



Research Paper

**Analysis of the 2016
Supplementary Disability
Survey**

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EXECUTIVE SUMMARY

The Washington Group on Disability Statistics (WG) is a United Nations (UN) sponsored City Group commissioned to improve the quality and international comparability of disability measures. The WG's main purpose is to promote and co-ordinate international co-operation in the area of health statistics focusing on disability measures suitable for censuses and national surveys. The WG's major objective is to develop tools to collect the basic data necessary to provide information on disability that is comparable throughout the world. A short set of questions on disability for use on national censuses has been developed, tested and adopted by the WG (Washington Group on Disability Statistics, 2017a). In 2016 the Australian Bureau of Statistics (ABS) collected data on the prevalence of disability in the Australian community using the WG Short Set of questions via the Supplementary Disability Survey (SDS). The SDS was conducted on a sample of respondents from the 2015 ABS Survey of Disability, Ageing and Carers (SDAC), allowing for an analysis of the identification of disability in Australia using the WG Short Set, relative to the identification of disability in the SDAC.

Findings of the analysis included:

- Most people with a disability in the SDS also had a disability in the SDAC (84.7%).
- Just over one quarter (26.9%) of people with disability in the SDAC were identified as having a disability in the SDS.
- There was a great deal of variation in the consistency of reporting disability in the six functioning domains included in the WG Short Set (seeing, hearing, mobility, remembering and concentrating, self-care, and communication). This ranged from 65% of people with difficulty in remembering or concentrating in the SDAC also reporting this in the WG Short Set, down to 20% of those who have difficulty with self-care activities.
- For those who reported a disability in the SDAC, the likelihood of being identified with disability in the SDS using the WG short set varied based on:
 - Severity of disability;
 - Age;
 - Socio-economic status (SEIFA quintile);
 - Labour force status; and
 - Education.

ANALYSIS OF THE 2016 SUPPLEMENTARY DISABILITY SURVEY

ACKNOWLEDGEMENTS

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The analysis work was conducted with funding supplied by the Department of Foreign Affairs and Trade (DFAT) and the ABS gratefully acknowledges and thanks DFAT and the Washington Group on Disability Statistics for their support, advice and expertise.

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ABBREVIATIONS

ABS	Australian Bureau of Statistics
ARA	Any Responsible Adult
CATI	Computer Assisted Telephone Interview
DFAT	Department of Foreign Affairs and Trade
NHIS	National Health Interview Survey
NSO	National Statistical Office
SEIFA	Socio-Economic Indexes For Areas
SDAC	Survey of Disability, Ageing and Carers
SDG	Sustainable Development Goal
SDS	Supplementary Disability Survey
SIPP	Survey of Income and Program Participation
UN	United Nations
USA	United States of America
WG	Washington Group on Disability Statistics

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ANALYSIS OF THE 2016 SUPPLEMENTARY DISABILITY SURVEY

INTRODUCTION

The Washington Group on Disability Statistics (WG) is a United Nations (UN) sponsored City Group commissioned to improve the quality and international comparability of disability measures. The WG's main purpose is to promote and co-ordinate international co-operation in the area of health statistics focusing on disability measures suitable for censuses and national surveys. The WG's major objective is to develop tools to collect the basic data necessary to provide information on disability that is comparable throughout the world. A short set of questions on disability for use on national censuses has been developed, tested and adopted by the WG (Washington Group on Disability Statistics, 2017a). In 2016 the Australian Bureau of Statistics (ABS) collected data on the prevalence of disability in the Australian community using the WG Short Set of questions via the Supplementary Disability Survey (SDS).

BACKGROUND

Measuring disability in a community is challenging. The United Nations Convention on Rights of Persons with Disabilities defines disability as follows:

Persons with disabilities include those who have long-term physical, mental, intellectual or sensory impairments which in interaction with various barriers may hinder their full and effective participation in society on an equal basis with others.

In 2001 the UN held an International Seminar on the Measurement of Disability, where it was agreed there was a need for common definitions, concepts, standards and methodologies in the production of data about people with disabilities. As a result, the Washington Group on Disability Statistics (WG) was formed, with its major objective being to support basic needed data on disability that is internationally comparable (For more information, see http://www.cdc.gov/nchs/washington_group/index.htm).

The work of the WG has led to the development of the Washington Group Short Set of disability questions (the WG Short Set). The WG Short Set can be used in censuses and surveys, with the expectation they will identify the majority of people with a disability and more specifically, will identify those who are at greater risk than the general population of experiencing restrictions in performing tasks (such as activities of daily living) or participating in roles (such as employment) (Mont, 2017). The WG Short Set was developed for use in low resource settings where it may not be feasible to run a national disability survey.

INTERNATIONAL COLLABORATION TO IMPROVE THE COLLECTION OF DISABILITY DATA

The ABS has a well-established collaboration with the Department of Foreign Affairs (DFAT), supporting their role in leading international efforts to strengthen the collection and analysis of disability data globally. Most significantly, the ABS has been working with DFAT over many years to contribute to the development of the WG Short Set of disability questions.

The ABS's involvement in the WG Short Set questions and its reputation in running the Survey of Disability Ageing and Carers (SDAC) for over 30 years have placed it as an international leader in disability data.

In 2015-2016, the ABS and DFAT collaborated on a project to collect information using the WG Short Set of questions on disability through conducting the 2016 Supplementary Disability Survey (SDS), as a follow up to the 2015 SDAC. The aim of this research paper is to present the outcomes of the project to collect the WG Short Set questions in Australia, and to compare these results to the 2015 SDAC. Through this project, the ABS can provide evidence-based advice to the UN and other international National Statistical Office (NSO) members of the Washington Group on Disability Statistics fora, regarding the results of the WG Short Set data in Australia.

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MEASURES

The ABS' Survey of Disability, Ageing and Carers

Disability surveys in Australia have evolved over time to support the changing disability policy information needs, with the most recent national survey being the 2015 Survey of Disability, Ageing and Carers (SDAC). This was the eighth comprehensive national survey conducted by the ABS to measure disability, following similar surveys in 1981, 1988, 1993, 1998, 2003, 2009 and 2012.

The SDAC was developed to align with the World Health Organisation's International Classification of Functioning, Disability and Health, which aims to provide a common language for describing disability and functioning.

The SDAC was developed to underpin disability (and aged care) support planning and policy development in Australia. It provides a significant amount of information about the prevalence and characteristics of disability in Australia, along with support needs and information about the level and providers of this support. The SDAC has proved highly consistent in terms of quality and reliability over a long period of time. The aims of the 2015 SDAC survey included:

- measuring the prevalence of disability in Australia
- measuring the need for support of older people and those with disability
- providing a demographic and socio-economic profile of people with disability, older people and carers compared with the general population
- estimating the number of and provide information about people who provide care to people with disability, long-term health conditions and older people.

The survey collected detailed information from three target populations:

- people with disability
- older people (i.e. those aged 65 years and over)
- people who care for people with disability, long-term health conditions or older people.

For more information please refer to Disability, Ageing and Carers, Australia: Summary of Findings, 2015.

Supplementary Disability Survey

Conducted in early 2016, the SDS used a sub- sample of households from the 2015 SDAC.

The person responsible for providing household level information (Any Responsible Adult or 'ARA') that was enumerated in the 2015 SDAC between September and November 2015 was asked whether they would consent to participating in the SDS as a follow-up survey. The SDS interviews were conducted from 31 January to 1 March 2016 via Computer Assisted Telephone Interview (CATI).

The ARA answered the WG Short Set for all members of their household.

For each of the six domains of functioning included, the WG Short Set asks a single question about difficulties people experience in that domain. The questions are as follows.

Because of a health problem:

1. Do you have difficulty seeing, even if wearing glasses?
2. Do you have difficulty hearing, even if using a hearing aid?
3. Do you have difficulty walking or climbing steps?

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4. Do you have difficulty remembering or concentrating?
5. Do you have difficulty (with self-care such as) washing all over or dressing?
6. Using your usual (customary) language, do you have difficulty communicating, for example understanding or being understood?

Respondents answer according to the following scale:

1. No, no difficulty
2. Yes, some difficulty
3. Yes, a lot of difficulty
4. Cannot do at all.

The questions were developed to identify the majority of the population with difficulties in functioning in basic actions, that is, difficulties that have the potential to limit independent living or social integration if appropriate accommodation is not made (Washington Group on Disability Statistics, 2017b).

Differences between the SDAC and the SDS

It should be noted there were differences in the definitions of disability and collection methodologies used in the two surveys, which may have contributed to some of the changes in the responses observed.

In the SDAC a person has a disability if they report they have a limitation, restriction or impairment, which has lasted, or is likely to last, for at least six months and restricts everyday activities. In contrast, using the WG Short Set in the SDS a person is identified as having disability when at least one domain is coded as a lot of difficulty or cannot do it at all.

There were a number of differences in approaches used between the SDAC and the SDS (Table 1 below).

TABLE 1: Key differences in survey methodology - Supplementary Disability Survey and Survey of Disability, Ageing and Carers

	2015 SDAC	2016 SDS
Age ^a Scope	People of all ages Households and establishments (e.g. hospitals, nursing home, aged care hostels, cared components of retirement villages and other 'homes', such as group homes for people with disability).	People aged five years and over A voluntary sub-set of SDAC Households only.
Interview method Respondent	Computer-assisted personal interviews Initial questions asked of an adult responsible for providing information on behalf of the household, followed by personal interviews for those in the target populations (with disability, older people and carers). Proxy interviews conducted for those unable to self-report.	Computer-assisted telephone interviews An adult responsible for providing information on behalf of the household.
Number of questions	An extensive set of questions (up to 150) designed to identify disability and the underlying conditions causing disability. A large number of these questions are used to establish if a person is restricted by disability and is in need of assistance.	Six questions, referred to as WG Short Set, designed to identify difficulties experienced with six functional domains.

a All analyses in this paper have been restricted to people aged 18 years and over, living in households. This is consistent with the population that is intended to be most accurately captured by the WG Short Set (Washington Group on Disability Statistics, 2017b).

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There were also a number of differences in the way the SDS was enumerated compared to the recommended approach for collecting the WG Short Set, which are outlined in Table 2 below. These changes were made for operational reasons and in consultation with the WG Secretariat.

TABLE 2: Key differences in survey methodology - Washington Group Short Set and Supplementary Disability Survey

	<i>Washington Group Short Set</i>	<i>2016 SDS</i>
Age	Designed for the adult population	Collected for people aged 5 years and over, however, data was published for people aged 18 years and over to be consistent with the WG target population
Interview method	Face-to-face	Computer-assisted telephone interviews
Respondent	Individual (self-response)	An adult responsible for providing information on behalf of the household
Collection type	Census or population survey	Population survey conducted as voluntary follow up to SDAC
Question format	Questions asked in numerical order for each respondent before proceeding to next person	Questions for each functional domain asked of every person in the household before proceeding to the next functional domain

DISABILITY PREVALENCE RATES

2015 SDAC

The 2015 SDAC found 20.7% of Australians aged 18 years and over and living in households had a disability. This included:

- 20.1% of males
- 21.2% of females
- 8.3% of those aged 25-34 years
- 73.4% of those aged 85 years and over
- 18.2% of those living in state capital cities
- 25.9% of those living outside of state capital cities.

2016 SDS

The SDS found that 6.7% of Australian adults reported considerable difficulty with at least one of six domains of activity; that is, either a lot of difficulty or cannot do at all. Using the WG short set in the SDS these Australians can be considered to have disability and to be at greater risk of experiencing limited or restricted participation in society than the general population.

In the SDS, the following people are considered to have disability in the Australian population:

- 5.9% of males
 - 7.3% of females
 - 1.7% of those aged 25-34 years
 - 42.5% of those aged 85 years and over
-

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- 5.3% of those living in state capital cities; and
- 9.5% of those living outside of state capital cities

The ABS first released information on the SDS in June 2016. For more information about the SDS, see the Supplementary Disability Survey (cat. no. 4450.0).

Washington Group Short Set Internationally

As of 2016, there were a number of other countries that had included the WG Short Set as part of a national survey or census. Countries such as the USA, Zambia, the Maldives and South Africa have all used a similar methodology to the SDS in Australia, by using household surveys and the six WG Short Set questions with four responses as intended, and using the Washington Group suggested cut offs to determine disability from these response categories.

Generally, people are considered as having a disability if they respond with Yes – a lot of difficulty or Yes – cannot do it at all to any of the six questions. There is, however, scope to expand the people counted as having a disability using these questions, by also incorporating anyone who supplies an answer of Yes – some difficulty, or category 2, in any of the domains. This is referred to as the ‘lower threshold’ throughout this publication. The standard disability criteria are referred to as the ‘higher threshold’ in this publication when being compared with results using the lower threshold.

Of the 14 countries in the table below, the disability prevalence rate was between 3.1% and 10.9%. Israel’s 2010 Survey and Brazil’s 2010 Census, which produced prevalence rates of 15% and 23.9% respectively, were excluded from the below results as outliers. The WG also recognised that the method by which the WG Short Set questions are asked (in the form of a survey or a census) affects the overall prevalence rate, with surveys generally producing higher rates than censuses. Disability prevalence rates derived from surveys ranged from 4% to 11%, while censuses produced rates in the range of 4-8%.

TABLE 3: Washington Group Short Set disability prevalence rates, international comparisons (a)

<i>Country</i>	<i>Year</i>	<i>Mode of collection</i>	<i>WG Prevalence rate (%)</i>
South Africa	2014	Survey	4.9
Zambia	2006	Survey	8.5
USA	2012, 2011, 2012, 2013	Survey	8.9, 8.5, 7.9, 9.5
Bangladesh ^b	2010	Survey	9.1
Maldives	2009	Survey	9.6
Australia	2016	Survey	6.7
Philippines ^c	2010	Census	3.1
Malawi ^c	2003-04	Census	4.0
Mexico ^c	2010	Census	4.1
Israel ^c	2008	Census	6.4
Aruba	2010	Census	6.9
Turkey ^c	2011	Census	6.9
Panama ^c	2010	Census	8.4
Peru ^c	2007	Census	10.9

a Data drawn from WG country reports, made available to the ABS by the WG Secretariat

b Lower threshold

c Variation in questions and/or responses from WG standard

Note: Countries above varied in their methodology, using different questions and response combinations and different thresholds to determine disability.

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Given the broad variety of countries that have run the WG Short Set, it is useful to compare the SDS results with those of a similar nation, such as the USA. Results from the 2010 Survey of Income and Program Participation (SIPP) estimate that 18.7% of people in the USA live with disability, similar to the results from the 2015 SDAC (18.3%). The National Health Interview Survey (NHIS) is conducted annually in the USA, and includes the WG Short Set questions to determine disability prevalence. Disability prevalence rates from the most recent NHIS have varied between 7.9% in 2012 and 9.5% in 2013. This is comparable to the prevalence rate of 6.7% found in the 2016 SDS.

ANALYSIS

The methodology of the SDS has provided an opportunity to go beyond reporting WG Short Set prevalence rates in Australia and to determine the degree of overlap in SDS and SDAC results, in the same sample of respondents for which their disability status and key demographic information is available.

The degree of agreement between respondents' answers to the WG Short Set in the SDS and the SDAC were examined and the results are discussed below.

Analysis was also conducted to determine whether responses to the WG Short Set in the SDS varied across different population groups. More information on the multivariate modelling to confirm these results is available in Appendix A.

All analyses have been restricted to people aged 18 years and over, living in households. This is consistent with the population that is intended to be most accurately captured by the WG Short Set.

Kappa values were also calculated, as they incorporate the likelihood of a certain amount of overlap occurring between the measures through chance alone. The results confirmed the following findings. Detailed kappa values are available at Appendix B.

RESULTS

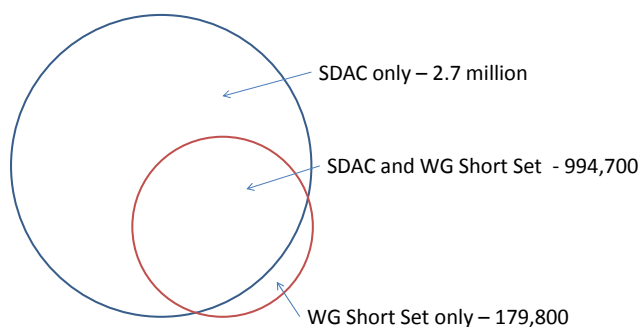
Applying the higher threshold for defining disability, 994,700 people, or 26.9% of those with a disability in the SDAC are identified as having a disability in the SDS using the WG Short Set. In contrast, this represents 84.7% of those having a disability using the WG Short Set in the SDS have a disability in the SDAC.

Using the lower WG threshold, 2.6 million people, or 71.3% of those with a disability in the SDAC are identified as having a disability using the WG Short Set in the SDS. This represents 54.6% of those having a disability using the WG Short Set in the SDS have a disability in the SDAC. For a graphical presentation of these findings, please see the diagram below.

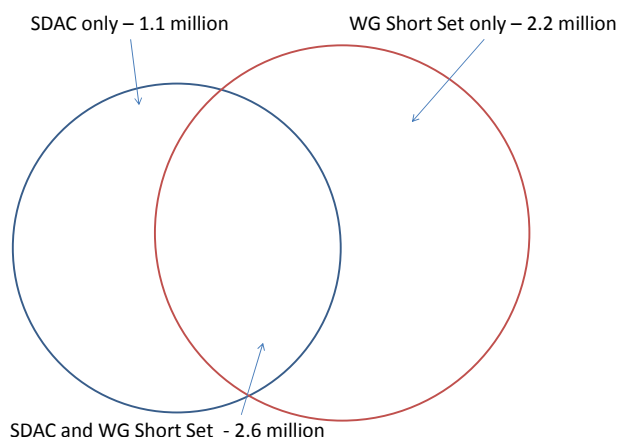
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Diagram 1: Populations identified as having a disability in the SDS and the SDAC using different disability definition thresholds on the WG Short Set

Higher WG threshold



Lower WG threshold



While using the lower WG Short Set threshold for disability in the SDS identifies more of the people with disabilities in the SDAC, almost half the people identified as having disability by the WG Short Set in the SDS didn't have a disability in the SDAC.

These comparisons show there is a great deal of difference between the two collections.

SDS AND SDAC BY SELECTED DISABILITY CHARACTERISTICS

Given the differences in responses to the two surveys, the data has been analysed to examine the variation in consistency of reporting disability among people with different disability related characteristics.

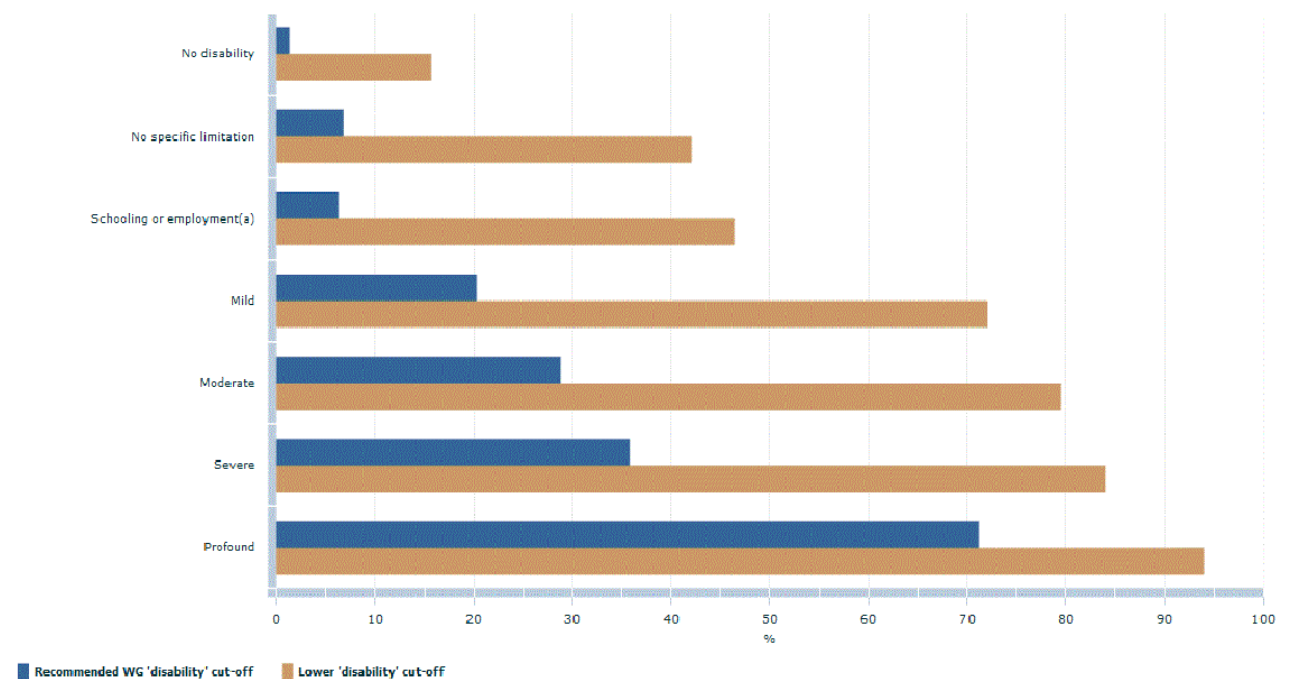
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Disability severity

As the severity of disability increased in the SDAC, so too did the likelihood of respondents also being identified as having a disability in the SDS using the WG Short Set. This ranged from 71.2% of those with a profound core activity limitation having a disability in the WG Short Set to 6.8% of those with no specific limitation. Considering a 'profound core activity limitation' means the person always needs assistance with activities associated with mobility, communication or self-care, or is unable to do those at least one of those activities at all, it would be reasonable to infer they should have been responding 'a lot of difficulty' or 'cannot do at all' to the Washington group questions. Conceptually there should be complete overlap between these populations, so a 71.2% overlap appears to be lower than would have been anticipated.

Applying the lower WG threshold to define disability, it can be seen that the level of agreement in disability identification increases across the surveys with all levels of severity. However, there is also a large increase in the number of people being classified as having a disability using the WG short set, that do not have a disability in the SDAC (see graph below).

Disability status in SDAC by Whether reported disability in WG Short Set, using Short Set definition & Lower threshold



[Save Chart Image](#)

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Footnote(s): (a) Due to the analysis being conducted on people aged 18 years and over, the bulk of people with a schooling restriction only have been removed from this analysis.

Source(s): ABS Survey of Disability, Ageing and Carers - 2015 and Supplementary Disability Survey - 2016

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Disability type

When looking at the results of the WG Short Set in the SDS in relation to the types of disabilities people reported in the SDAC, there is some variation. Those who were identified as have difficulty with their memory or concentration were the most likely to be identified as having a disability with the WG Short Set, while those with nervous or emotional conditions that limit a person's ability to do everyday activities were the least likely to (see Table 4 below).

Table 4: Proportion of people with Disability Types in SDAC who reported a disability using the WG Short Set

	<i>Higher WG threshold</i>	<i>Lower WG threshold</i>
Loss of sight	49.5	86.8
Loss of hearing	34.0	85.2
Speech difficulties	57.2	82.6
Breathing difficulties	47.0	87.5
Chronic or recurring pain or discomfort	35.9	81.0
Blackouts, seizures or loss of consciousness	43.1	69.3
Difficulty learning or understanding things	43.7	81.0
Incomplete use of arms or fingers	35.9	84.4
Difficulty gripping or holding things	36.8	80.2
Incomplete use of feet or legs	50.7	90.8
Nervous or emotional condition	33.0	72.8
Restriction in physical activities or work	39.2	82.2
Disfigurement or deformity	37.4	74.4
Mental illness	51.0	87.4
Memory problems or periods of confusion	64.5	91.4
Social or behavioural difficulties	35.8	74.6
Other limitations	37.1	79.4

From the table above, it can be seen using the lower threshold for disability with the WG Short Set increased the level of agreement across all disability types, with the largest increase being in 'loss of hearing' and the smallest being in 'speech difficulties'.

SDS AND SDAC BY DOMAIN

The WG Short Set focuses on health-related difficulties experienced in six domains: seeing, hearing, walking, cognition, self-care and communication. The degree of agreement in the results of the SDAC and WG Short Set in the SDS varied by domain.

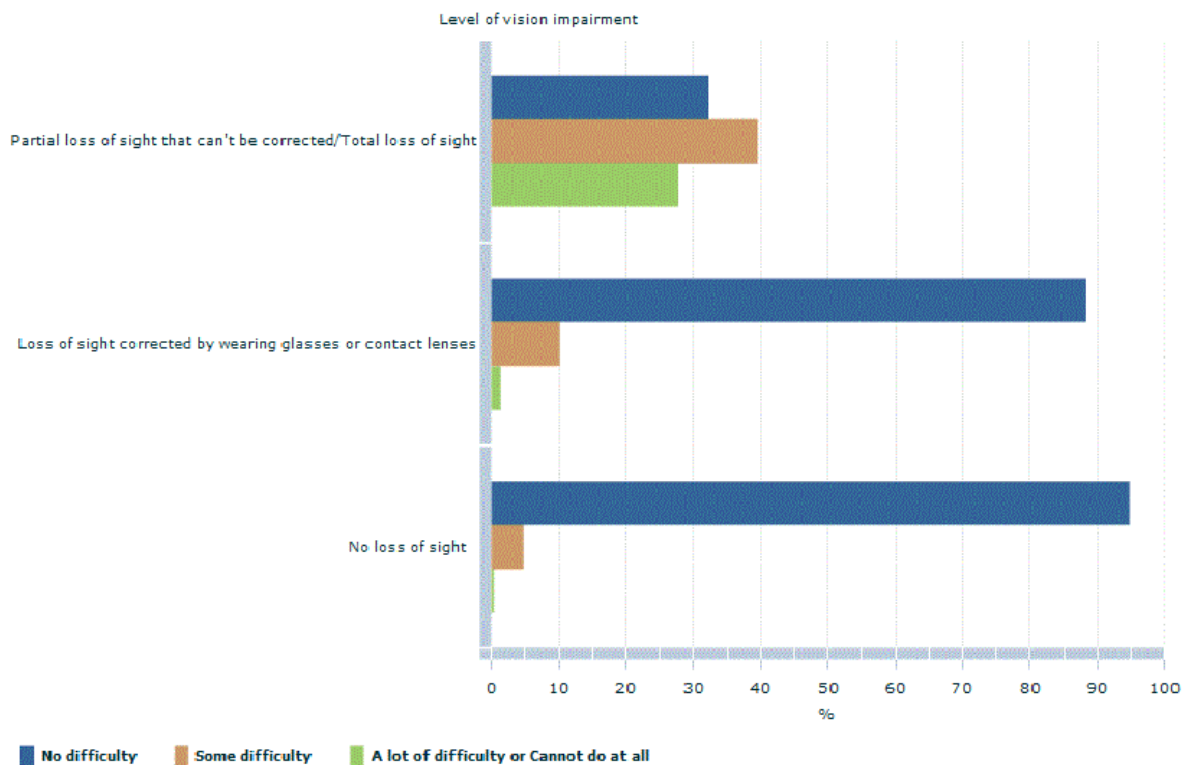
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Seeing

In the SDAC people are asked questions to establish whether they first, have any loss of vision and then, whether that vision loss can be corrected by glasses or contact lenses. People with vision loss are also asked if they have total loss of vision. In comparison, in the WG Short set, people were asked 'Do you have difficulty seeing' and then to rate the level of difficulty.

People identified as having loss of sight that could not be corrected by glasses or contact lenses in the SDAC had a high level of variation in their responses to the WG short set question about seeing, with 28.1% indicating they had a lot of difficulty or couldn't see at all, 39.6% indicated they had some difficulty, while the remaining 32.3% had no difficulty.

ALL PERSONS Level of vision impairment in SDAC by level of difficulty with vision in WG Short Set



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Source(s): ABS Survey of Disability, Ageing and Carers - 2015 and Supplementary Disability Survey - 2016

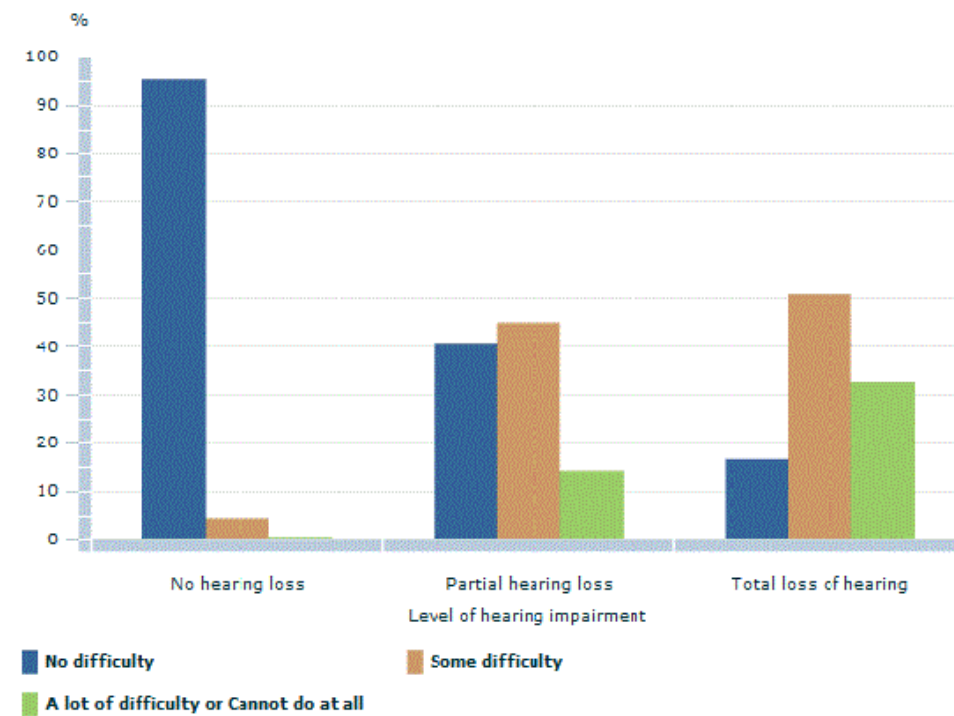
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Hearing

In the SDAC people were asked questions to establish whether they first, have any loss of hearing and then, whether they have total hearing loss. In comparison, people were asked in the WG Short set 'Do you have difficulty hearing, even if using a hearing aid?' and rated their level of difficulty according to the WG Short Set scale.

When a person reported having some loss of hearing in the SDAC, they reported having a lot of difficulty or cannot do at all when asked about their hearing using the WG Short Set 14.2% of the time. A further 45.0% of people with partial hearing loss in SDAC indicated they had some difficulty while the remaining 40.8% had no difficulty.

ALL PERSONS Level of hearing impairment in SDAC by level of difficulty in hearing in WG Short Set



[Save Chart Image](#)

Australian Bureau of Statistics

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Source(s): ABS Survey of Disability, Ageing and Carers - 2015 and Supplementary Disability Survey - 2016

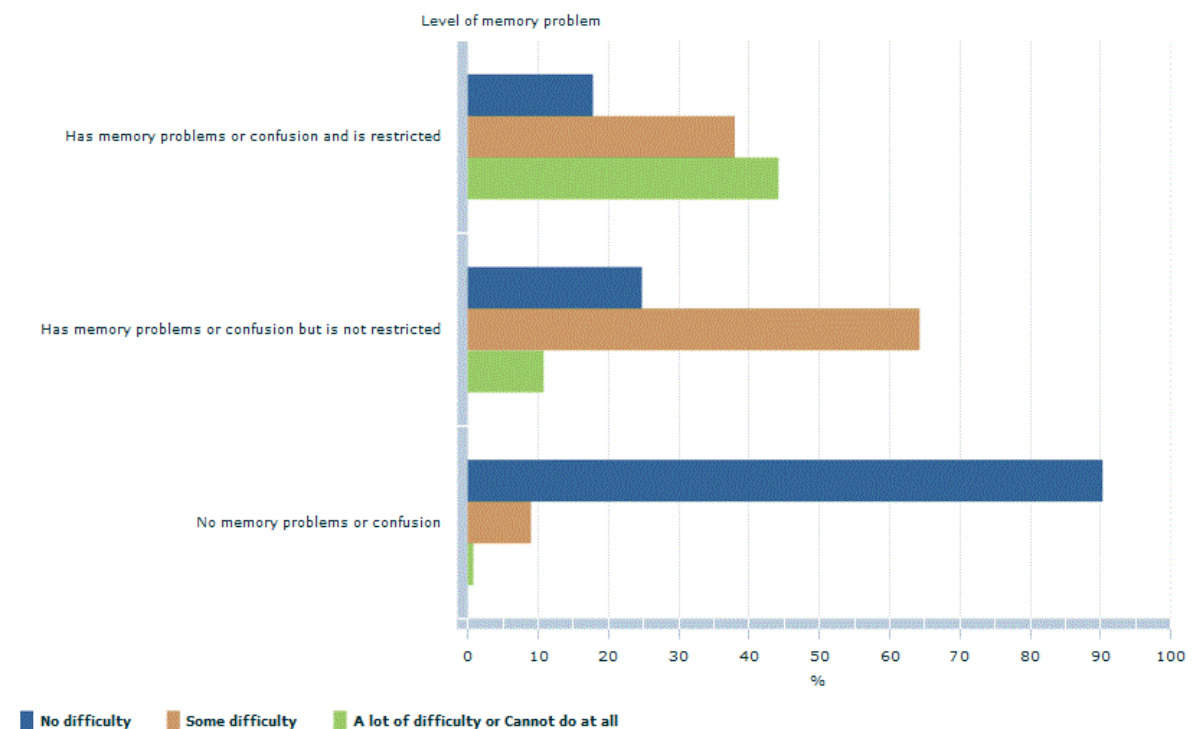
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Remembering and Concentrating

In the SDAC people are asked questions to establish whether they first, have any memory problems or periods of confusion and then, whether they are restricted in everyday activities because of these problems. In comparison, as noted earlier, people were asked in the WG Short Set 'Do have difficulty remembering or concentrating' and rated their level of difficulty according to the WG Short Set scale.

Memory and concentration is one of the domains where the WG questions had the highest level of agreement with the SDAC results. Of those who reported difficulty remembering and concentrating in the SDAC and for whom this difficulty caused restrictions in their abilities to do everyday activities, 44.2% reported they had a lot of difficulty or cannot do it at all using the WG Short Set. A further 38.1% reported having some difficulty, with the remaining 17.8% reporting no difficulty.

ALL PERSONS Level of memory or confusion impairment in SDAC by difficulty with memory or confusion in WG Short Set



[Save Chart Image](#)

Australian Bureau of Statistics

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Source(s): ABS Survey of Disability, Ageing and Carers - 2015 and Supplementary Disability Survey - 2016

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Mobility

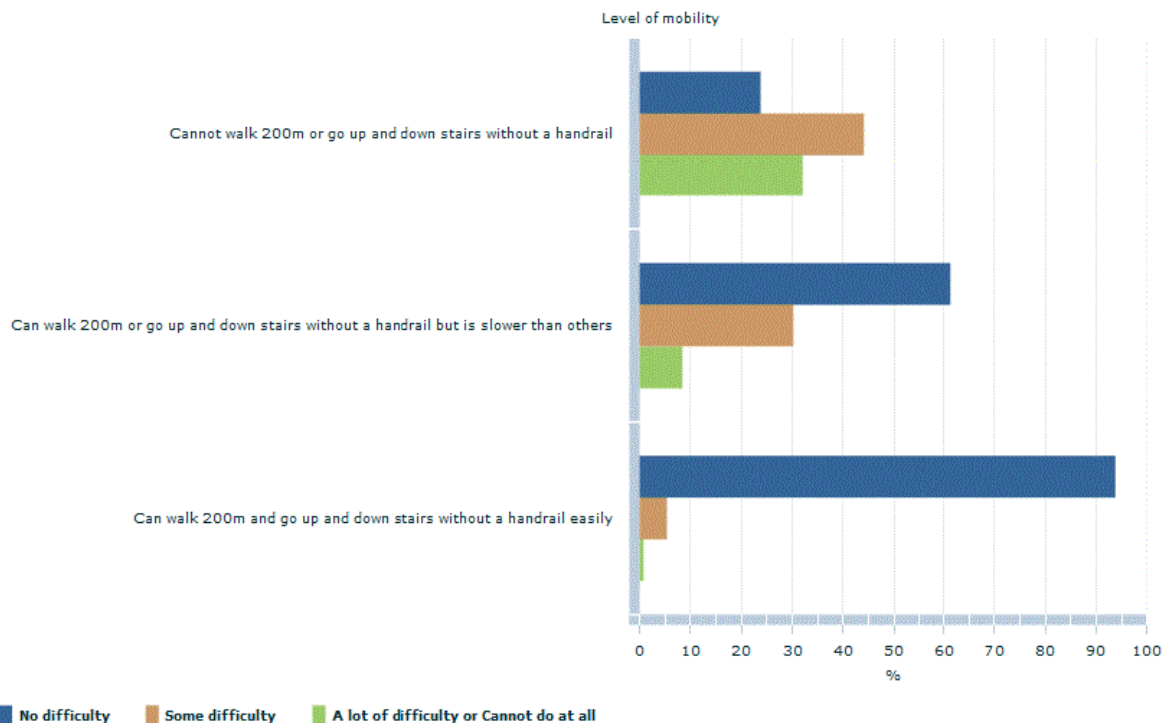
The remaining three domains (mobility, communication and self-care) are not screened for as such in the SDAC. The SDAC screens for disability based on body impairments and the impact those impairments have on people's ability to do everyday activities (as defined by the person answering the question themselves). People's difficulties with the last three domains are established in the SDAC, but these questions are only asked of people who have been identified as having a disability through the body impairment screening questions. These activities are three of the ten activities of daily living people are specifically asked about.

The SDAC also takes a more targeted approach to establishing the level of difficulty people have with these three activities, asking about difficulties with a number of specific activities, which are then aggregated to the broader activity. For example, people are asked if they need assistance with dressing, bathing, eating a meal, using the toilet, and if relevant, managing continence. Responses to these questions are then aggregated to a measure of the need for support with self-care.

In the case of mobility, data is available from the SDAC about how easily a person can walk 200m and their ability to walk up and down stairs without a handrail. While these concepts are more specific than the WG Short Set question 'Do you have difficulty walking or climbing steps', they are the closest available from the SDAC.

Of those people who couldn't walk 200m or go up or down stairs without a handrail in the SDAC, 32.1% had a lot of difficulty or couldn't do at least one of these tasks at all when responding to the WG Short Set. A further 44.1% had some difficulty while the remaining 23.8% had no difficulty.

ALL PERSONS Level of mobility difficulty in SDAC by level of mobility difficulty in WG Short Set



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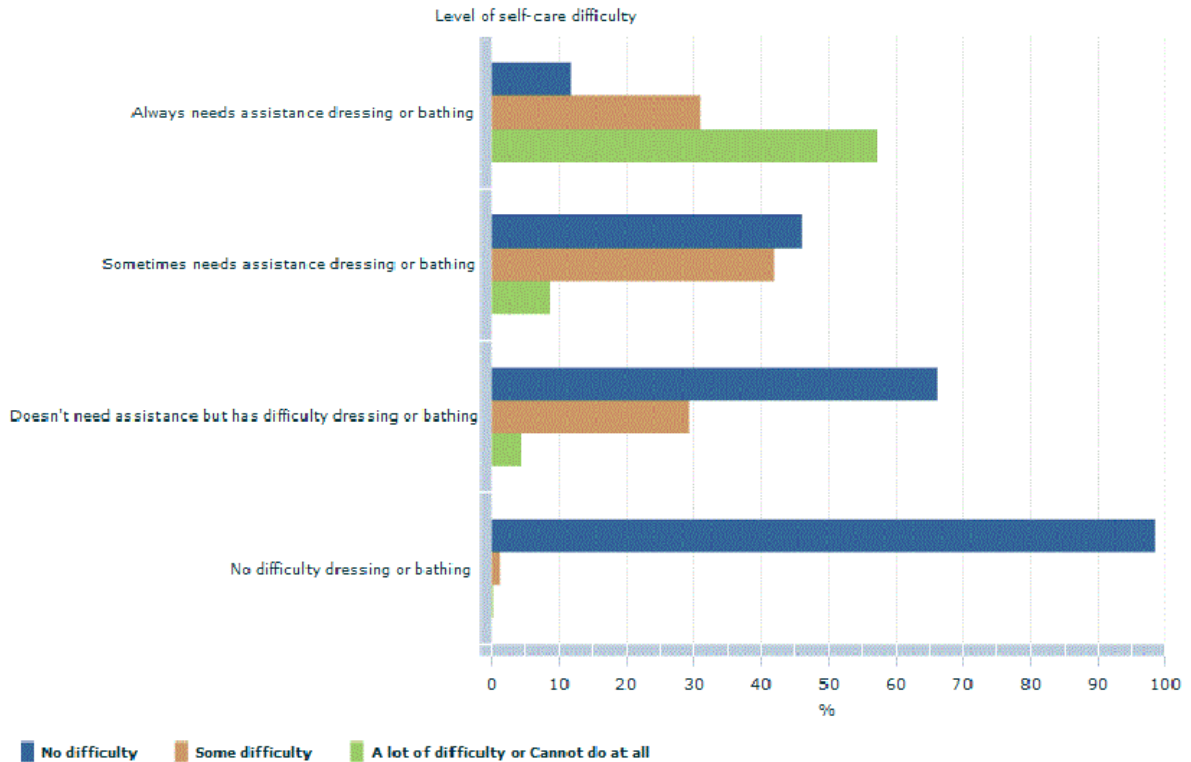
Source(s): ABS Survey of Disability, Ageing and Carers - 2015 and Supplementary Disability Survey - 2016

ANALYSIS OF THE 2016 SUPPLEMENTARY DISABILITY SURVEY

Self-care

Of the people who indicated they had difficulty or needed assistance with dressing or bathing in the SDAC, 20.1% were identified as needing a lot of assistance or not being able to do the tasks and a further 33.2% had some difficulty with the self-care tasks using the WG Short Set. This leaves almost half the people (45.2%) being recorded as having no difficulty with bathing or dressing.

ALL PERSONS Level of difficulty with self-care in SDAC by level of difficulty with self-care in WG Short Set



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Source(s): ABS Survey of Disability, Ageing and Carers - 2015 and Supplementary Disability Survey - 2016

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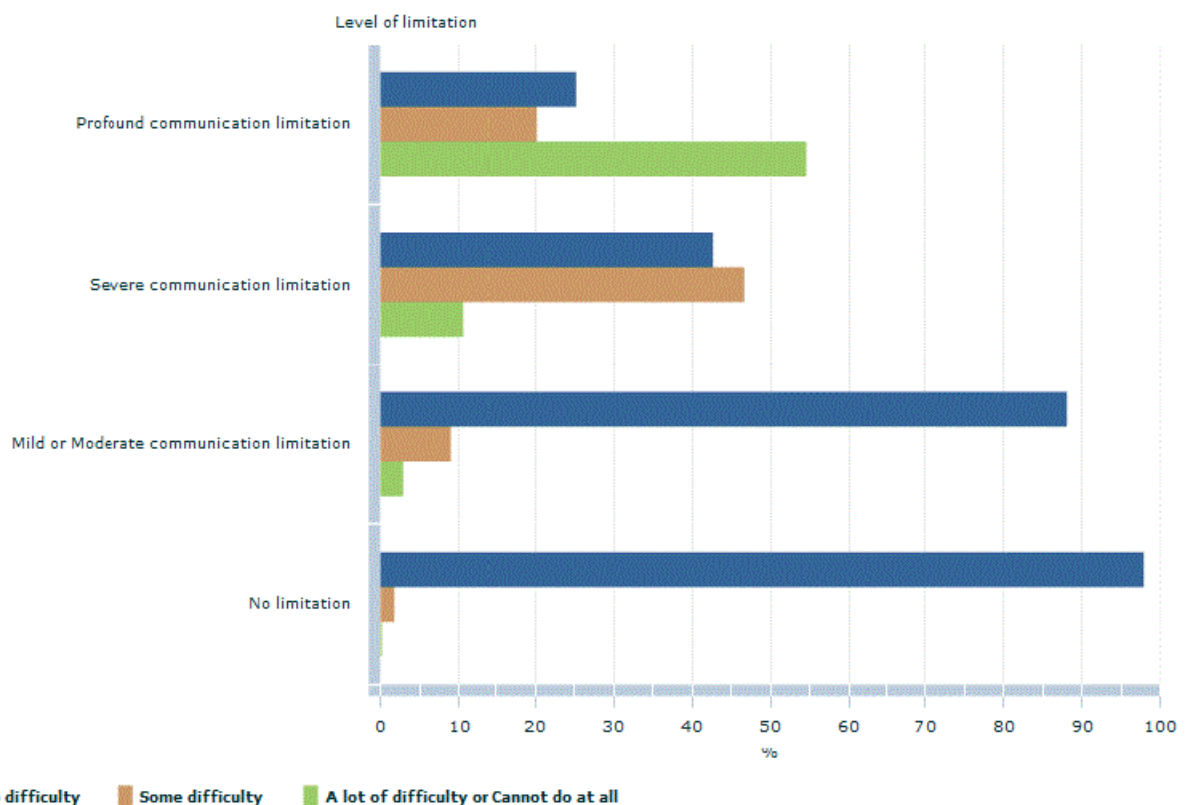
Communication

No completely comparable measure is available on the communication domain across the two surveys, as SDAC establishes communication limitation using a different approach. However, conceptually the issue of communication is the same, so an examination of the WG Short Set data in relation to the SDAC 'level of communication limitation' data is provided. A person with a profound or severe communication limitation requires assistance, at least some of the time, in communicating with other people, while those with a moderate or mild communication limitation find it difficult to communicate with others and may use aids to support their communication.

Looking at the people with a more severe communication impairment in the SDAC (ie those with a profound or severe communication limitation), 27.4% reported having a lot of difficulty or not being able to communicate at all using the WG Short Set. A further 36.6% were recorded as having some difficulty, leaving the remaining 36.0% with 'no difficulty'.

Expanding the group to include all those with a communication limitation in the SDAC, 7.0% have a lot of difficulty or cannot communicate at all, 13.6% have some difficulty communicating and 79.3% have no difficulty communicating.

ALL PERSONS Level of communication limitation in SDAC by level of difficulty with communication in WG Short Set



[Save Chart Image](#)

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Source(s): ABS Survey of Disability, Ageing and Carers - 2015 and Supplementary Disability Survey - 2016

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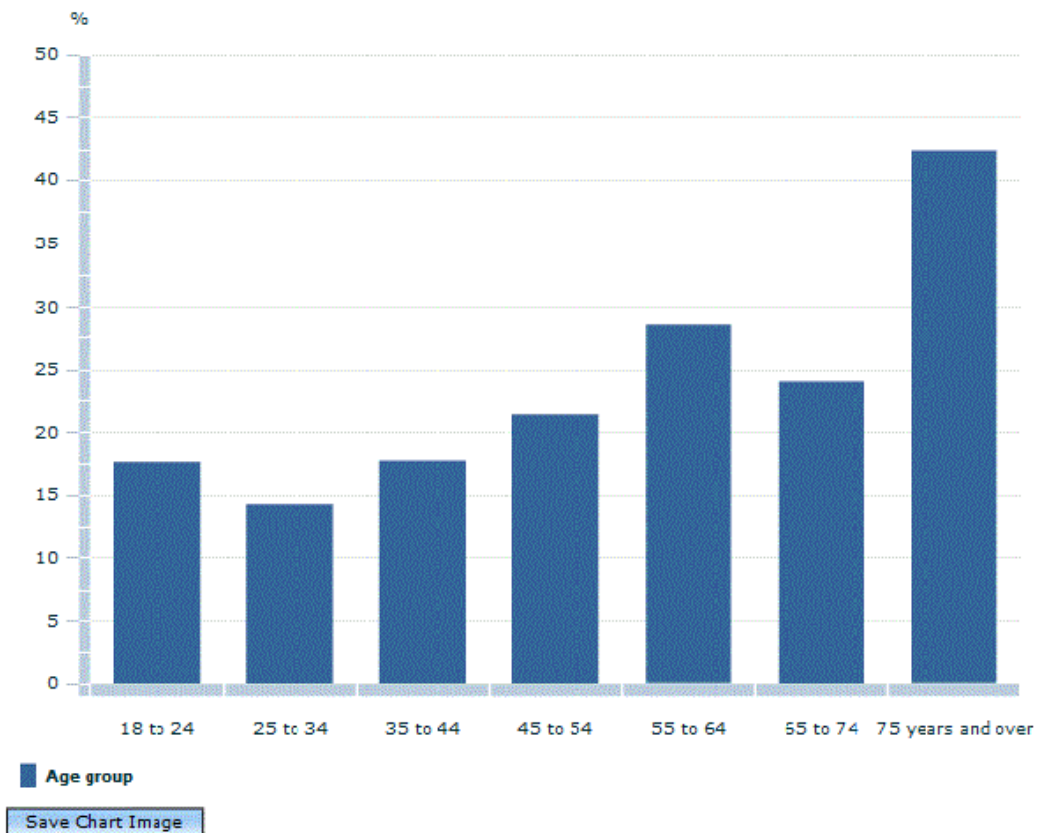
SDS AND SDAC BY SELECTED SOCIO ECONOMIC CHARACTERISTICS

The linking of the SDAC question responses with SDS presents the opportunity to investigate whether responses to the WG Short Set in the SDS varied across different population groups. While cross-tabulations are presented in the discussion below, the impact of these socio-demographic characteristics were also assessed via logistic regression modelling. Details of the modelling work conducted and the findings are presented in Appendix A.

Age

People with a disability in the SDAC were generally more likely to be identified as having a disability using the WG Short Set with increasing age.

Proportion of people with a disability in SDAC who reported a disability in WG Short Set by age group



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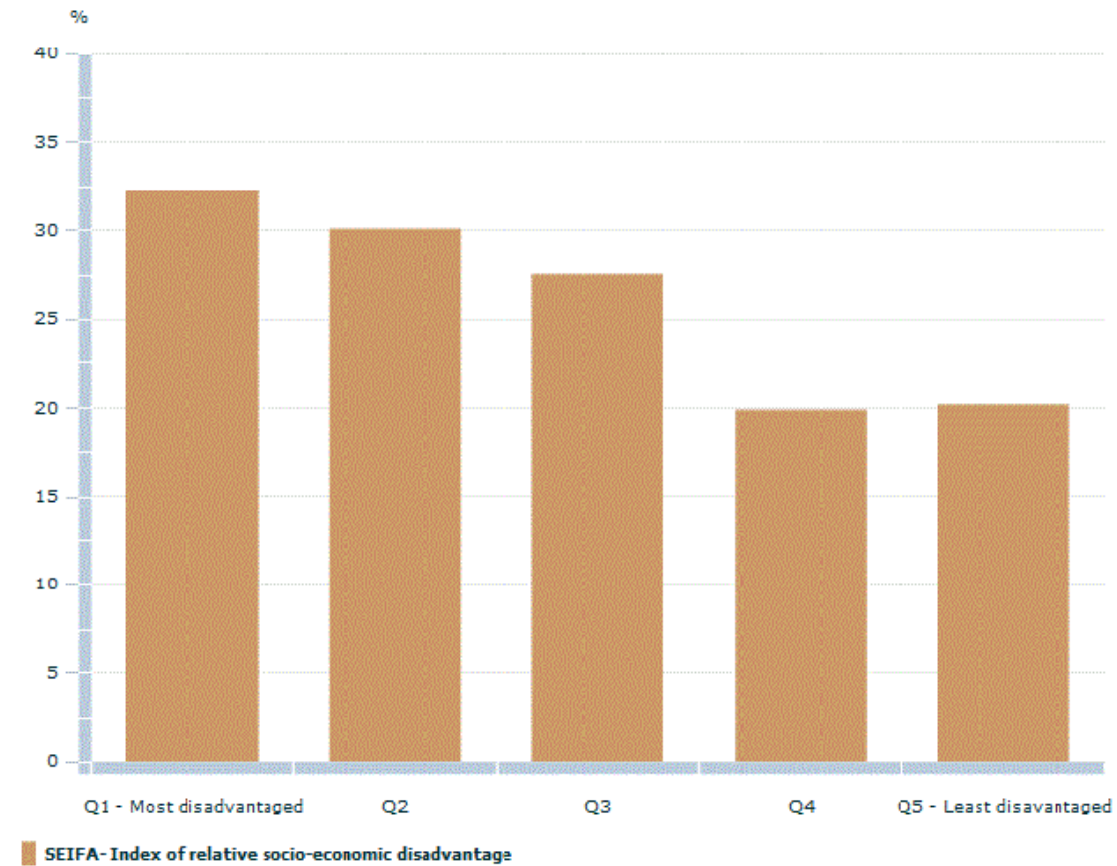
Source(s): ABS Survey of Disability, Ageing and Carers - 2015 and Supplementary Disability Survey - 2016

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Socio Economic status (SEIFA)

The graph below indicates those people identified as living with disability in the SDAC and who were living in the more socio-economically disadvantaged areas, were more likely to also be identified as having a disability in the WG Short Set than those people living in higher socio-economic areas.

Proportion of people with a disability in SDAC who reported a disability in WG Short Set by SEIFA Quintiles



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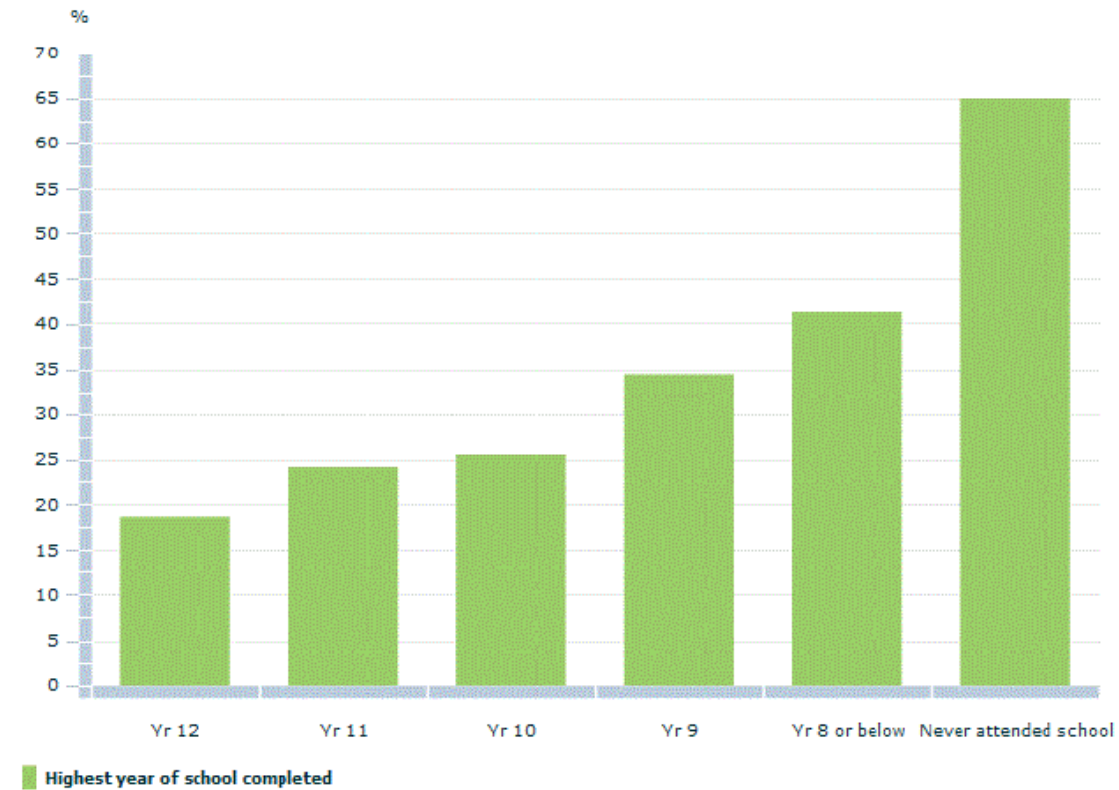
Source(s): ABS Survey of Disability, Ageing and Carers - 2015 and Supplementary Disability Survey - 2016

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Education

As can be seen from the graph below, those who had a disability in the SDAC and had completed Year 12 were the least likely to report having a disability using the WG Short Set, while those who left school early were the most likely to also report a disability in the WG Short Set.

Proportion of people with disability in SDAC who reported disability in WG Short Set by Highest year of school completed



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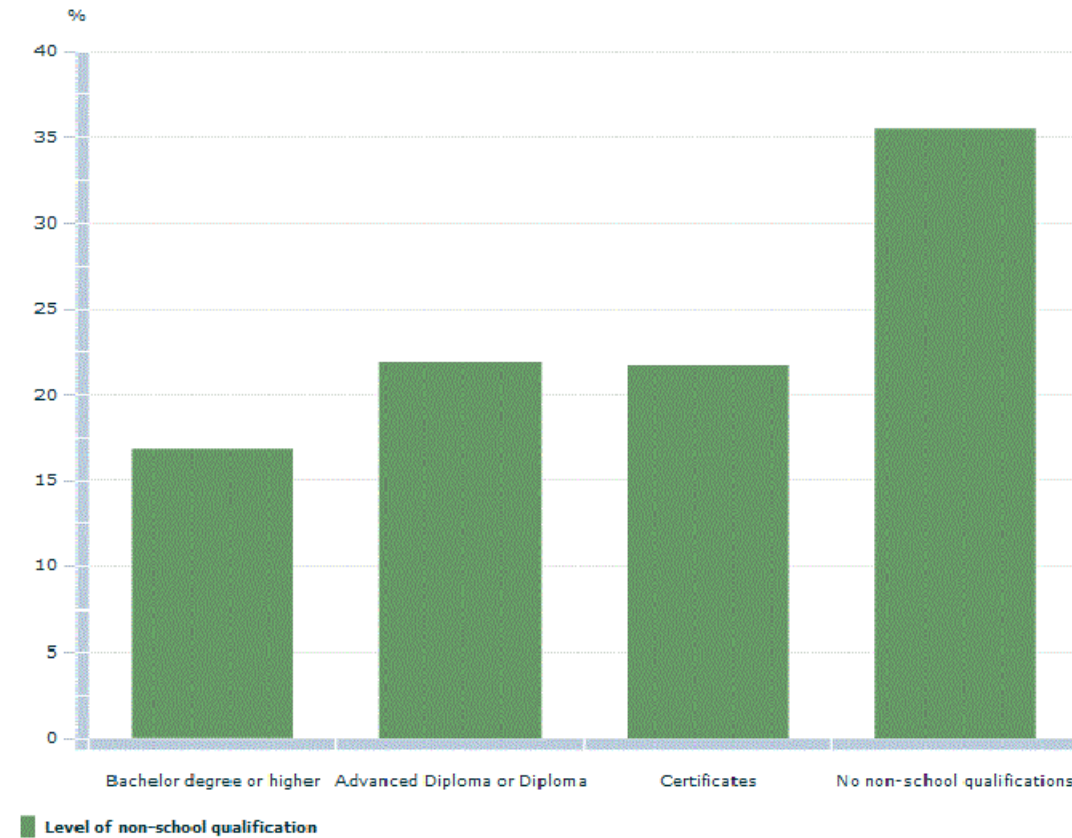
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Source(s): ABS Survey of Disability, Ageing and Carers - 2015 and Supplementary Disability Survey - 2016

A similar picture is painted when looking at non-school qualifications. As can be seen in the graph below, those with a disability in the SDAC and a Bachelor degree or higher were less likely to report a disability in the WG Short Set.

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Proportion of people with disability in SDAC who reported disability in WG Short Set by Highest non-school qualification



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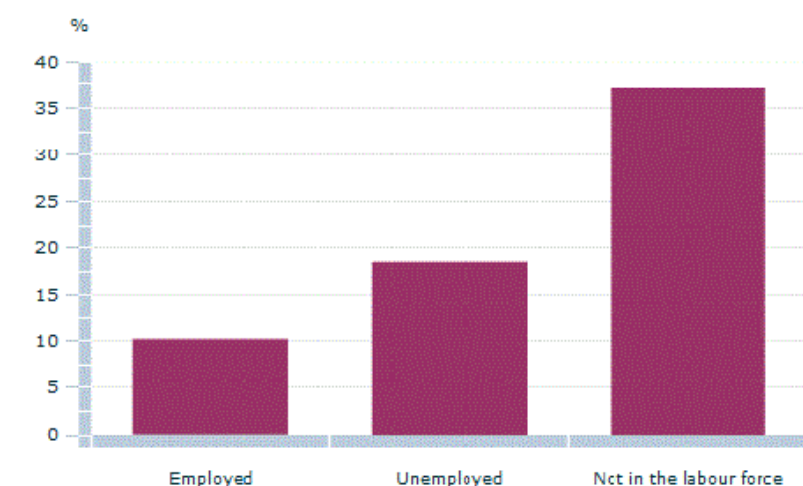
Source(s): ABS Survey of Disability, Ageing and Carers - 2015 and Supplementary Disability Survey - 2016

Labour Force participation

In terms of the overlap between the identification of disability in the two surveys, there is variation across the labour force status categories. Those who were employed in the SDAC and had a disability, were considerably less likely to be identified as having a disability using the WG Short Set (10.1%), compared with those who were unemployed (19.4%) and those who were not in the labour force (36.3%).

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Proportion of people with a disability in SDAC who reported a disability in WG Short Set by Labour force status



Labour Force Status

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Source(s): ABS Survey of Disability, Ageing and Carers - 2015 and Supplementary Disability Survey - 2016

Conclusions

The collection of the WG Short Set in the 2016 SDS provided an opportunity to compare disability information using these questions and those used in the SDAC. Above analysis shows that there are many differences in results between the surveys which is not unexpected given the differing methodologies used. Information from this research is useful to understand the results from the SDS using the WG Short Set in Australia and identify issues for further discussion and research.

The WG are continuing to work on developing a suite of question sets that complement the WG Short Set. The WG Extended Set of questions for adults was designed to capture those persons at risk for exclusion that might be missed by the WG Short Set. The WG Extended Set include questions to identify people with restrictions associated with chronic pain, fatigue, affect (anxiety and depression) and upper body functioning. In addition, a specific question set has been developed for use with children (aged 2 to 17 years), which has some focus on developmental disabilities.

Work is continuing on development of a mental health question set and questions that will examine barriers to employment and education. These extra question sets will be of use in new collections aiming to gather more detailed information about disability and participation.

Based on the results of this study, areas for potential future research, both within the Australian context and internationally may include:

- Qualitative research to investigate why people's responses may be changing between surveys;
- Comparing the WG Short Set against national disability surveys in other countries, particularly considering the influence of different modes of running the questions;
- Exploring other WG measures such as the Extended Set; and

ANALYSIS OF THE 2016 SUPPLEMENTARY DISABILITY SURVEY

- Further investigating whether people's responses to the WG Short Set are influenced by demographic, ethnic or socio-economic characteristics.
- The use of the WG question sets in disaggregating Sustainable Development Goal indicators by disability status.

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APPENDIXES

A. BINARY LOGISTIC REGRESSION

INTRODUCTION

To further investigate the responses given to the two surveys, logistic regression modelling was conducted. The modelling was specifically looking to identify whether there were socio-demographic factors which were associated with a statistically significant increased likelihood of being identified as having a disability in both surveys.

METHODS

Logistic regression is widely used in many fields, including the medical and social sciences, as a statistical method for modelling categorical outcomes. Binary logistic regression is used for modelling a dichotomous outcome (e.g. modelling 1 and 0, where 1 = event / outcome of interest occurs and 0 = event / outcome of interest does not occur). The output of the logistic regression model is usually presented in terms of the odds that the event will occur. For each categorical characteristic in the model a comparison (reference) group is selected.

The binary logistic model for estimating the likelihood of an event can be expressed as follows:

$$\log\left(\frac{p_{event}}{p_{non\ event}}\right) = \alpha + \beta_1x_1 + \dots + \beta_kx_k \quad (1)$$

where α is the intercept, the β_1, \dots, β_k are k regression coefficients, and the x_1, \dots, x_k are a set of k explanatory variables for each individual in the data.

The model in (1) indicates that the log of the odds of an event occurring is a linear function of the explanatory variables. The coefficients of the model can be estimated using standard maximum likelihood techniques.

Variables in the models

This section lists the variables used in the models.

TABLE A1: Variables used in models*

Number	Variable	Categories
Personal Characteristics		
1.	Age group	1 – [18;24], 2 – [25;34] (ref.)**, 3 – [35;44], 4 – [45;54], 5 – [55;64], 6 – [65;74], 7 – 75+
2.	Indigenous status	0 – not Aboriginal and Torres Strait Islander (ref.), 1 – Aboriginal and Torres Strait Islander
3.	Highest year of school completed	1 – School education level (year 12 or equivalent) (ref.), 2 – School education level (year 11), 3 – School education level (year 10), 4 – School education level (year 9), 5 – School education level (year 8 or below), 6 – Never attended school
4.	Highest non-school qualification completed	1 – Bachelor degree or higher, 2 – Advanced diploma or diploma, 3 – Certificate (ref.), 4 – No non-school qualification
5.	Labour force status	1 – Employed,

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6.	Disability severity (SDAC)	2 – <i>Unemployed (ref.)</i> , 3 – <i>Not in labour force</i> 1 – <i>Profound</i> , 2 – <i>Severe</i> , 3 – <i>Moderate</i> , 4 – <i>Mild (ref.)</i> , 5 – <i>Schooling or employment restriction only</i> , 6 – <i>No specific limitation</i>
7.	Disability status (WG)	1 – <i>with disability</i> , 0 – <i>without disability (ref.)</i>
Geographic characteristics		
8.	Index of relative socio-economic disadvantage	1 – <i>quintile 1 – Most disadvantaged (ref.)</i> , 2 – <i>quintile 2</i> , 3 – <i>quintile 3</i> , 4 – <i>quintile 4</i> , 5 – <i>quintile 5 – Most advantaged</i>

* Only those found significant were included in the table

** Reference or comparison group for each variable was denoted in the table in italic

Modelling Washington Group sensitivity

The first step in the process was to build a model for WG disability status with SDAC disability severity as a covariate. Statistical significance of disability severity implies different sensitivity by disability severity.

The second step was to build extended models for the same outcome variable with SDAC disability severity and one of the explanatory variables: age group, Index of relative socio-economic disadvantage, Indigenous status, labour force status, highest year of school completed and highest non-school qualification. If both disability severity and the explanatory variable are statistically significant then one can conclude that controlling for the explanatory variable does not explain the different sensitivity by disability severity.

The third step was to add an interaction term between disability severity and an explanatory variable included in the model. The interaction was then tested to see whether it was significant or not. If the interaction was significant then it can be concluded that the effect of disability severity on the sensitivity of the WG questions differs by the categories of the second explanatory variable.

The final step was to combine all the extended models into one model that included all the covariates to understand whether controlling for all explanatory variables changed the sensitivity by disability severity. If any explanatory variables were non-significant then these were removed sequentially until all the remaining explanatory variables were significant ($p < 0.05$), removing the least significant first.

RESULTS OF THE MODEL

Disability severity

There was significantly different sensitivity by the SDAC disability severity. The less severe the disability was, the lower was the probability of the person having a disability according to the WG questionnaire. Respondents with a profound disability in the SDAC were 8.3 times more likely to report their disability in the SDS than respondents with a mild disability (see the table below).

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Age

After controlling for age, the estimated difference in sensitivity by disability severity increased even more – respondents with a profound disability in the SDAC were 9.96 times more likely to report their disability in the SDS than respondents with a mild disability. After controlling for disability severity, the older a person was, the higher was the odds of having a disability in the SDS.

Socio-economic status

After controlling for relative socio-economic disadvantage, the sensitivity remained very similar to the model that did not control for this variable, although the effect of relative socio-economic disadvantage on sensitivity is significant ($p=0.0015$). After controlling for disability severity, those people living in the more socio-economically disadvantaged areas were more likely to also report a disability in the SDS.

Aboriginal and Torres Strait Islander status

Controlling for Indigenous status did not impact the diversity of sensitivity by disability severity. Although Aboriginal and Torres Strait Islander people with disability in the SDAC were less likely to report a disability in the SDS than non-Indigenous people, this difference is not significant after controlling for disability severity ($p=0.14$).

Labour force status

Controlling for labour force status decreases the diversity of sensitivity by disability severity, e.g. persons with a profound disability in the SDAC were seven times more likely to report their disability in the SDS than persons with mild disability (instead of 8.2 times). After controlling for disability severity, employed people with a disability in the SDAC were less likely to report a disability in the SDS than unemployed people (odds ratio=0.59), whereas people not in labour force had 1.4 times higher sensitivity compared to unemployed people.

Education

There was a significant effect of education on the sensitivity by disability severity; however, the diversity of sensitivity by disability severity still remained very close to that of the model which did not control for education. After controlling for disability severity, people with a disability in the SDAC with a lower number of years of school completed were more likely to report a disability in the SDS than those with a higher number of years of school completed. After controlling for disability severity, people with a disability in the SDAC with no non-school qualification were 1.6 times more likely to report a disability in the SDS than those with a Certificate and those with a higher degree had no significantly different odds to those with a Certificate.

Even after controlling for all the significant explanatory variables (age group: $p<0.0001$, Index of relative socio-economic disadvantage: $p=0.0141$, labour force status: $p<0.0001$) the diversity of sensitivity by disability severity remains.

TABLE A2: Sensitivity results

<i>Indicator</i>	<i>Population used in modelling</i>	<i>Significance level*</i>	<i>Sub-group of interest</i>		<i>Odds ratio</i>	<i>95% Confidence Interval</i>
Sensitivity	Had a disability in SDAC	Disability severity: $p<0.0001$	By disability severity	Profound	8.28	[6.42;10.70]
				Severe	2.07	[1.64;2.62]
				Moderate	1.71	[1.36;2.16]
				Mild (comparison group)	-	-

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				Schooling or employment restriction only	0.29	[0.18;0.49]			
				No specific limitation	0.29	[0.19;0.43]			
Sensitivity, controlling for age	Had disability in SDAC, aged 18 years and over	Disability severity: p<0.0001, age group: p<0.0001	By disability severity	Profound	9.96	[7.43;13.35]			
				Severe	2.66	[2.07;3.42]			
				Moderate	1.74	[1.37;2.21]			
				<i>Mild (comparison group)</i>	-	-			
				Schooling or employment restriction only	0.41	[0.23;0.71]			
						By age group	No specific limitation	0.35	[0.23;0.52]
							18-24 years	0.99	[0.49;1.99]
							25-34 years	-	-
							(comparison group)		
							35-44 years	1.16	[0.64;2.09]
				45-54 years	1.77	[1.03;3.06]			
				55-64 years	2.26	[1.36;3.78]			
				65-74 years	1.94	[1.16;3.23]			
				75 years and over	3.37	[2.03;5.60]			
Sensitivity, controlling for relative SE disadvantage	Had disability in SDAC	Disability severity: p<0.0001, Index of relative SE disadvantage: p=0.0015	By disability severity	Profound	8.16	[6.31; 10.54]			
				Severe	2.07	[1.63; 2.62]			
				Moderate	1.69	[1.34; 2.14]			
				<i>Mild (comparison group)</i>	-	-			
				Schooling or employment restriction only	0.29	[0.18; 0.49]			
						By Index of relative SES disadvantage	No specific limitation	0.29	[0.20; 0.44]
							<i>Quintile 1 – Most disadvantaged (comparison group)</i>	-	-
							Quintile 2	0.84	[0.67; 1.06]
							Quintile 3	0.88	[0.69; 1.12]
							Quintile 4	0.64	[0.48; 0.85]
				Quintile 5 – Most advantaged	0.60	[0.45; 0.80]			
Sensitivity, controlling for Indigenous status	Had disability in SDAC	Disability severity: p<0.0001, Indigenous status: p=0.1399	By disability severity	Profound	8.29	[6.42; 10.71]			
				Severe	2.07	[1.64; 2.63]			
				Moderate	1.72	[1.36; 2.17]			
				<i>Mild (comparison group)</i>	-	-			
				Schooling or employment restriction only	0.29	[0.18; 0.49]			
						By Indigenous status	No specific limitation	0.29	[0.19; 0.43]
							Aboriginal or Torres Strait Islander	0.63	[0.34; 1.16]
							<i>Not Aboriginal or Torres Strait Islander (comparison group)</i>	-	-
							Profound	7.04	[5.43; 9.13]
							Severe	1.97	[1.55; 2.50]
Sensitivity, controlling for labour force status	Had disability in SDAC	Disability severity: p<0.0001, labour force status: p<0.0001	By disability severity	Moderate	1.72	[1.36; 2.18]			
				<i>Mild (comparison group)</i>	-	-			
				Schooling or employment restriction only	0.36	[0.22; 0.61]			
				No specific limitation	0.33	[0.22; 0.50]			
				Employed	0.59	[0.33; 1.04]			
						By labour force status	<i>Unemployed (comparison group)</i>	-	-
							Not in labour force	1.36	[0.79; 2.33]
							Profound	8.83	[6.62; 11.76]
							Severe	2.29	[1.79; 2.93]
							Moderate	1.67	[1.31; 2.11]
Sensitivity, controlling for highest year of school completed	Had disability in SDAC aged 18 years and over	Disability severity: p<0.0001, highest year of school completed:		<i>Mild (comparison group)</i>	-	-			
				Schooling or	0.33	[0.19; 0.57]			

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		p<0.0001		employment restriction only	
				No specific limitation	0.32 [0.21; 0.48]
			By highest year of school completed	Year 12 (comparison group)	- -
				Year 11	1.11 [0.79; 1.56]
				Year 10	1.41 [1.11; 1.79]
				Year 9	1.77 [1.33; 2.35]
				Year 8 or below	1.90 [1.44; 2.51]
				Did not attend school	2.67 [0.68; 10.51]
Sensitivity, controlling for highest non-school qualification completed	Had disability in SDAC aged 18 years and over	Disability severity: p<0.0001, highest non-school qualification completed: p=0.0002	By disability severity	Profound	8.79 [6.61; 11.71]
				Severe	2.30 [1.80; 2.95]
				Moderate	1.70 [1.34; 2.16]
				<i>Mild (comparison group)</i>	- -
				Schooling or employment restriction only	0.32 [0.18; 0.54]
				No specific limitation	0.31 [0.21; 0.47]
			By highest non-school qualification completed	Bachelor degree or higher	1.11 [0.76; 1.62]
				Advanced Diploma or Diploma	1.13 [0.85; 1.51]
				<i>Certificate (comparison group)</i>	- -
				No non-school qualification	1.61 [1.25; 2.09]
Sensitivity, controlling for age, relative SE disadvantage, labour force status*	Had disability in SDAC	Disability severity: p<0.0001, age group: p<0.0001, Index of relative SE disadvantage: p=0.0141, labour force status: p<0.0001	By disability severity	Profound	8.36 [6.21; 11.26]
				Severe	2.46 [1.91; 3.18]
				Moderate	1.69 [1.33; 2.16]
				<i>Mild (comparison group)</i>	- -
				Schooling or employment restriction only	0.46 [0.27; 0.81]
				No specific limitation	0.39 [0.26; 0.59]
			By age group	18-24 years	0.89 [0.44; 1.82]
				25-34 years (comparison group)	- -
				35-44 years	1.14 [0.62; 2.08]
				45-54 years	1.70 [0.98; 2.97]
				55-64 years	1.96 [1.16; 3.31]
				65-74 years	1.45 [0.86; 2.47]
				75 years and over	2.42 [1.42; 4.10]
			By Index of relative SE disadvantage	<i>Quintile 1 – Most disadvantaged (comparison group)</i>	- -
				Quintile 2	0.89 [0.70; 1.14]
				Quintile 3	0.88 [0.68; 1.14]
				Quintile 4	0.62 [0.45; 0.84]
				Quintile 5 – Most advantaged	0.68 [0.50; 0.93]
			By labour force status	Employed	0.57 [0.31; 1.03]
				<i>Unemployed (comparison group)</i>	- -
				Not in labour force	1.19 [0.66; 2.13]

* Only statistically significant explanatory variables were included

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B. KAPPA VALUES

In the table below the kappa values for the measures of disability in the SDAC and the in the WG short set are provided for different subpopulations to capture the degree of overlap in the two measures. Kappa values are used as they incorporate the likelihood of a certain amount of overlap occurring between the measures through chance alone. Whilst there is no consensus agreement about what kappa values constitute a 'good' match, McHugh (2012) suggested the following as guidelines:

TABLE B1: Kappa Value Guidelines

<i>Value of Kappa</i>	<i>Level of Agreement</i>	<i>% of Data that are Reliable</i>
0-0.20	None	0-4%
0.21-0.39	Minimal	4-15%
0.40-0.59	Weak	15-35%
0.60-0.79	Moderate	35-63%
0.80-0.90	Strong	64-81%
Above 0.90	Almost perfect	82-100%

Kappa values have been calculated using both the standard WG short set threshold for having a disability (ie the person had a lot of difficulty or could not do at all at least one of the six domains considered in the question set) and the lower threshold (which includes people who reported some difficulty with at least one domain as having a disability).

KAPPA VALUES BY SOCIO-DEMOGRAPHIC CHARACTERISTICS

TABLE B2: Kappa values by socio-demographic characteristics

	<i>Higher WG threshold</i>	<i>Lower WG threshold</i>
Disability		
Disability	0.34	0.50
Age		
18 to 24 years	0.27	0.48
25 to 34 years	0.22	0.36
35 to 44 years	0.25	0.43
45 to 54 years	0.30	0.41
55 to 64 years	0.33	0.44
65 to 74 years	0.24	0.39
75 years and over	0.32	0.36
SEIFA		
Quintile 1	0.35	0.49
Quintile 2	0.36	0.52
Quintile 3	0.34	0.49
Quintile 4	0.28	0.45
Quintile 5	0.29	0.45
Labour Force Status		
Employed	0.15	0.32
Unemployed	0.23	0.34
Not in the Labour Force	0.40	0.60
Highest non-school qualification		
Bachelor degree or higher	0.25	0.42
Advanced Diplomas/ Diplomas	0.29	0.46
Certificate	0.27	0.45
None	0.41	0.56
Highest Year of school completed		
Year 12	0.27	0.40
Year 11	0.32	0.48
Year 10	0.28	0.48
Year 9	0.34	0.46
Year 8 or below	0.32	0.40
Never attended	0.63	0.50

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KAPPA VALUES BY DOMAINS

The following kappa values are derived by taking measures of the individual domains from the SDAC and comparing them with the results of those domains in the WG Short Set, ie they are not comparing measures of the broader concept of disability, but rather impairment related to each specific domain.

TABLE B3: Kappa values by functioning domains

<i>Domains</i>	<i>Higher WG threshold</i>	<i>Lower WG threshold</i>
Sight	0.30	0.16
Hearing	0.23	0.30
Memory/concentration	0.41	0.15
Communication	0.46	0.23
Mobility	0.37	0.59
Self-care	0.31	0.53

KAPPA VALUES FOR DISABILITY STATUS AND DISABILITY TYPE

For these kappa values, rather than splitting the groups by whether or not they had a disability in the SDAC, the populations have been split on whether they have the given disability status/disability type or not.

TABLE B3: Kappa values by functioning domains

	<i>Higher WG threshold</i>	<i>Lower WG threshold</i>
<i>Disability Status</i>		
Profound	0.36	0.11
Severe	0.19	0.12
Moderate	0.16	0.13
Mild	0.15	0.21
School or employment restriction only	0.00	0.02
Disability with no specific limitation	0.00	0.03
No disability but has a long-term health condition	-0.08	0.00
No disability and no long term health condition	-0.12	-0.36
<i>Disability type</i>		
Loss of sight	0.13	0.05
Loss of hearing	0.26	0.21
Speech difficulties	0.12	0.03
Breathing difficulties	0.23	0.11
Chronic or recurring pain or discomfort	0.35	0.29
Blackouts, seizures or loss of consciousness	0.09	0.03
Difficulty learning or understanding things	0.17	0.07
Incomplete use of arms or fingers	0.15	0.09
Difficulty gripping or holding things	0.26	0.17
Incomplete use of feet or legs	0.28	0.13
Nervous or emotional condition	0.16	0.08
Restriction in physical activity or work	0.40	0.31
Disfigurement or deformity	0.08	0.03
Mental illness	0.14	0.05
Memory problems or periods of confusion	0.23	0.07
Social or behavioural difficulties	0.09	0.04
Other limitations and restrictions	0.38	0.30

C. GLOSSARY

Activity

An activity comprises one or more tasks. See Appendix - Limitations and Restrictions (cat. no 4430.0) for a summary table of restrictions, activities and tasks. In the SDAC, tasks have been grouped into the following ten activities:

- Cognition or emotion
- Communication
- Health care
- Household chores
- Meal preparation
- Mobility
- Property maintenance
- Reading or writing
- Self-care
- Transport.

Age

The age of a person on their last birthday.

Any Responsible Adult (ARA)

Refers to the adult who is selected to be interviewed for a survey. This adult may have also responded on behalf of others in the household. In the Supplementary Disability Survey (SDS), the ARA who was interviewed for the Survey of Disability, Ageing and Carers (SDAC) was also interviewed for the SDS.

Assistance

Includes help that is being received, as well as help that may be needed, but not being received, in common activities of daily life such as showering or dressing, moving around, housework and gardening, or using transport. The help or assistance must be because of the person's disability, long-term health condition or old age.

Capital city/Balance of state

Capital city refers to the Greater Capital City Statistical Area for each state or territory. All other regions within each state or territory are classified as 'balance of state'.

Carer

See [Appendix - Carers \(cat no. 4430.0\)](#)

Communication

In the SDAC, 'communication' comprises the following tasks:

- Understanding family or friends
- Being understood by family or friends
- Understanding strangers
- Being understood by strangers.

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Core activities

Core activities are communication, mobility and self-care.

Core activity limitation

Four levels of core activity limitation are determined based on whether a person needs help, has difficulty, or uses aids or equipment with any of the core activities (mobility, self-care and communication). A person's overall level of core activity limitation is determined by their highest level of limitation in these activities.

The four levels of limitation are:

- Profound - the person is unable to do, or always needs help with, a core activity task
- Severe - the person:
 - sometimes needs help with a core activity task, and/or
 - has difficulty understanding or being understood by family or friends, or
 - can communicate more easily using sign language or other non-spoken forms of communication.
- Moderate - the person needs no help, but has difficulty with a core activity task.
- Mild - the person needs no help and has no difficulty with any of the core activity tasks, but:
 - uses aids or equipment, or has one or more of the following limitations
 - cannot easily walk 200 metres
 - cannot walk up and down stairs without a handrail
 - cannot easily bend to pick up an object from the floor
 - cannot use public transport
 - can use public transport, but needs help or supervision
 - needs no help or supervision, but has difficulty using public transport.

Difficulty (with an activity or task)

The difficulty a respondent experiences in undertaking or completing an activity or task was up to their own interpretation. A person might consider themselves to have difficulty with an activity or task if it takes them longer to complete than other people of the same age, causes pain or discomfort, or is harder for them to do because of their disability or old age.

Disability

In the context of health experience, the International Classification of Functioning, Disability and Health (ICF) defines disability as an umbrella term for impairments, activity limitations and participation restrictions. It denotes the negative aspects of the interaction between an individual (with a health condition) and that individual's contextual factors (environment and personal factors).

In the SDS, disability is determined by using the questions in the Washington Group Short Set on Functioning (or WG Short Set). The focus is on measuring people's functioning in six core domains, in contrast to approaches that are based on impairments or bodily structures.

Using the WG Short Set, disability is determined by whether people have health related difficulties or limitations in the following six domains: seeing, hearing, walking, cognition, self-care and communication. People with disability include those who experience difficulty, even if the difficulties are alleviated by the use of assistive devices or living in a supportive environment for example. They are people who are at greater risk than the general population for experiencing restrictions in participation in education, employment and social and community life.

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In the SDAC, a person has a disability if they report they have a limitation, restriction or impairment, which has lasted, or is likely to last, for at least six months and restricts everyday activities. This includes:

- loss of sight (not corrected by glasses or contact lenses)
- loss of hearing where communication is restricted, or an aid to assist with, or substitute for, hearing is used
- speech difficulties
- shortness of breath or breathing difficulties causing restriction
- chronic or recurrent pain or discomfort causing restriction
- blackouts, seizures, or loss of consciousness
- difficulty learning or understanding
- incomplete use of arms or fingers
- difficulty gripping or holding things
- incomplete use of feet or legs
- nervous or emotional condition causing restriction
- restriction in physical activities or in doing physical work
- disfigurement or deformity
- mental illness or condition requiring help or supervision
- memory problems or periods of confusion causing restriction
- social or behavioural difficulties causing restriction
- long-term effects of head injury, stroke or other acquired brain injury causing restriction
- receiving treatment or medication for any other long-term conditions or ailments and still being restricted
- any other long-term conditions resulting in a restriction.

Disability group

See [Appendix - Disability groups \(cat. no 4430.0\)](#)

Disability rate

The proportion of people with reported disability, in any given population or sub-population (e.g. age group).

Disability status

The level of specific limitation or restriction experienced by persons with disability. This is determined by the amount of difficulty experienced, the level of assistance needed from another person, or the use of an aid to undertake a particular core activity and/or to participate in education or employment activities.

Domain

Refers to the core areas of functioning or activity. The 2016 SDS has six domains:

- Seeing
- Hearing
- Walking
- Cognition
- Self-care
- Communication.

Dressing (assistance with)

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Includes physical assistance for dressing or undressing activities, such as doing up buttons or zips, putting on socks and shoes, tying shoelaces, etc., including before or after showering or bathing. It also includes advising on appropriate clothing.

Eating (assistance with)

This includes the physical aspects of eating, as well as supervising to ensure the food is eaten and nothing harmful is placed in the mouth (e.g. bones) and any washing or clothing adjustments that are needed after eating or feeding. The physical aspects of eating include being seated at the table, serving food, cutting food into pieces and feeding.

Employed

People who reported that they had worked in a job, business or farm during the reference week (the full week prior to the date of interview); or that they had a job in the reference week, but were not at work.

Employment restriction

An employment restriction is determined for persons with one or more disabilities if, because of their disability, they meet one or more of the following:

- Are permanently unable to work
- Are restricted in the type of work they can or could do
- Need or would need at least one day a week off work on average
- Are restricted in the number of hours they can or could work
- Require or would require an employer to provide special equipment, modify the work environment or make special arrangements
- Require assistance from a disability job placement program or agency
- Need or would need to be given ongoing assistance or supervision
- Would find it difficult to change jobs or get a better job.

This information was collected for persons aged 15 years or more with one or more disabilities, living in households.

Household

A group of two or more related or unrelated people who usually reside in the same dwelling and who make common provision for food and other essentials for living; or a person living in a dwelling who makes provision for his or her own food and other essentials for living without combining with any other person. Thus a household may consist of:

- One person
- One family
- One family and related individual(s)
- Related families with or without unrelated individual(s)
- Unrelated families with or without unrelated individual(s)
- Unrelated individuals.

This comprises people living in private dwellings and self-care retirement units in retirement villages.

Impairment

In the context of health experience, an impairment is defined by the International Classification of Functioning, Disability and Health (ICFHD) as a loss or abnormality in body structure or physiological function (including mental functions). Abnormality is used to refer to a significant variation from established statistical norms.

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Examples of an impairment are loss of sight or loss of a limb, disfigurement or deformity, impairment of mood or emotion, impairments of speech, hallucinations, loss of consciousness, and any other lack of function of body organs.

Labour force status

A classification of the population aged 15 years or over into employed, unemployed or not in the labour force.

Level of communication limitation

Four levels of communication limitation are determined based on whether a person needs help, has difficulty, or uses aids or equipment in communicating with others. A person's overall level of communication limitation is determined by their highest level of limitation in these activities.

The four levels of limitation are:

- profound - the person cannot understand or be understood at all. They always need help when communicating with family or friends and people they don't know.
- severe - the person:
 - communicates more easily with sign language or other non-spoken communication
 - sometimes needs help understanding or being understood by someone they don't know
 - sometimes needs help understanding or being understood by family or friends
 - doesn't need help, but has difficulty understanding or being understood by family or friends.
- moderate - the person doesn't need help, but has difficulty understanding or being understood by someone they don't know, or the interview was conducted in English with difficulty because of communication problems.
- mild - the person has no difficulty understanding or being understood by someone else, but uses a communication aid.

Limitation

A person has a limitation if they have difficulty, need assistance from another person, or use an aid or equipment, to do a particular core activity. See Appendix - Limitations and restrictions (cat. no 4430.0) for more detail.

Living in households

A person is included in the 'Living in households' population if they are part of a household and resided in a private dwelling, excluding health establishments.

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Long-term health condition

A disease or disorder that has lasted, or is likely to last, for six months or more and is current at the time of the survey. The exception to this is a periodic or episodic condition (e.g. asthma, epilepsy or schizophrenia, where people suffer attacks or relapses at irregular intervals) where the attack or relapse has occurred in the last 12 months. Conditions that had not occurred in the last 12 months because they had been controlled by medication were also included. Long-term health conditions were coded to a classification based on the World Health Organisation's International Classification of Diseases, 10th Revision (ICD-10).

Mild core activity limitation

See Core activity limitation.

Moderate core activity limitation

See Core activity limitation.

Non-school qualification

Non-school qualifications are awarded for educational attainments other than those of pre-primary, primary or secondary education. They include qualifications at the Post Graduate Degree level, Master Degree level, Graduate Diploma and Graduate Certificate level, Bachelor Degree level, Advanced Diploma and Diploma level, and Certificates I, II, III and IV levels. Non-school qualifications may be attained concurrently with school qualifications.

Not in the labour force

Persons who were not employed or unemployed.

Older person

In the SDAC, older person refers to a person aged 65 years and over. Information on health and well-being, internet use, social and community participation, feelings of safety and the need for and receipt of assistance for household chores, property maintenance, meal preparation, reading and writing tasks, and transport activities is available from the survey for persons aged 65 years and over, regardless of whether they have a disability or not.

Profound core activity limitation

See Core activity limitation.

Proxy

A proxy is a person who answers the survey questions on behalf of someone who has been selected for interview. A proxy interview may be conducted:

- when the selected person is less than 15 years of age
- when the selected person is aged 15-17 years and parental consent to interview them personally has not been provided
- due to the selected person's illness, injury or language difficulties.

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Quintiles

Groupings that result from ranking all households or people in the population in ascending order according to some characteristic such as their household income and then dividing the population into five equal groups, each comprising 20% of the estimated population. The same dollar values for household income can therefore appear in separate quintiles.

Restriction (education or employment)

A person has an education or employment restriction if he/she has difficulty participating, needs assistance from another person or uses an aid or equipment in schooling or employment. See Appendix - Limitations and restrictions (cat. no 4430.0) for more detail.

Schooling restriction

A schooling restriction is determined for persons aged 5 to 20 years who have one or more disabilities if, because of their disability, they:

- are unable to attend school
- attend a special school
- attend special classes at an ordinary school
- need at least one day a week off school on average
- have difficulty at school.

Self-care

This activity comprises the following tasks:

- Showering or bathing
- Dressing
- Eating
- Toileting
- Bladder or bowel control

Severe core activity limitation

See Core activity limitation.

Showering or bathing

Showering or bathing is defined as getting in and out of the shower or bath, turning on/off taps in the shower or bath, washing, drying and having a bed-bath. It excludes dressing and undressing.

Socio-Economic Indexes for Areas (SEIFA)

SEIFA is a product developed especially for those interested in the assessment of the welfare of Australian communities. The ABS has developed four indexes to allow ranking of regions/areas, providing a method of determining the level of social and economic well-being in each region.

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Each of the indexes summarise different aspects of the socio-economic status of the people living in those areas. The index refers to the attributes of the area (Statistical Area Level 1) in which a person lives, not to the socio-economic situation of a particular individual. The index used in this publication was compiled following the 2011 Census. For further information about the SEIFAs, see Census of Population and Housing - Socio-Economic Indexes for Areas (SEIFA), Australia, 2011 (cat. no. 2033.0.55.001).

The four indexes are:

- Index of relative socio-economic advantage and disadvantage: includes attributes such as households with low incomes and people with a tertiary education.
- Index of relative socio-economic disadvantage: includes attributes such as low income, low educational attainment, high unemployment and dwellings without motor vehicles.
- Index of economic resources: includes attributes such as income and housing expenditure.
- Index of education and occupation: includes attributes relating to the educational and occupational characteristics of communities, like the proportion of people with a higher qualification or those employed in a skilled occupation.

Specific limitation or restriction

A limitation in core activities, or a restriction in schooling or employment. This corresponds with the concept of 'handicap' used in previous ABS publications on disability. See Appendix - Limitations and Restrictions (cat. no 4430.0).

Statistical significance

Differences between population estimates are said to be statistically significant when it can be stated with 95% confidence that there is a real difference between the populations. See Technical Note - Data quality (cat. no 4430.0) for more information.

Task

A task is a component of an activity and represents the specific level at which information was collected.

Unemployed

Persons aged 15 years and over who were not employed during the reference week, and:

- had actively looked for full-time or part-time work at any time in the four weeks up to the end of the reference week
- were available for work in the reference week.

Washington Group

The Washington Group on Disability Statistics was established under the United Nations Statistical Commission to address the need for comparable data on disability cross nationally. Representatives from national statistical agencies work together in this City Group to promote and coordinate disability data collection tools for use in censuses and national surveys. For more information, see http://www.cdc.gov/nchs/washington_group/index.htm.

Washington Group Short Set on Functioning

A set of six questions developed by the United Nations Washington Group that can be used in censuses and sample-based surveys to measure disability prevalence rates in different countries. Consistent with the International Classification of Functioning, the WG Short Set of questions are intended to produce internationally comparable data. For more information, see http://www.cdc.gov/nchs/washington_group/index.htm.

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