio-economic indicators across several domains and a range of impairment types. For the first time that we are aware, we compare levels of disadvantage experienced by women and men with the same impairment types.

There are also limitations. First, we excluded people who only reported an impairment which was categorised as ‘other’ as this was a heterogeneous category,

however this only constituted 1.5% of the population. Second, we use an indicator of personal income as household income was not available in the dataset. It is possible that people with disabilities have access to resources from other members of the household. However, despite this limitation, these indicators represent a person's access to their own socio-economic resources. Third, we use education as an indicator although it is likely to reflect childhood circumstances. However, education is also a marker of future labour market opportunities. Finally, the study is cross-sectional so it is not possible to determine the direction of the associations between socio-economic disadvantage and disability.

Interpretations

We consistently found that people with sensory and speech impairments had better outcomes than other impairment types. In Australia, people with vision impairments receive non-means tested income support (vision impairments make up approximately one fifth of this group). Additionally, most vision and hearing impairments are acquired later in life (48) when people are more likely to be financially secure.

The particularly low levels of participation in paid work for those with psychological impairments may be due to the lack of investment in finding employment for this group. It is also possible that jobs and workplaces are more easily adapted for people with sensory and speech and physical impairments than for those with psychological impairments, or that employers are more willing to make changes to the physical work environment rather than adapting jobs for people with intellectual or psychological impairments. With respect to discrimination, there is

evidence to show that in general people have the most favourable attitudes towards people with physical impairments, while those with psychological impairments are the most stigmatised (49-51). People with psychological impairments report experiencing discrimination at higher levels than people with other disabilities (52). Both employers and co-workers hold discriminatory attitudes towards people with psychological impairments in the workplace (51, 53, 54); employers are less likely to hire people with psychological impairments and are less likely to promote them to executive positions (55). These findings have led to the development of workplace-based mental health anti-stigma interventions (56).

Our findings with respect to gender-based inequalities potentially challenge current orthodoxy regarding the 'double disadvantage' that women with disabilities experience particularly when comparing women and men with the same impairment type. This finding requires further investigation. As highlighted in the introduction, men with disabilities may not be able access the same resources available to other men because of what Shuttleworth *et al.* (2012) describe as their 'disabled masculinity' (39, 40, 57). The fact that we report few gender differences in the patterning of socio-economic disadvantage among people with different impairment types does not negate the importance of gender. Access to male privilege *per se* does not naturally flow from being a man but requires the enactment of hegemonic forms of masculinity which may not available to men with disabilities who may experience more marginalised forms of gender identity and practice. While we do not find as many gender-based socio-economic inequalities among people with a disability as expected, women with disabilities do experience health consequences

on account of their gender including high levels of gender-based violence(58) and forced sterilisation (59).

Implications for policy and future research

Improving participation in the paid workforce for people with disabilities provides the greatest opportunity for achieving better living conditions and the health and wellbeing of people of disabilities. The Australian Institute of Health and Welfare (AIHW) notes that the use of employment services by persons with a disability has grown by 75 percent since 2005-2006 (60). The revised Disability Employment Services (which aims to assist those with a disability, injury or health condition to find and keep a job) was introduced in 2010 after these data were collected, however based on the interim evaluation of these services, placement in employment is low (24% of service users remain in a job at 13 weeks) (61). The National Disability Insurance Scheme, introduced in July 2013 in four locations around Australia provides individual support packages for people with severe permanent disabilities up to 65 years of age. These packages provide access to a range of services (such as personal assistance). Because disabilities are more likely to be severe among people with intellectual and psychological impairments and acquired brain injuries (data not shown), it is possible that the very high levels of inequalities found in these groups will be reduced. However, people with severe and profound impairments make up less than one quarter of people with disabilities, therefore significant inequalities may remain.

CONCLUSION

In sum, we found that levels of socio-economic disadvantage were high for people with all impairment types, with those with psychological and intellectual impairments and acquired brain injuries being most disadvantaged. The areas of most concern are education and employment, which have flow-on effects to income, housing and health. From a public health perspective, improving the socio-economic conditions of people with disabilities should reduce disability-based health inequalities and reduce the economic costs of the poor health of people with disabilities.

Our finding that there are few differences in socio-economic disadvantage for women and men with the same types of impairments needs to be examined in other studies. It does however emphasise the need to unpack how gender and disability intersect to shape socio-economic disadvantage.

ABBREVIATIONS

ABS, Australian Bureau of Statistics; AIHW, Australian Institute of Health and Welfare; CURF, Confidentialised Unit Record Files; OECD, Organisation for Economic Cooperation and Development; SDAC, Survey of Disability, Ageing and Carers; WHO, World Health Organization

REFERENCES

1. Organisation for Economic Co-operation and Development. Sickness, disability and work: keeping on track in the economic downturn - background paper. 2009.

2. World Health Organization and World Bank Group. World report on disability. Geneva: WHO, 2011.

3. Marmot M, Friel S, Bell R, Houweling TAJ, Taylor S, Hlt CSD. Closing the gap in a generation: health equity through action on the social determinants of health. Lancet. 2008;372(9650):1661-9.

4. Australian Institute of Health and Welfare. Health of Australians with disability: health status and risk factors. Bulletin 83. Cat no. AUS 132 Canberra: AIHW, 2010.

5. Department of Health. Victorian population health survey of people with an intellectual disability 2009. Melbourne: State Government of Victoria, 2011.

6. Emerson E, Llewellyn G, Honey A, Kariuki M. Lower well-being of young Australian adults with self-reported disability reflects their poorer living conditions rather than health issues. Australian and New Zealand journal of public health. 2012;36(2):176-82. Epub 2012/04/11.

7. United Nations Convention on the Rights of Persons with Disabilities, (2006).

8. Department of Families, Housing, Community Services and Indigenous Affairs. National Disability Strategy 2010-2020. Canberra: Commonwealth of Australia, 2011.

9. Disability Policy and Research Working Group. National Disability Research and Development Agenda. Sydney: Commonwealth of Australia, 2011.

10. World Health Organization. World Health Assembly: Realizing the Millennium Development Goals for persons with disabilities towards 2015 and beyond. Geneva: WHO, 2013 A/65/448.

11. Karmel T, Nguyen N. Disability and learning outcomes: How much does the disability really matter? Adelaide: National Centre for Vocational Research, 2005.

12. Hogan A, Kyaw-Myint S, Harris D, Denronden H. Workforce participation barriers for people with disability. International Journal of Disability Management. 2012;7:1-9.

13. Hum D, Simpson W. Canadians with disabilities and the labour market. Canadian Public Policy. 1996;22:285-99.

14. Jones MK. Disability, employment and earnings: an examination of heterogeneity. Appl Econ. 2011;43(8):1001-17.

15. Jones MK, Latreille PL, Sloane PJ. Disability, Gender, and the British Labour Market. Oxford Economic Papers. 2006;58(3):407-49.

16. Luffman J. Measuring housing affordability (Catalogue no. 75-001-XIE). Statistics Canada, 2006.

17. Beer A, Faulkner D, Paris C, Clower T. Housing transitions through the life course: aspirations, needs and policy. Bristol: The Policy Press; 2011.

18. Dalton T, Ong R. Welfare to work in Australia: disability income support, housing affordability and employment incentives. International Journal of Housing Policy. 2007;7:275-97.

19. Beer A, Faulkner D. The housing careers of people with a disability and carers of people with a disability. AHURI (Australian Housing and Urban Research Institute); 2008.

20. National Disability Authority. A national survey of public attitudes to disability in Ireland. Dublin: National Disability Authority, 2011.
21. Reavley NJ, Jorm AF. Stigmatizing attitudes towards people with mental disorders: findings from an Australian National Survey of Mental Health Literacy and Stigma. Aust Nz J Psychiat. 2011;45(12):1086-93.
22. ABS. Disability, ageing and carers: summary of findings, 2009 (4430.0). ABS, 2010.
23. Meekosha H, Dowse L. Enabling citizenship: gender, disability and citizenship in Australia. Feminist Review. 1997;57:49-72.
24. LaMontagne A, Vallance D, Keegel T. Occupational skill level and hazardous exposures among working Victorians. Australian Journal of Labour Economics. 2008;11(1):47-70.
25. Astbury J. The social causes of women's depression: a question of rights violated? In: Jack D, Ali A, editors. Silencing the self across cultures: depression and gender in the social world. New York: Oxford University Press; 2010.
26. Louie A, Ostry A, Quinlan M, Keegel T, Shoveller J, LaMontagne A. Empirical study of employment arrangements and precariousness in Australia. Relations Industrielles/Industrial Relations. 2006;61(3):465-89.
27. LaMontagne A, Keegel T, Vallance D, Ostry A, Wolfe R. Job strain—attributable depression in a sample of working Australians: Assessing the contribution to health inequalities. BMC Public Health. 2008;8(181):9 pages.
28. LaMontagne A, Krnjacki L, Kavanagh A, Bentley R. Psychosocial working conditions in a representative sample of working Australians 2001-2008: an analysis of changes in inequalities over time. Occupational and Environmental Medicine. 2013;70:639-47.

29. LaMontagne A, Smith P, Louie A, Quinlan M, Shoveller J, Ostry A. Unwanted sexual advances at work: Variations by employment arrangement in a sample of working Australians. Australia and New Zealand Journal of Public Health 2009;33(2):173-9.

30. Piccinelli M, Wilkinson G. Gender differences in depression. Critical review. The British journal of psychiatry : the journal of mental science. 2000;177:486-92. Epub 2000/12/05.

31. Plaisier I, Beekman ATF, de Bruijn JGM, de Graaf R, ten Have M, Smit JH, et al. The effect of social roles on mental health: A matter of quantity or quality? Journal of Affective Disorders. 2008;111(2–3):261-70.

32. Plaisier I, de Bruijn JGM, Smit JH, de Graaf R, ten Have M, Beekman ATF, et al. Work and family roles and the association with depressive and anxiety disorders: Differences between men and women. Journal of Affective Disorders. 2008;105(1–3):63-72.

33. Sen G, Östlin P, George A. Unequal, unfair, ineffective and inefficient. Gender inequity in health: why it exists and how we can change it. Bangalore & Stockholm: Indian Institute of Management Bangalore & Karolinska Institutet, 2007.

34. ABS. Gender Indicators, Australia, Jan 2013 (4125.0). ABS; 2013.

35. Traustadottir R. Obstacles to equality: the double discrimination of women with disabilities: overview article. North Bay: DAWN Ontario, 1990.

36. Fine M, Asch A. Disabled women: sexism without the pedestal. Journal of Sociology and Social Welfare. 1981;8(2):233-48.

37. Gerschick TJ. Toward a theory of disability and gender. Signs. 2000;25(4):1263-8.

563 38. Giarelli E, Wiggins L, Rice C, Lew S, Kirby R, Pinto-Martin J, et al. Sex
564 differences in the evaluation and diagnosis of autism spectrum disorders among
565 children. Disability and health journal. 2010;3(2):107-16.
566 39. Shakespeare T. Disability, identity and difference. In: Barnes C, Mercer G,
567 editors. Exploring the divide. Leeds: The Disability Press; 1996. p. 94-113.
568 40. Shuttleworth R, Wedgwood N, Wilson N. The dilemna of disabled masculinity.
569 Men and Masculinities. 2012;15(2):174-94.
570 41. Deegan M. Multiple minority groups: a case study of physically disabled
571 women. In: Deegan M, Brooks N, editors. Women and disability: the double
572 handicap. New Brunswick: Transaction; 1985.
573 42. ABS. Confidentialised unit record file. Survey of Disability and Carers 2009.
574 ABS, 2010.
575 43. ABS. ABS sources of disability information, Australia 2003 - 2008.
576 Information paper (4431.0.55.002). ABS, 2010.
577 44. ABS. Housing tenure data in the census: fact sheet. ABS, 2011.
578 45. Baker E, Beer A. Developing a workable model of housing need: Applying
579 geographical concepts and techniques to a problem of public policy. Appl Geogr.
580 2007;27(3-4):165-80.
581 46. StataCorp. Stata Statistical Software: Release 12. College Station, TX:
582 StataCorp LP; 2011.
583 47. Shaw LR, Chan F, McMahon BT. Intersectionality and disability harassment:
584 the interactive effects of disability, race, age and gender. Rehabilitation Counseling
585 Bulletin. 2012;55(2):82-91.
586 48. ABS. Disability, ageing and carers: summary of findings, 2003 (4430.0). ABS,
587 2004 Contract No.: 4430.0.

588 49. Chan F, Cardoso E, Chronister J. Understanding psychosocial adjustment to
589 chronic illness and disability: a handbook for evidence-based practitioners in
590 rehabilitation. New York: Springer; 2009.
591 50. Cook J. Employment barriers for persons with psychiatric disabilities: update
592 of a report for the president's commission. Psychiatric Services. 2006;57(10):1391-
593 405.
594 51. Scheid TL. Stigma as a barrier to employment: mental disability and the
595 Americans with Disabilities Act. International journal of law and psychiatry.
596 2005;28(6):670-90. Epub 2005/08/23.
597 52. Kassam A, Williams J, Patten S. Perceived Discrimination Among People
598 With Self-Reported Emotional, Psychological, or Psychiatric Conditions in a
599 Population-Based Sample of Canadians Reporting a Disability. Can J Psychiat.
600 2012;57(2):102-10.
601 53. Manning C, White PD. Attitudes of employers to the mentally ill. Psychiatric
602 Bulletin. 1995;19(9):541-3.
603 54. Baldwin M. Estimating the potential benefits of the ADA on the wages and
604 employment of persons with disabilities. In: Blanck P, editor. Employment, disability
605 and the ADA: Issues in law, public policy and research. Evanston: Northwestern
606 University Press; 2000. p. 258-84.
607 55. Glozier N. Workplace effects of the stigmatization of depression. Journal of
608 occupational and environmental medicine / American College of Occupational and
609 Environmental Medicine. 1998;40(9):793-800. Epub 1998/10/20.
610 56. Malachowski C, Kirsh B. Workplace Antistigma Initiatives: A Scoping Study.
611 Psychiatric Services. 2013;64(7):694-702.

612 57. Gerschick TJ. Disability identity intersections with masculinities. Masculinities
613 in Higher Education: Theoretical and Practical Considerations. 2011:130-44.
614 58. Barrett KA, O'Day B, Roche A, Carlson BL. Intimate partner violence, health
615 status, and health care access among women with disabilities. Women's health
616 issues : official publication of the Jacobs Institute of Women's Health. 2009;19(2):94-
617 100. Epub 2009/03/11.
618 59. Parker M. "Forced sterilisation": clarifying and challenging intuitions and
619 models. Journal of law and medicine. 2013;20(3):512-27. Epub 2013/04/23.
620 60. Australian Institute of Health and Welfare. Disability support services: services
621 provided under the National Disability Agreement 2010-11. Canberra: AIHW, 2012
622 Contract No.: Cat. no. DIS 60.
623 61. Department of Education, Employment and Workplace Relations. Evaluation
624 of Disability Employment Services Interim Report. Canberra: Commonwealth of
625 Australia, 2012.
626
627
628

FIGURE CAPTIONS

Figure 1 Logistic regression analyses of the association between disability (by impairment type) and each indicator of socio-economic disadvantage and the association between gender and socio-economic disadvantage among people with and without disabilities (by impairment type)

Description: This figure shows the relative odds of each indicator of socio-economic disadvantage for people with a disability and each impairment type compared to those with no disability, for women (column 1) and men (column 2), and the relative odds of each indicator of socio-economic disadvantage for women compared to men within each impairment type (column 3).

Author/s:
Kavanagh, AM;Krnjacki, L;Aitken, Z;LaMontagne, AD;Beer, A;Baker, E;Bentley, R

Title:
Intersections between disability, type of impairment, gender and socio-economic disadvantage in a nationally representative sample of 33,101 working-aged Australians

Date:
2015-04

Citation:
Kavanagh, A. M., Krnjacki, L., Aitken, Z., LaMontagne, A. D., Beer, A., Baker, E. & Bentley, R. (2015). Intersections between disability, type of impairment, gender and socio-economic disadvantage in a nationally representative sample of 33,101 working-aged Australians. DISABILITY AND HEALTH JOURNAL, 8 (2), pp.191-199. https://doi.org/10.1016/j.dhjo.2014.08.008.