DISABILITY IN AUSTRALIA: THE IMPACT ON EARNING AND LEARNING

OCCASIONAL PAPER

DISABILITY IN AUSTRALIA: THE IMPACT ON EARNING AND LEARNING

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Disability in Australia: The impact on earning and learning

Cover: How one parent helped change the conversation around parenting with a disability
https://www.abc.net.au/life/exposing-the-misconceptions-around-parenting-with-disability/10593076

ABSTRACT

Background and Aim

This occasional paper describes the impact of disability in Australia on earning and learning. It is the fifth in a series of reports on career development, commencing in 1999 and examined further in 2014, 2015 and 2019.

Data source

The report is based on the official statistics on *Disability Ageing and Carers* by the Australian Bureau of Statistics (2019).

Findings

Whilst 67.9% of those aged 15-64 years without a reported disability complete Year 12 only 43.6% of those with a disability complete the highest level of secondary schooling.

In the labour market, the participation rate is lower for persons with a disability (53.4%) compared to 84.1% for those without a disability. This results in a reduced worklife for persons with a disability. As an example, for a male aged 30 years with a mild disability the expected worklife is around 30% less than that for a male with no disability.

There has not been an improvement in the labour market for persons with a disability. General labour force participation has increased from 2003 to 2018 but the labour force participation of persons with a disability has remained stubbornly constant.

Even when people with disabilities are ready to work it is accompanied by a higher rate of unemployment (10.3%) compared with 4.6% for those without a disability.

Furthermore, the unemployment rate for person with a disability has increased markedly from 2009 whilst that for persons without a disability has decreased.

Overall, for persons aged 15-64 years, income is reduced by half. The median weekly income for persons without a disability is $1016 per week compared with $505 per week for those with a disability.

Conclusions

When the influence of all these factors is combined there is an overwhelming landscape of disadvantage within which a person with a disability has to navigate an educational and vocational pathway. This is summarised in a calculation of worklife expectancy and earnings at five-year intervals. The final section of the report highlights some guidelines for career development and rehabilitation psychology.

DISABLITY IN AUSTRALIA: THE IMPACT ON EARNING AND LEARNING

Disability has been defined formally by the Australian Bureau of Statistics (2009, p. 27; 2019) as "a limitation, restriction or impairment, which has lasted, or is likely to last for at least six months and restricts everyday activities" The purpose of this report is to map the impact of restrictions in the core activities of everyday life that make up a disability (i.e., self-care, communication and mobility) on the two key areas of educational and vocational life. It is the fifth in a series of reports on the same topic, commencing in 1999 and examined further in 2044, 2015 and 2019 (Athanasou 1999, 2014, 2015; Athanasou, Murphy, & Mpofu, 2019).

Most laypersons would recognise that the extent of disability is likely to have an influence on (a) how much a person learns or (b) how much they earn but they may (c) underestimate the extent of impact on the overall worklife as (d) develop stereotypes that limit the potential of persons with a disability in terms of workplace adaptations, affirmative action or even discrimination. This report is based on a unique set of official data from the national household and establishment survey of disability by the Australian Bureau of Statistics (2019). The data are from households and persons in cared accommodation. The emphasis is on career development and unless otherwise stated, the focus in this report is on those of working age, that is 15-69 years.

The number of persons with a disability in Australia in 2018 was 4.3 million and the overall proportion of persons was around 17.7% of the population. The proportion varies from a low of 3.7% for the youngest age group (0-4 years) and increases directly with age, up to 84.6% for those over 90 years. Figure 1 indicates the proportions across the age groups 15-69 years.

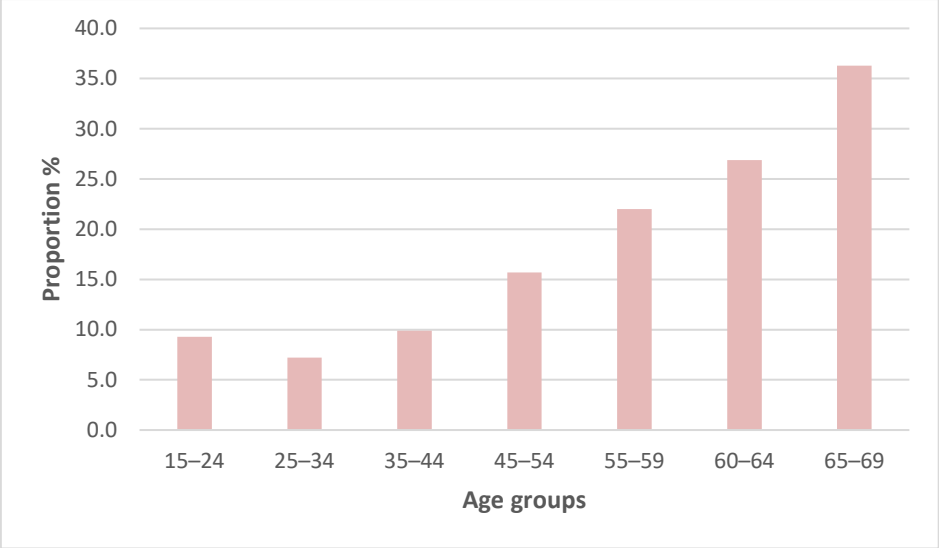


Figure 1. Proportion in working age groups with a disability (Source: ABS, 2019, Table 1.3).

Disability status

At the outset it may be helpful to recount for the reader the ways in which disability and restrictions are defined formally by the Australian Bureau of Statistics. These are linked with international classifications that focus on functioning rather than a specific disease or condition. Firstly, a person has a disability if he/she has one of the following conditions listed in Table 1 and which has lasted or is likely to last for six months or more.

Table 1

Disability conditions

Loss of sight (not corrected by glasses);
Loss of hearing (with difficulty communicating or use of aids);
Loss of speech;
Chronic or recurring pain that restricts everyday activities;
Breathing difficulties that restrict everyday activities;
Blackouts, fits or loss of consciousness;
Difficulty learning or understanding;
Incomplete use of arms or fingers;
Difficulty gripping;
Incomplete use of feet or legs;
A nervous or emotional condition that restricts everyday activities;
Restriction in physical activities or physical work;
Disfigurement or deformity;
Needing help or supervision because of a mental illness or condition;
Head injury, stroke or other brain damage, with long-term effects that restrict everyday activities;
Treatment for any other long-term condition, and still restricted in everyday activities; or
Any other long-term condition that restricts everyday activities.

Source: Australian Bureau of Statistics, 2019

In the official statistics, the limitations arising from a disability have been rated as profound, severe, moderate or mild (see Table 2). This rating relates to a specific restriction across three core activities: (a) self-care (bathing or showering, dressing, eating, toileting, managing incontinency); (b) mobility (moving around at home and away from home, getting into or out of a bed or chair, and using public transport); and (c) communication (understanding and being understood by others – strangers, family and friends) (Australian Bureau of Statistics, 2019).

Table 2

Categorisation of the extent of a disability

Category	Description
Profound	unable to perform a core activity, or always needing assistance
Severe	sometimes needing assistance to perform a core activity
Moderate	not needing assistance, but having difficulty performing a core activity
Mild	having no difficulty performing a core activity, but using aids or equipment because of disability.

Source: Australian Bureau of Statistics, 2019

Just over 1 in 20 (5.7%) in the population have a disability with a profound or severe core activity limitation. This may also involve a schooling or employment restriction (1.97 million) or just under 8% of the entire population (7.98%). Amongst those with a disability, the largest number (43%) are in the mild core activity limitation group (see Figure 2).

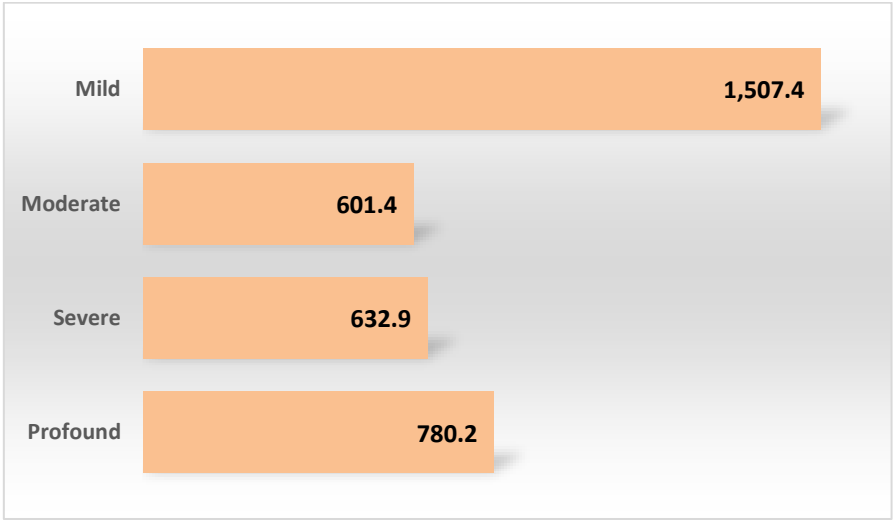


Figure 2. Proportion of all persons with a core activity limitation (Source: ABS, 2019 Table 3.1).

Schooling and qualifications

One of the first community-wide impacts of disability appears typically in schooling. For instance, just over 16% or around 1 in 6 of those persons with a disability do not even complete Year 10 (i.e., a minimum standard for school leaving). As expected, the situation in schooling worsens and persons with a disability are much less likely to complete the highest level of secondary schooling. Whilst 67.9% of those aged 15-64 years without a reported disability complete Year 12 only 43.6% of those with a disability complete the highest level of secondary schooling. The educational disadvantage continues at tertiary level where 32.8% of those without a disability obtain a bachelor degree or higher compared with 18.4% of those with a disability. The restrictions in education are summarised in Table 3.

Table 3

Highest level of secondary schooling completed or non-school qualifications (persons aged 15-64 years)

Level	All with disability	No disability
Year 12 or equivalent	43.6%	67.9%
No non-school qualification	41.1%	33.6%

Source: Australian Bureau of Statistics, 2019, Table 6.3

Labour force participation

One of the ultimate outcomes of disability appears in the field of employment. The participation rate in the labour force is lower for persons with a disability (53.4%) compared to those without a disability (84.1%). The impact is illustrated in Figure 3. Whilst labour force participation for those without a disability increased slightly from 83.2% in 2015 to 84.1% in 2019. For those with a disability it remained constant (53.4% in 2015 and 2018). In short, this labour force indicator for those with a disability is poor and has not improved.

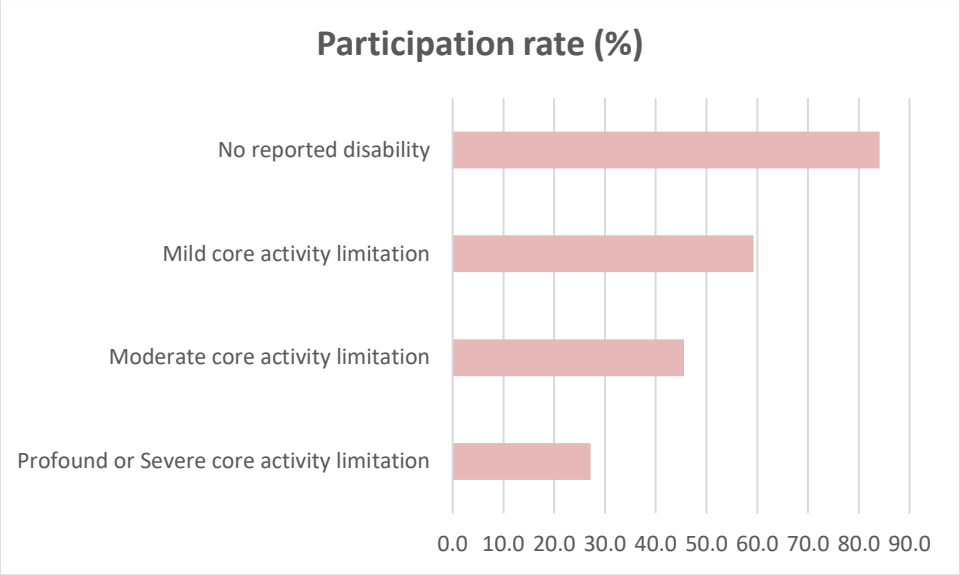


Figure 3. Labour force participation rate and core activity limitations (Source: ABS, 2019, Table 8.1).

Even when people with a disability are ready to work, their labour force experience is accompanied by a higher rate of unemployment (10.3% for persons with disabilities compared with 4.6% for those without a disability – see Figure 4). In addition, the rate of unemployment increases with the extent of disability and the rate of labour force participation decreases with the extent of disability. Persons with a profound or severe core activity limitation have an unemployment rate of 12.7% compared with 11.8% for those with a moderate restriction through to 9.6% for those with a mild core activity limitation and only 4.6% for those with no disability.

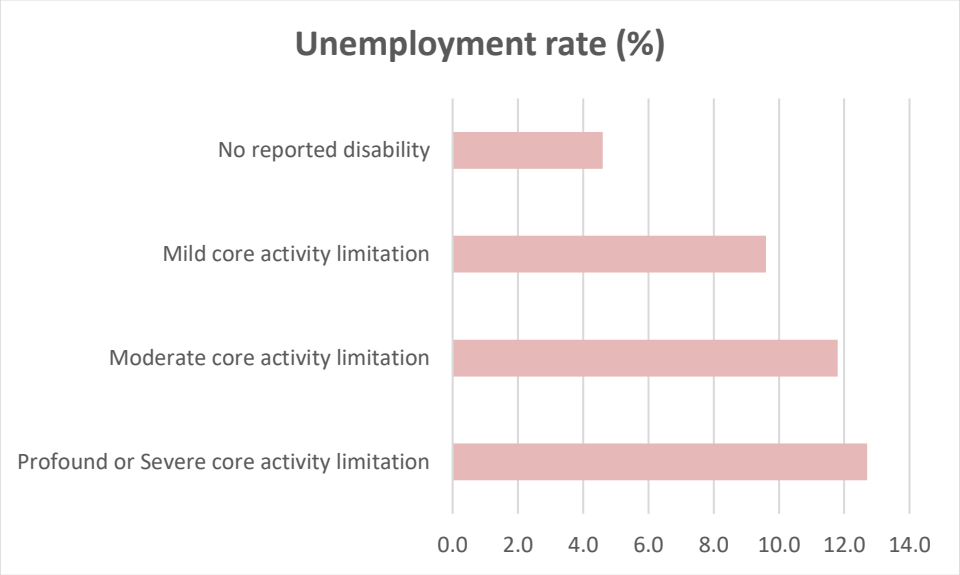


Figure 4. Unemployment rate and core activity limitations (Source: ABS, 2019, Table 8.1).

Not only are there absolute differences in this labour market indicator but there has been a decline from 2015 to 2018. The unemployment rate increased from 10.0% to 10.3% for persons with a disability, whereas the unemployment rate for those without a disability actually decreased from 5.3% to 4.6%.

Types of occupations

It is relevant for rehabilitation purposes to consider the types of work undertaken by those persons with disabilities. The overall patterns across the eight major occupational groups is shown in Figure 5. Of the 984,200 persons with a disability, the pattern of employment across occupational groups shows a preponderance in the professional category. There are also large numbers in the technicians/trades as well as labourer groups.

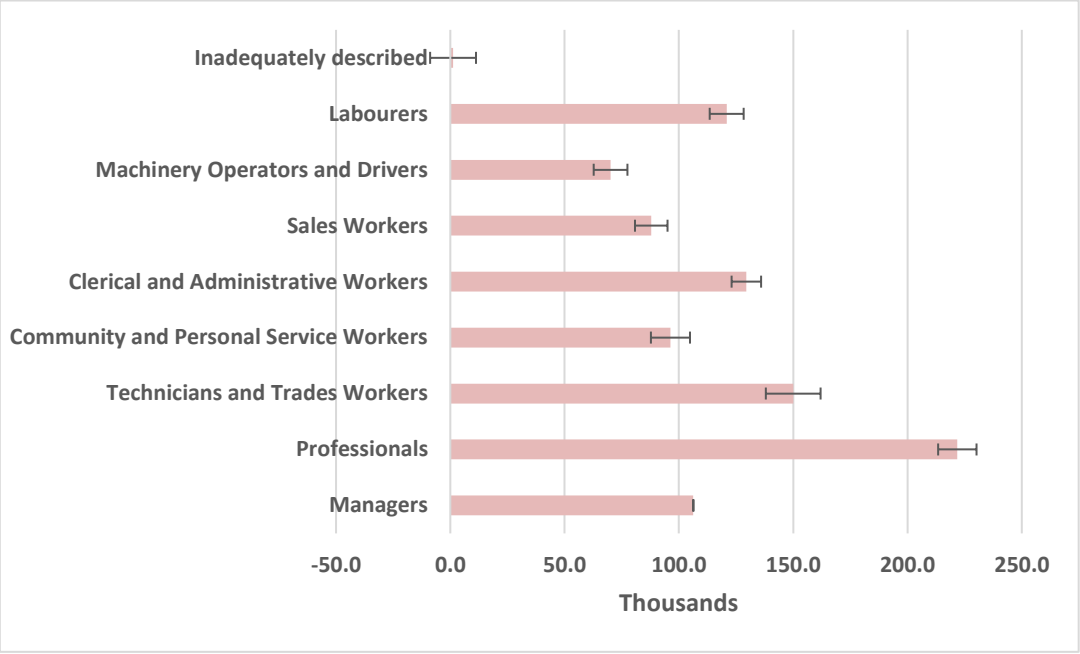


Figure 5. Employment across all occupational groups for those with a disability – relative standard errors shown (Source: ABS, 2019, Table 9.1).

Figure 6. Employment across all occupational groups for those with and without a disability (Source: ABS, 2019, Table 9.1).

There might be a view that the pattern of employment across the different types of occupations might be different across all persons with and without a disability. It is shown in Figure 6. Actually, the overall pattern is similar to that for persons with no disability but because of the large numbers involved it is statistically significant (chi-square (8) = 18.16, p=.02).

Income

The impact of a disability on income is quite clear. Overall, for persons aged 15-64 years it is reduced by half. The median weekly income for persons without a disability is $1016 per week compared with $505 per week for those with a disability. Moreover, there is a direct decrease in income from those with a mild limitation ($555 p.w.) through to those with a moderate limitation ($482 p.w.) then those with a severe limitation ($445 p.w.) and finally to those with a profound core activity limitation ($400 p.w.). This is shown directly in Figure 7.

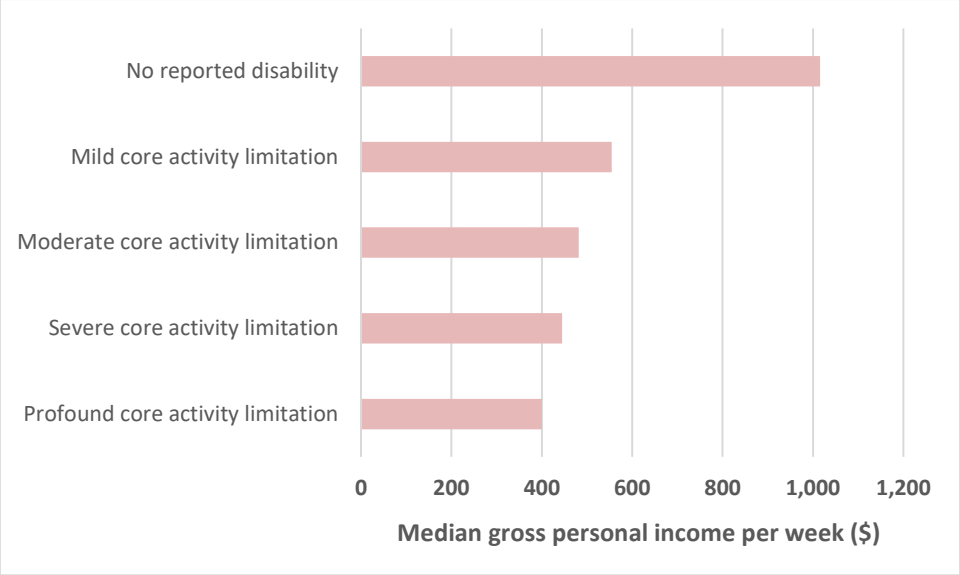


Figure 7. Median gross income and core activity limitations (Source: ABS, 2019, Table 7.1).

Employment restrictions, support and discrimination

In addition to lower participation and higher unemployment as well as lower income, there are multiple sources of labour market limitations. These operate to limit the opportunity to work and may appear as (a) a restriction in the type of job (709,900), (b) the number of hours (481,700) or (c) difficulty changing jobs/getting a preferred job (587,400). The proportions involved, however, vary depending on whether one is working full-time (447,400) part-time (572,300), whether one is unemployed (174,800) or not in the labour force (587,200). The proportions are shown for each of the major groups in Table 4. The proportion who are restricted in the type of job is fairly even across groups. Restriction in the number of hours impact on those working part-time but also impeded job-seeking for those who are unemployed and those not even in the labour force. Difficulty in changing jobs also appears fairly uniform across groups. In terms of experiencing discrimination, this was reported by just over 300,000 out of 3.2 million (9.59%) (ABS, 2019, Table 20.1).

Around 18,900 out of a total of 39,900 employed persons with a disability aged 15-64 years were provided with ongoing supervision or assistance in the form of a disability support person. The areas in which other workplace arrangements were made are summarised in Table 5. Special equipment was provided in around 40-48% of cases; different duties

were allocated in around a quarter of cases; but the most improvement required is building modifications, providing support at work and providing training (see Table 5). Almost one-third avoid situations due to their disability (1,083,900 out of 3,271,900 – ABS, 2019, Table 22.1).

Table 4

Restrictions in employment for persons with a disability

Type of employment restriction(s)	Full-time	Part-time	Unemployed	Not in the labour force
Restricted in type of job	45%	37%	41%	40%
Restricted in number of hours	17%	31%	29%	29%
Difficulty changing jobs, getting a preferred job	38%	32%	30%	31%

All percentages rounded; Source: ABS, 2019, Table 10.1

Table 5

Need for special employer arrangements

Needs	Full-time (N=57,100)	Part-time (N=38,400)	Total employed (N=94,600)
Provided special equipment	48%	40%	46%
Modified buildings or fittings	11%	5%	7%
Provided help from someone at work	7%	13%	8%
Provided training or retraining	3%	14%	4%
Allocated different duties	24%	31%	26%
Other arrangements	42%	44%	43%

All percentages rounded; Source: ABS, 2019, Table 10.1

Worklife expectancy

Much of the preceding disadvantage of disability in education and work can be portrayed by a single vocational outcome, namely worklife expectancy. Worklife expectancy is the estimated duration of someone's working life.

In 1988, Gamboa attempted to determine the worklife expectancy of people with disabilities in the USA. This approach was developed principally for medico-legal purposes and in 1999, this was replicated for Australia (Athanasou, 1999). By any standard, worklife expectancy is an important consideration as it combines educational and vocational factors into one practical metric.

With the release of the latest official statistics on disability and the labour force it is possible to update these worklife expectancies. The latest

worklife estimates take into account the official categorisation of disability, that is, profound/severe, moderate, mild and no disability as well as age and gender. Whereas in the past the worklife expectancy had been calculated for each disability group to a retirement age of 65 years, this has now been extended to 69 years in line with societal changes.

The basis for the calculation is to determine the joint probability of participation and employment at a particular age and to multiply this by the probability of life at that age. These were then summed for each age level to produce a worklife expectancy that is expressed in years for a person. A spreadsheet containing these calculations is available freely from the author upon request.

An abbreviated table at five-year age intervals for males and females is listed as Table 6 and illustrated in Figure 8. In essence it shows how long one might be expected to work given a level of disability. For instance, the tables showed that a 25-vear-old female without a disability had a worklife expectancy to age 69 of 30.2 years, compared with only 9.4 years for a female of the same age with a profound-severe disability, 17.7 years with a moderate disability or 21.1 years for a mild disability.

Some readers may have subtracted 25 years from 69 years and ended up with 44 years of remaining work-life for a female without a disability and may be wondering how the much lower figure of 30.2 years was calculated. First, some people die. Reference to life tables shows that from an original cohort of 100,000 newborn female babies, 90,524 will make it to age 69 years (Australian Bureau of Statistics, Life Tables Australia 2016-2019). A female aged 25 has a probability of 0.91 of surviving to age 69 and theoretically this gives around 41.96 uninterrupted years of working. Next others get sick or do not work. They are not in the labour force. So this 41.96 years needs to be reduced by the probability of employment for females without a disability. This was set at 0.719 (it assumes a constant employment rate which is far from correct but at least it is a starting point). Where does the 0.719 come from? It is the total number of females employed or seeking work out of the total female population. Unfortunately, this is an average and ideally one would really need the figure for each age group because

labour force participation is definitely a function of age, let alone other factors such as education. Although one might vary this 0.72 to suit individual circumstances, it will have implications for working capacity over a lifetime.

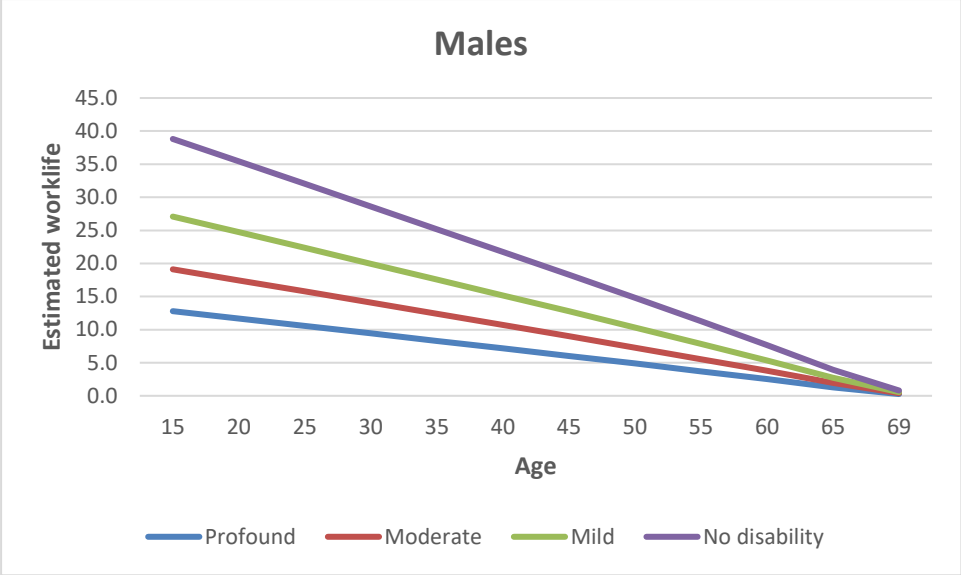
Table 6

Estimated worklife expectancy for different levels of disability at five-year age intervals

	Males				**Females**			
Age	Profound-Severe	Moderate	Mild	No disability	Profound-Severe	Moderate	Mild	No disability
15	12.8	19.1	27.1	38.8	11.5	21.5	25.6	36.7
20	11.7	17.4	24.7	35.4	10.5	19.6	23.4	33.4
25	10.6	15.8	22.3	32.0	9.4	17.7	21.1	30.2
30	9.4	14.1	20.0	28.6	8.4	15.8	18.8	26.9
35	8.3	12.4	17.6	25.2	7.4	13.9	16.5	23.6
40	7.2	10.7	15.2	21.8	6.4	11.9	14.2	20.3
45	6.0	9.0	12.8	18.3	5.3	10.0	11.9	17.0
50	4.9	7.3	10.3	14.8	4.3	8.1	9.6	13.7
55	3.7	5.6	7.9	11.3	3.2	6.1	7.2	10.4
60	2.5	3.8	5.3	7.7	2.2	4.1	4.9	7.0
65	1.3	1.9	2.7	3.9	1.1	2.1	2.5	3.5
69	0.3	0.4	0.6	0.8	0.2	0.4	0.5	0.7

The net effect of restricted educational and vocational potential is highlighted in reduced income and earning capacity over a lifetime. For those aged 15-64 years without a disability[1], the median gross personal income per week was $1016 compared with $505 per week for those with a disability (ABS, 2019, Table 7.1). The median gross personal income per week is a direct function of the extent of disability limitation and Figure 2 indicated this relationship. Overall, the increased disability resulted in lower median gross personal income per week. Almost assuredly this means that persons with a disability will suffer substantial if not massive economic disadvantage. This is highlighted by calculating lifetime earnings.

[1] The only income data is for those aged 15-64 years



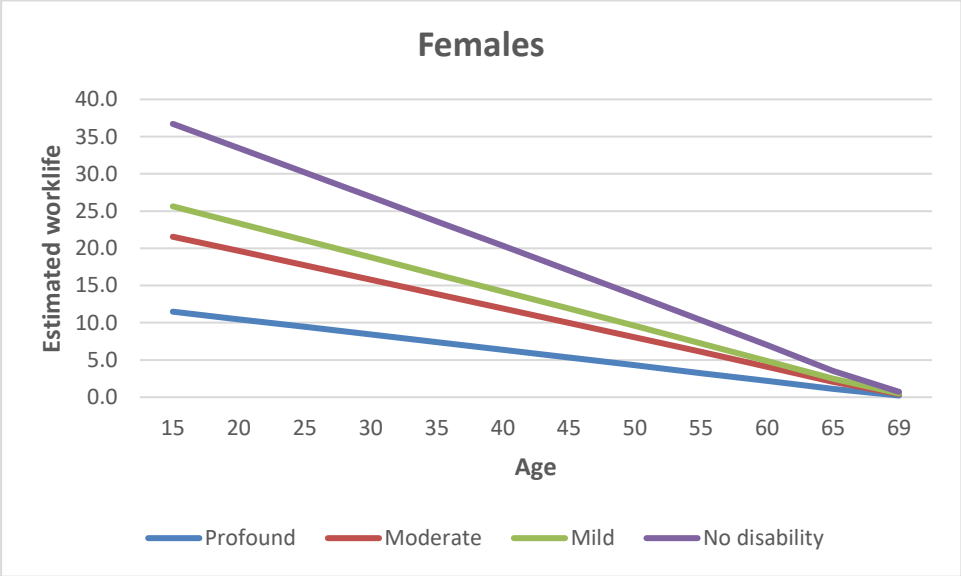


Figure 8. Estimated worklife expectancy for different levels of disability at five-year age intervals.

If the reader recalls the earlier example of our female aged 25 years without a disability, it is possible to estimate her available lifetime earnings and then this can be compared to a female of the same age with say, a mild disability. The only available income figures are for males and females combined and here are my calculations:

Female 25 years, no reported disability. Median gross income = $1016 multiplied by 30.2 years multiplied by 52 weeks = $1,595,526.

Female 25 years, mild disability. Median gross income = $555 multiplied by 21.1 years multiplied by 52 weeks = $608,946.

An overall summary of theoretical lifetime earning capacity for five year interval age groups is provided in Table 7.

Any comparisons need to take into account other factors (e.g., after tax income, other vicissitudes of life, longevity differences in the groups) but the general message is that the economic loss suffered through a disability is likely to be quite large. Of course, the disparities increase as the level of disability increases and the age of onset is younger. Needless to say, one should not extrapolate from general findings to a particular case but this is a starting point to describe the overall background against which an individual might live, learn, work and earn.

Table 7

Estimated theoretical lifetime incomes for different levels of disability at five-year age intervals

	Males				Females			
Age	Profound severe	Moderate	Mild	No disability	Profound severe	Moderate	Mild	No disability
15	$296,020	$479,134	$781,575	$1,120,119	$265,861	$540,097	$739,791	$1,939,702
20	$270,150	$437,262	$713,272	$1,022,230	$242,190	$492,010	$673,924	$1,767,001
25	$244,213	$395,281	$644,792	$924,087	$218,496	$443,874	$607,991	$1,594,128
30	$218,200	$353,176	$576,109	$825,654	$194,775	$395,685	$541,984	$1,421,060
35	$192,102	$310,934	$507,203	$726,900	$171,019	$347,426	$475,882	$1,247,743
40	$165,892	$268,511	$438,002	$627,725	$147,213	$299,064	$409,639	$1,074,056
45	$139,525	$225,833	$368,384	$527,952	$123,331	$250,548	$343,185	$899,816
50	$112,921	$182,772	$298,143	$427,284	$99,325	$201,778	$276,383	$724,666
55	$85,952	$139,121	$226,937	$325,236	$75,121	$152,609	$209,034	$548,078
60	$58,399	$94,524	$154,189	$220,977	$50,615	$102,824	$140,842	$369,282
65	$29,917	$48,423	$78,989	$113,204	$25,656	$52,121	$71,392	$187,186
69	$6,132	$9,925	$16,190	$23,203	$5,207	$10,577	$14,488	$37,986

Concluding comments

Disability in Australia is not only widespread but also deep in its educational and vocational consequences. This report focused on earning and learning; it described the schooling or employment restrictions of just over two million Australians aged 15-64 years. The officially reported aspects of mild to profound restrictions were compared to persons with no disability and the picture that has been painted is of uniform disadvantage.

Persons with a disability are less likely to complete the highest level of secondary schooling. They are less likely to obtain higher education qualifications. Their participation rate in the labour force (53.4%) is much lower than the 84.1% for those without a disability. Even when people are ready to work it is accompanied by a higher rate of unemployment (10.3% for persons with disabilities compared with 4.6% for those without a disability). Overall, for persons aged 15-64 years, income is reduced by half. The final section of the report highlights the reduced worklife expectancy and the lifetime economic disadvantage of a restriction in communication, self-care or mobility.

These worklife expectancies encapsulate the real-life impact of disabilities on employment. The reader should note, however, that these are approximations and estimates. They made assumptions about participation rates at each age level. They should be interpreted with caution and they do not consider individual circumstances. Nevertheless, they provide a realistic backdrop for considering the likely extent of one's future career, especially in relation to disabilities. Taking into account the level of participation, the extent of employment and one's survival rate means that there is now a clearer perception of the overall vocational disadvantage suffered by people with disabilities in Australia. The disadvantage and its extent are quantified in part by these tables, and these may be of practical assistance in some forensic vocational contexts.

When the influence of all the factors is combined there is an overwhelming backdrop of disadvantage within which a person with a disability has to navigate their educational and vocational life. It is beyond the scope of this paper to suggest social or political remedies but at the professional it highlights the need for vocational rehabilitation interventions to overcome personal and individual disadvantage. For instance, it is not clear that the vocational potential of persons with a disability is appreciated. They face workplace restrictions and discrimination. There is little in the way of affirmative action.

Table 8

Unemployment rates and labour force participation rates for person with and without disability 1988-2018

Indicator	1998	2003	2009	2012	2015	2018
Participation rate with disability		53.2%	54.3%	52.8%	53.4%	53.4%
Participation rate no reported disability		80.6%	82.8%	83.5%	83.2%	84.1%
Unemployment rate with disability	11.5%	8.6%	7.8%	9.4%	10.0%	10.3%
Unemployment rate no reported disability	7.8%	5.0%	5.1%	4.9%	5.3%	4.6%

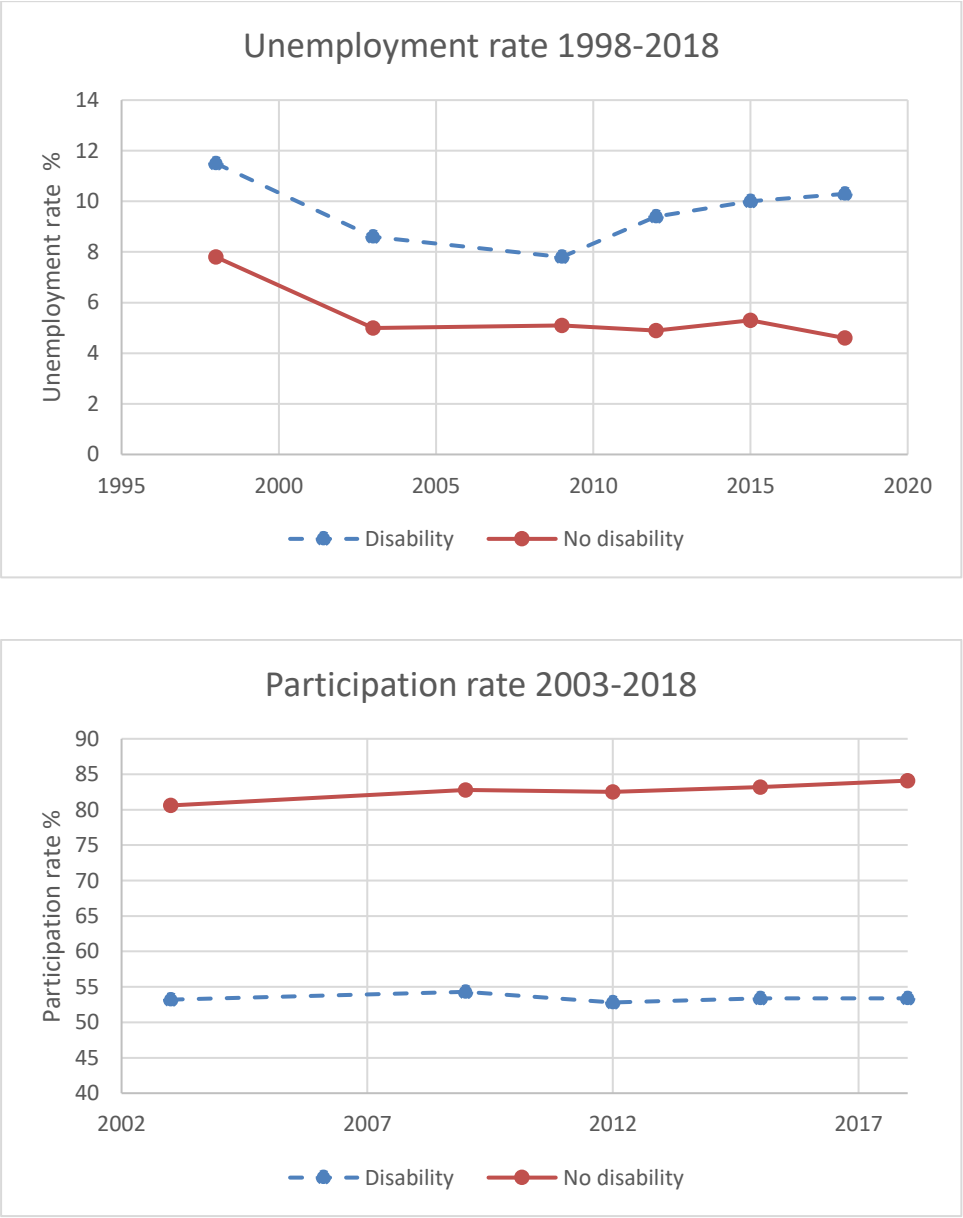


Figure 9. Unemployment rates and labour force participation rates for person with and without disability 1988-2018.

Whilst such comments might seem hard or somewhat controversial, one only has to examine labour force participation rate and unemployment rates over a 20-year period to see that these have not kept pace with that of the wider community. The results are displayed Table 8 and illustrated graphically in Figure 9. Whilst general labour force participation has increased from 2003 to 2018, the labour force participation rate of persons with a disability has remained stubbornly constant. Since 2012 the unemployment rate for persons with a disability has increased markedly whilst that for persons without a disability has reduced. In simple terms, one might say that despite social and government policies to support persons with a disability, they seem to be at a greater disadvantage in recent years in the labour market.

The most telling outcome of disadvantage was that of worklife expectancy. This has a flow-on effect to earnings. Overall, disability can be a lifetime sentence to financial poverty. For this reason, this paper concludes with some broad considerations for improving vocational rehabilitation.

These principles originated from the work of the psychologist Beatrice Wright (1983) who worked in the area of disability (see Athanasou, 2017; Athanasou, Murphy & Mpofu, 2019). They may outline some aspects of a pathway for rehabilitation psychology and vocational rehabilitation services:-

- all phases of rehabilitation have psychological aspects
- a disability does not reduce fundamental human rights to learn and earn;
- the severity of restrictions in core activity on earning and learning are variable;
- career development can be enhanced but variability is required in rehabilitation plans as each person has unique characteristics and each situation its own properties;
- the group findings on education and work should be applied with caution to the individual case (adapted from Wright, 1983, pp. xi-xvii).

No claim is made that these principles are complete or all-encompassing, but it is clear that employment is a possibility for persons with a disability and the challenge is to translate this potential into a reality for many more persons. Although it is beyond the remit of this paper to

advocate policy solutions, a key issue for career-development professionals is how to overcome individual disadvantage. At the very least it is a social paradox that despite so many efforts the unemployment for persons with a disability has increased in recent years and socially saddening that labour force participation rates have stagnated. The impact on worklife expectancy and lifetime earnings are a major source of personal disadvantage.

Conflict of Interest

The research was not undertaken with any financial support or assistance. No conflict of interest is reported for this paper.

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