

2 Existing estimates of prevalence of physical disability

This chapter presents an overview of existing international and Australian estimates of the prevalence of disability. Issues relating to operational definitions and different approaches to estimating prevalence are discussed.

2.1 International estimates

The United Nations Disability Statistics Data Base (DISTAT) uses the ICIDH as a framework to integrate and compile data collected from 55 countries in population censuses, household surveys and registration systems. DISTAT covers five subject areas: prevalence of impairments; prevalence of disability; causes of impairment; social, economic and environmental characteristics; and the distribution and use of services and social support (WHO 1990:42).

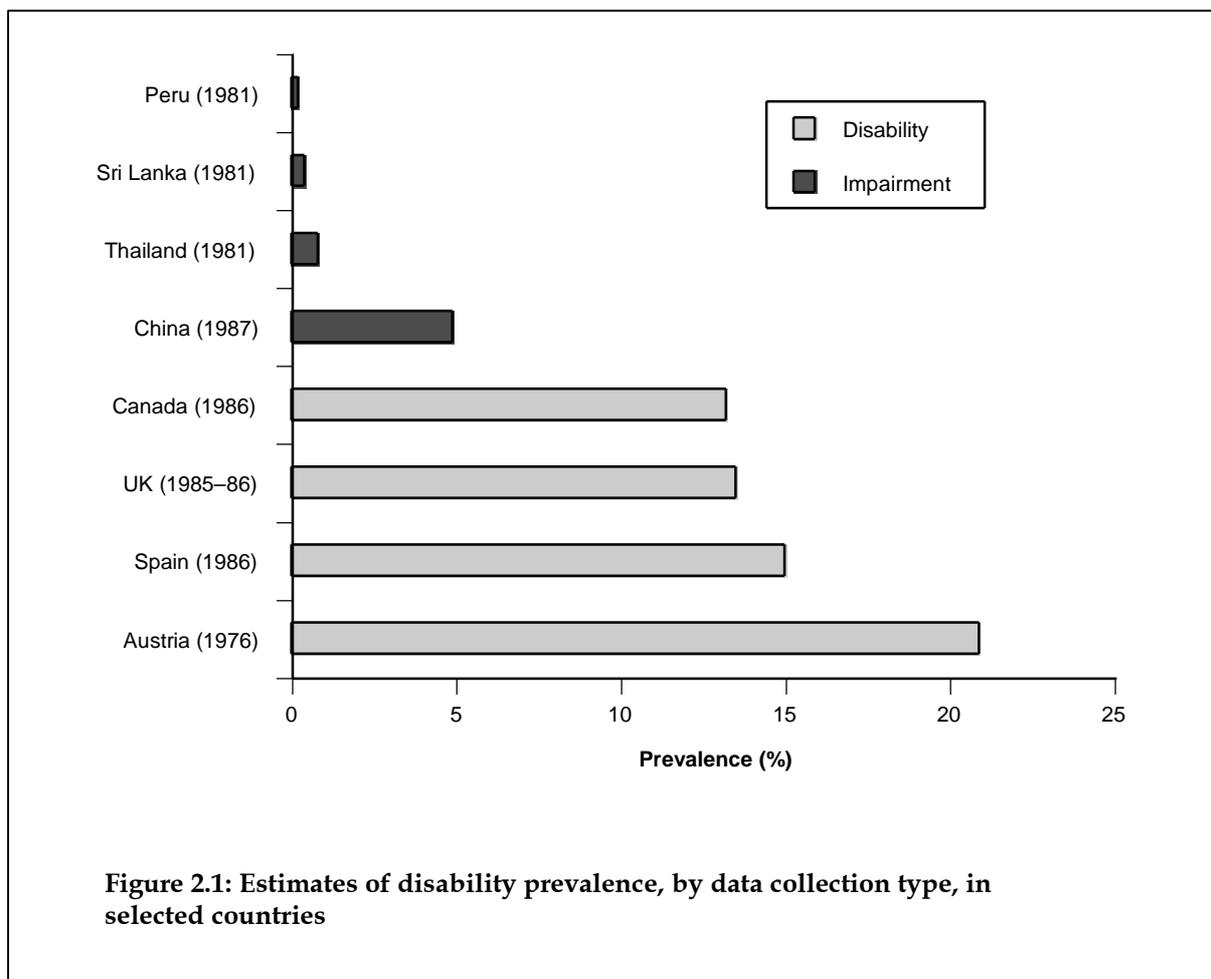
DISTAT has re-grouped published national statistics on impairment and disability into meaningful subgroups using ICIDH impairment and disability codes. Each impairment or disability classification used in national censuses or surveys has been coded to fit as closely as possible the ICIDH classifications of impairments and disabilities (Chamie 1989).

Comparisons using the DISTAT data show that estimates of disability prevalence range from 0.2% to 20.9% among 55 countries (Table 2.1, Figure 2.1). This large variation is mainly due to differences in operational definitions and case identification methodology (Chamie 1989, 1995).

Table 2.1: Prevalence of disability by data collection type in selected countries

Data collection type	Country	Year	Prevalence (%)	Population
Disability (activity limitation)	Austria	1976	20.9	all ages
	Spain	1986	15.0	all ages
	UK	1985–86	13.5	age 16+
	Canada	1986	13.2	all ages
Impairment	China	1987	4.9	all ages
	Thailand	1981	0.8	all ages
	Sri Lanka	1981	0.4	all ages
	Peru	1981	0.2	all ages

Source: United Nations International Statistics Database (DISTAT), cited from Chamie 1989.



The data show that developed countries generally report higher prevalence of disability than developing countries. The developing countries of Asia and Africa have generally used screening questions that are impairment-focused and limited in scope. For instance, screening questions might be targeted to identify people who are blind, deaf, paralysed, or amputees. Such questions identify the most severe or visible cases of disability. Developed countries more often use broad survey screening questions that focus on functional or activity limitations, resulting in higher estimates of disability prevalence (Chamie 1989).

Surveys that use impairment-focused screening questions often also ask respondents to describe the activity limitations associated with their impairments. Likewise, surveys that use activity limitation screening questions often ask respondents to describe the impairments/conditions that underlie their activity limitations. However, as cases of disability are identified on the basis of response to the screening questions, it is the screening questions that determine the scope of 'disability'. Therefore, the dimension on which the screening questions are focused – impairment or activity limitation – can substantially affect estimates of disability prevalence.

Surveys using impairment-focused screening questions produced the lowest prevalence rates, ranging from about 0.3% to 5.0% of the general population. In contrast, surveys using activity screening questions gave the highest prevalence rates, ranging from about 7.1% to 20.9% (Table 2.1, Figure 2.1) (Chamie 1989).

When impairment-based screening questions were used, the prevalence rates for males were generally higher than for females. When broad activity-based screening questions, or

questions combining impairment and activity limitations were used, prevalence rates were similar for females and males, and in some cases rates for females were higher (Chamie 1989, 1995). This suggests that operational definitions of disability may influence patterns of reporting differently for males and females (Chamie 1989).

The diversity of survey methodology, particularly the two broad types of screening question (impairment-focused and activity-focused), indicates a need for an internationally agreed conceptual approach to disability survey screening procedures in order to produce internationally comparable data on the prevalence of disability.

Although the DISTAT database defines the scope of physical impairment (Table 1.2), and provides detailed sub-categories, operational definitions in national surveys vary in scope. Hence, detailed international comparisons of the prevalence of physical disability are problematic.

Nevertheless, international data appear to show that physical disabilities are the most commonly reported disabilities. For example, the 1987 national disability survey of Spain estimated that 60.2% of people with a disability reported physical impairments as their underlying condition. Data from the 1989 Survey of National Registry of Germany show that underlying physical conditions were reported by about 70% of all people with a severe disability receiving rehabilitation services (Chamie 1995).

2.2 Australian estimates of the prevalence of physical disability

Estimates at national level

ABS Survey of Disability, Ageing and Carers

The Australia Bureau of Statistics (ABS) disability surveys provide the only available data on disability based on a comprehensive national sample of the Australian population. The surveys cover rural and urban areas in all States and Territories and gather data from both households and establishments. In the 1993 Survey of Disability, Ageing and Carers, the household sample included about 17,800 private dwellings and 1,600 special dwelling units, while the establishment sample included approximately 700 establishments. This gave a sample size of about 42,000 persons in the household component and 4,800 persons in the establishment component (ABS 1993a).

The ABS disability surveys have collected cross-sectional data at three points in time (1981, 1988 and 1993) spread over a period of 12 years*. Unlike the data obtained from administrative agency records, the ABS disability surveys rely on respondents reporting information that may or may not reflect professional assessment.

The operational definitions of disability used in the surveys were adapted from the ICIDH definition of disability. The survey definitions are relatively broad, aiming to ensure that all people with a disability are identified by the survey. The 1993 survey used a list of 15 screening questions to identify people with a disability. Thus, disability was operationally defined as the presence of one or more of a list of impairments, limitations, restrictions and disabling conditions, which had lasted, or was likely to last, for 6 months or more (Box 2.1).

* Data for the 1998 disability survey have been collected but are not yet available.

Box 2.1: Limitations, restrictions and impairments for disability identification

In the 1993 ABS disability survey people were identified as having a disability if they had one or more of the limitations, restrictions or impairments summarised below (ABS 1993b: 6):

- *loss of sight (even when wearing glasses or contact lenses)*
- *loss of hearing*
- *speech difficulties in native languages*
- *blackouts, fits, or loss of consciousness*
- *slowness at learning or understanding*
- *incomplete use of arms or fingers*
- *difficulty gripping or holding things*
- *incomplete use of feet or legs*
- *treatment for nerves or an emotional condition*
- *restriction in physical activities or in doing physical work*
- *disfigurement or deformity*
- *need for help or supervision due to a mental illness*
- *long-term effects of head injury, stroke or any other brain damage*
- *treatment or medication for a long-term condition or ailment and still restricted*
- *any other long-term condition resulting in a restriction.*

In the survey, people with a disability were also asked to indicate their specific disabling conditions. A disabling condition is a disease, disorder or event (e.g. poisoning or accident) which has lasted or is likely to last for six months or more, or which has produced a long-term effect. To be included, a disabling condition must have resulted in one or more of the limitations, restrictions or impairments listed in the screening questions (ABS 1996:47).

The survey allowed for a maximum of 48 conditions to be recorded but, in practice, the highest number of reported conditions was 14. Disabling conditions were recorded using codes adapted from the ICD-9. The condition reported to cause the most problems was identified as the person's main disabling condition.

ABS estimates of prevalence from the 1993 disability survey

Using data from the survey, the ABS estimated that 18% of the Australian population had a disability in 1993, defined on the basis of a positive response to one or more of the 15 screening questions (ABS 1993a). The ABS grouped disabling conditions into two broad categories: mental disorders and physical conditions. 'Physical conditions' covers all conditions other than mental disorders, including disorders of eyes and ears, and head injury, stroke and other brain damage. 'Mental disorder' covers mental psychoses and all other mental disorders including intellectual impairment (Table 2.2). A classification of broad impairment types was also developed by the ABS on the basis of the 15 screening questions. 'Physical impairments' are identified by a positive response to screening questions about restriction in physical activity or work, difficulty gripping or holding things, lack of full use of arms or fingers, and lack of full use of feet or legs (Table 2.2).

Table 2.2: ABS groupings of main disabling condition and impairment

Type of main disabling condition	Grouping of screening questions into impairment types
Mental disorders	Sensory
Mental psychoses	Loss of sight
Other mental disorders	Loss of hearing
Physical conditions	Intellectual
Disorders of the eye and adnexa	Slow at learning or understanding
Disorders of the ear and mastoid process	Psychological
Nervous system diseases	Receiving treatment for nerves or an emotional condition
Circulatory diseases	Needs help or supervision in doing things because of a mental illness
Respiratory diseases	Blackouts, fits and loss of consciousness
Arthritis	Physical
Other musculoskeletal disorders	Restriction in physical activity or work
Head injury/stroke/any other brain damage	Difficulty gripping or holding things
All other diseases and conditions	Lacking full use of arms or fingers
	Lacking full use of feet or legs

Sources: ABS 1993b, 1996.

Using the ABS grouping of disabling conditions, physical disabling conditions were reported as the main disabling condition by 2,823,200 people – 16% of the Australian population, or 88.9% of people with a disability (Table 2.3). Based on the ABS impairment type groups, 10.3% of the Australian population, or more than half of all people with a disability had a physical impairment, either alone (30%) or in combination with other impairments (27%) (ABS 1996:3) (Table 2.3).

The large gap between the two ABS estimates is mainly because of different operational definitions. The figure of 10.3% was based on relatively limited information from the screening questions, while the figure of 16% was obtained using more detailed information about disease, disorders and disabling conditions (see Chapter 3 for a detailed discussion).

Table 2.3: Australian estimates of the prevalence of physical disabling conditions and physical disability

Region	Prevalence	Definition	Data sources	Source
Australia	16.0%	Main disabling condition, physical—ABS broad grouping, including sensory conditions	1993 ABS Disability Survey	ABS 1993b
Australia	10.3%	Impairment, physical—ABS grouping of survey screening questions	1993 ABS Disability Survey	ABS 1996
NSW	5.0%	'Single impairment group', physical	1993 ABS Disability Survey	Kennedy 1996
NSW	13.9%	Main disabling condition, physical—ABS broad grouping, including sensory conditions	1988 ABS Disability Survey	New South Wales Department of Family and Community Services 1990
Qld	16.0%	Main disabling condition, physical—ABS broad grouping, including sensory conditions	1993 ABS Disability Survey	Queensland Department of Families, Youth and Community Care 1997
WA	12.6%	Main disabling condition, physical (excluding sensory conditions)	1993 ABS Disability Survey	Alessandri et al. 1996
SA	11.9%	Musculoskeletal disability	SA Survey of Disability Prevalence, November 1996–February 1997	South Australian Health Commission 1998
	4.2%	Musculoskeletal disability (main condition)		
	0.7%	Neurological disability		
	0.4%	Limiting neurological disability		
ACT	16.8% ^(a)	Main disabling condition, physical—ABS broad grouping, including sensory conditions	1993 ABS Disability Survey (standardised rate)	Gilbert 1997

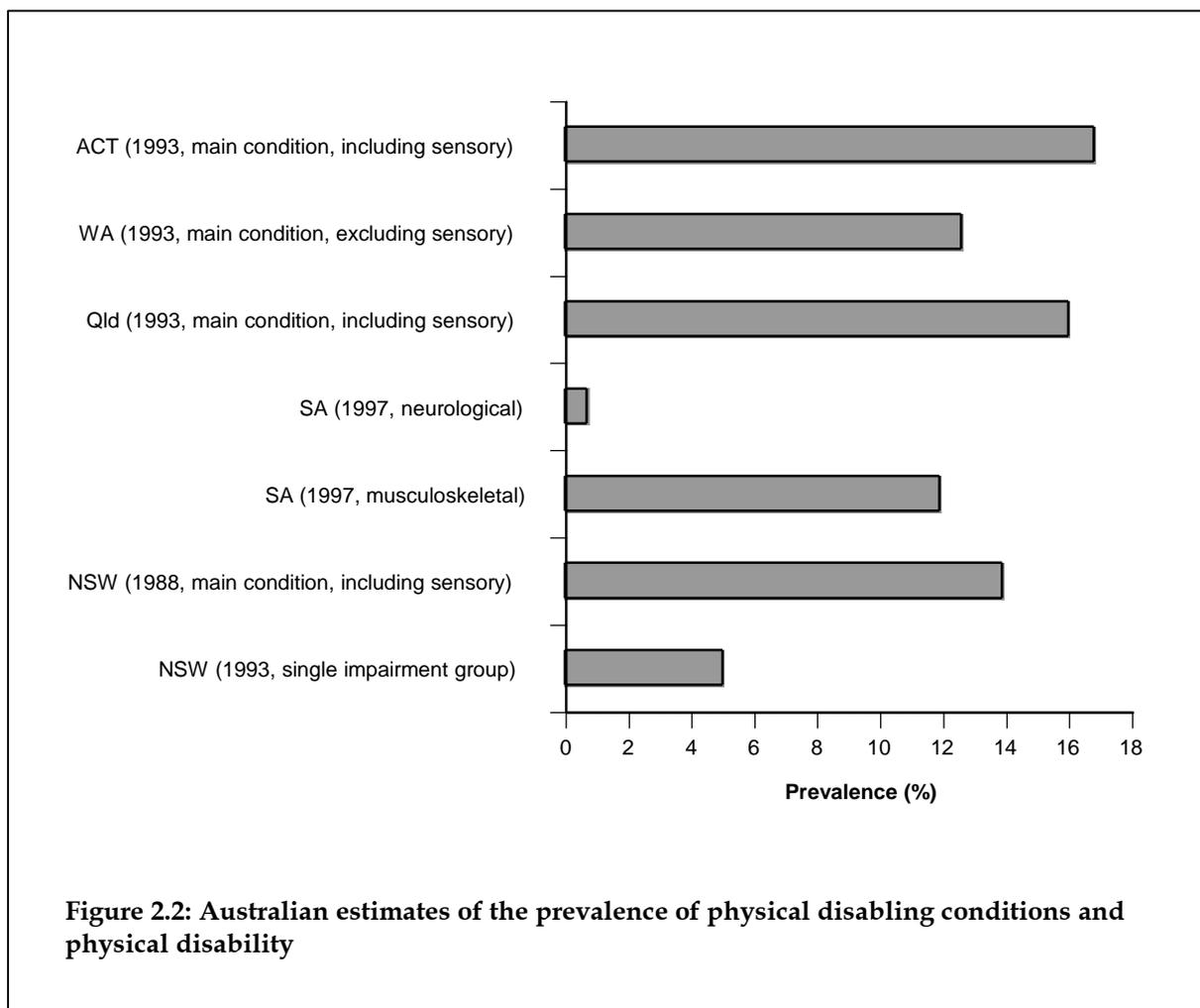
(a) The figure of 16.8 per 1,000 given on page 20 of Gilbert 1997 is a typographical error. The correct figure, as confirmed by the author, is 168 per 1,000.

Estimates at State level

Most of the existing estimates of physical disability at State level are based on the 1993 ABS disability survey data (Table 2.3, Figure 2.2). The estimates for South Australia, however, were based on a State-wide telephone survey of disability prevalence.

Most estimates derived from the ABS disability survey have used the ABS grouping of main disabling conditions. Based on this broad grouping (which includes sensory conditions) the Australian Capital Territory had the highest prevalence rate at 16.8%*. The Queensland estimate was next highest at 16%. The Western Australian estimate of 12.6% was based on the grouping of physical conditions, but with sensory conditions excluded (Table 2.3).

* This estimate was derived by applying Australian Capital Territory age-specific rates (perhaps not very reliable statistically) to the Australian population in March 1993.



One New South Wales report gave an estimate of 13.9%, using physical main disabling conditions (including sensory conditions) and based on the 1988 ABS disability survey data (New South Wales Department of Family and Community Services 1990). Another New South Wales report estimated the prevalence of physical disability at 5%, using the physical ‘single impairment group’ (Kennedy 1996), but it was not clear how this group was defined.

These State-level estimates demonstrate that, even using the same data source, prevalence estimates can vary substantially when different operational definitions and methods of estimation are used.

The South Australian prevalence estimates were derived from the South Australia Survey of Disability Prevalence, conducted by the South Australian Health Commission between November 1996 and February 1997 (South Australian Health Commission 1998). It was the first State-wide population disability survey ever conducted in Australia. The survey was based on a simple random sample of South Australian household telephone numbers.

The survey yielded a prevalence estimate of 11.9% for ‘musculoskeletal disabilities’, defined as all people who reported that they had one or more of the following conditions: arthritis, rheumatoid arthritis, paraplegia, quadriplegia, amputation (legs/arms), chronic idiopathic polyneuritis, osteogenesis imperfecta, and familial spastic paresis (Table 2.3).

An estimate of 4.2% for people with a ‘musculoskeletal disability’ (main condition) was obtained by excluding people for whom arthritis was their main or only musculoskeletal

condition, but who reported that their arthritis did not limit their usual daily activities, or that it only affected parts of their body other than their arms, legs, or neck (South Australian Health Commission 1998). The rationale for this exclusion is not clear, since substantial proportions of people who reported conditions other than arthritis as their main musculoskeletal condition also reported that the condition caused no limitation in their usual daily activities but were not excluded. The prevalence of neurological disabilities was estimated at 0.7% of the South Australian population and the prevalence of 'limiting neurological disabilities' (i.e. people who reported a neurological condition that limited their usual daily activities) was estimated at 0.4% (South Australian Health Commission 1998).

The South Australian survey estimates are not directly comparable with the estimates derived from the ABS disability surveys because the two surveys differ fundamentally in terms of conceptual framework, scope, survey methodology and operational definitions. The South Australian survey yielded an overall prevalence of disability of 21.3%, which is very high, particularly considering the limited scope of the survey – excluding people living in establishments. Even within the South Australia survey operational definitions varied between different disabilities. For instance, intellectual disability was defined as 'people who have been told by a doctor that they have an intellectual disability' (resulting in a prevalence estimate of 0.57%). This is in contrast to the definition of other types of disability, which did not require verification by professional assessment.

The differences between the estimates presented in Table 2.3 indicate the need to use standardised approaches and operational definitions to estimate prevalence rates if those rates are to be comparable between States and Territories.

Estimates of level of service usage based on national collection of service provision data

As mentioned in Section 1.5, the CSDA MDS is a significant source of data on disability support services provided under the CSDA. In 1997 the national collection gathered 64,432 consumer forms from service providers, representing people receiving services on the 'snapshot' day.

The data on consumers show that physical disability was the second most frequently reported primary disability type – 12.2% (7,718 people) of the total 64,432 service recipients (intellectual disability was the most frequently reported primary disability type). The data also show that if all reported significant disabilities (including primary disability) were considered, 18,513 people, or 29.3% of all clients, reported having a physical disability (Black & Maples 1998).

The data collected through the National Information Management System for open employment services for people with disabilities show that 13.3 % (3,260 people) of the total 24,590 clients in 1996–1997 reported physical disability (Anderson & Golley 1998)

It should be mentioned that these estimates only include people known to the administrators or service providers. CSDA services are not 'entitlement' services (as social security payments are) but are limited by supply. Further, they have been historically shaped by the expressed needs of different groups and different service approaches that may have developed in different parts of Australia. Hence, these data provide information on service usage and do not reflect prevalence of particular disability groups.