

Article

# Measuring disability: comparing approaches

Comparison of the Equality Act measure of disability used in Great Britain to the United Nations recommended measures of disability, based on the Opinions and Lifestyle Survey in January 2019

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# 1 . Summary

- This article compares the disability prevalence found using the Great Britain official definition based on the Equalities Act 2010, and the measures recommended by the United Nations (UN) Washington Group. We asked both sets of questions in the Opinions and Lifestyle Survey in January 2019.
- The adult disability prevalence using the Equalities Act disability definition (EADD) was around three times that based on the most commonly used definition of the Washington Group Short Set of questions (WGSS). The difference can be attributed partly to the exclusion of mental health issues from the WGSS, and partly to the higher severity threshold for inclusion in the Disability 3 measure.
- Where broader Washington Group indicators showed prevalence similar to, or greater than the EADD, less than half of the individuals included were counted as disabled by both definitions.
- We conclude that although the EADD and Washington Group questions are based on similar concepts of disability, their different approaches identify substantially different disabled populations.
- Comparability between the EADD and the Washington Group measures tested is therefore very limited, and the latter would be unable to meet Great Britain needs for disability monitoring. This is because of the need to define people as disabled against the Equality Act criteria, for example, to monitor compliance with the public sector equality duty.
- For comparable international reporting, it is possible that the most common WGSS measure might be able to be derived from EADD-based data, subject to further testing of validity. Disability 3 can be considered as effectively a subset of the EADD-disabled population.

## 2 . Introduction

Measuring disability in official statistics is important to prevent discrimination, monitor inequalities and compliance with the [public sector equality duty](#), ensure that disabled people can exercise their rights, identify service needs of disabled people and barriers to their equal participation in society. The globally agreed [Sustainable Development Goals \(SDGs\)](#) emphasise the need to reduce inequalities for disabled people and other disadvantaged groups.

International approaches to defining disability are broadly based on the [UN Convention on the Rights of Persons with Disabilities](#) and the conceptual framework set out in the World Health Organisation's (WHO's) [International Classification of Functioning, Disability and Health \(ICF\)](#). Disability can be described as the result of interactions between an individual's health-related functioning and their environment. To determine whether someone should be counted as disabled in statistics, we have to know firstly whether they have a functional limitation (also called an impairment) caused by a health condition, and secondly whether in their current circumstances that results in some restriction on their daily activities or their participation in society.

In this article we compare two approaches to measuring disability in surveys and examine the different estimates of the prevalence of disability that each produces. One is the [Great Britain official statistics definition of disability](#), which is regularly used in Office for National Statistics (ONS) publications and reflects the concepts of the [Equality Act 2010](#). The other is the [Washington Group](#) method, a suite of questions based on an approach that is widely used internationally. It is important to understand the differences between these approaches when comparing statistics on disability internationally.

For convenience, we have referred to the sets of survey questions used as the Equality Act disability definition (EADD) and the [WG Short Set on Functioning – Enhanced \(WG-SS Enhanced\)](#). The WGESS contains within it a smaller group of questions, the [WG Short Set on Functioning \(WG-SS\)](#) and can be analysed in several different ways, which are explained below.

The comparison was carried out using the ONS [Opinions and Lifestyle Survey \(OPN\)](#) a small monthly cross-sectional telephone interview survey, in January 2019. The OPN routinely contains a version of the EADD questions: for one month, the WGESS was added. This allowed the results of different disability measurements to be analysed, and produced estimates of disability prevalence for Great Britain according to the Washington Group's methods. We also considered the EADD measure based on a different survey, the much larger ONS [Annual Population Survey \(APS\)](#) for comparison.

### 3 . The Equality Act disability definition (EADD)

The EADD was developed through a programme of technical development and public consultation following a cross-government [Equality Data Review](#) in 2007, which suggested that “improvement in the coordination, comparability, quality and accessibility of disability statistics and the application of a principled approach to data collection” was needed. It tries to reflect the definitions that appeared in legal terms in the [Disability Discrimination Act 1995](#) and the subsequent [Equality Act 2010](#).

It should be noted that although the Equality Act replaced the Disability Discrimination Act in Great Britain, the Disability Discrimination Act is still in place in Northern Ireland. Both pieces of legislation define disability in the same way.

It is important for the official statistical definition to be as consistent as possible with the legal definition so that the data produced are appropriate for essential policy and monitoring uses. However, since legal definitions vary between countries, this is not necessarily suitable for international comparisons.

According to the Equality Act, a person is disabled if they:

- have a physical or mental impairment, and
- the impairment has a substantial and long-term adverse effect on their ability to carry out normal day-to-day activities

“Substantial” is interpreted to mean any effect greater than minor or trivial, while “long-term” means 12 months or more. People with certain severe or progressive diseases are also covered by the Act, but these are not systematically counted within the “core disabled” population.

Further details of the Great Britain survey questions can be found in the Government Statistical Service (GSS) documentation for the [harmonised principle for long-lasting health conditions and illness](#) and [the principle on activity restriction](#), which come together to form the [measuring disability for the Equality Act](#).

Although the EADD is specific to Great Britain (and wider UK statistics), its concepts and wording are close to the [global activity limitation indicator \(GALI\)](#), which is used in several harmonised European surveys. Among other minor differences, the GALI uses a duration of six months rather than 12.

The questions making up the EADD that appear on the OPN are:

- Q1. Do you have any physical or mental health conditions or illnesses? (Answers: yes/no)
- Q2. (Asked only if Q1 = yes) Has this lasted, or is it expected to last, for 12 months or more? (Answers: yes /no)
- Q3. (Asked only if Q2 = yes) Do any of your illnesses or conditions reduce your ability to carry out day to day activities? (Answers: yes a lot/yes a little/not at all)

A person is counted as disabled if they answer “yes” to Q1, “yes” to Q2, and either “yes a lot” or “yes a little” to Q3.

The questions differ slightly to the harmonised standard, which asks only two questions, with presence of a condition or illness with the duration combined in one question followed by the activity limitation in the second question.

The questions were not designed to specify any particular type of health condition or what “day to day activities” might be affected so, the person answering is free to decide for themselves what is relevant. The fact that a health condition could be either physical or mental is specifically pointed out in Q1.

The interview guidance related to the harmonised questions does specify that a person should consider their current limitation with use of aids or medication. However, unlike the Washington Group questions, there is no specific wording within the EADD questions as to whether the respondent should consider their limitation with or without use of aids or medication.

## 4 . The Washington Group measures of disability

The [Washington Group on Disability Statistics](#) was set up as a [City Group](#) of the United Nations Statistical Commission in 2001 to address a lack of cross-nationally comparable population-based measures of disability. The group's organisation and activities are fully described on its website. Its question sets are designed for use in national censuses and surveys, and have become widely known. The definition of disability according to the Group is based on multiple questions, each about a different area of functioning such as walking, seeing or hearing.

In this article we discuss disability prevalence based on the Washington Group Short Set (WGSS) because it is the most commonly used version of the Group's methodology internationally; and on the Washington Group Enhanced Short Set (WGES) because it is the version most comparable with the Equality Act disability definition (EADD). In particular, the WGSS does not cover any mental health conditions, whereas the WGES includes anxiety and depression. In the accompanying dataset we provide additional figures based on several different ways of defining disability using these question sets.

## 5 . Washington Group Short Set (WGSS)

The WGSS consists of six questions and is designed for use in labour force surveys and censuses. It is the most widely used question set in the Group's methodology, and the UN suggests using the WGSS for measurement of disability in the SDG indicators. It is intended to include [the majority of people who are at greater risk of restrictions in social participation](#) in respect of six core domains of functioning, but is not intended to be comprehensive. Unlike the EADD, there is no specific mention of duration.

The questions are:

- Introduction: Now I am going to ask you some questions about your ability to do different activities, and how you have been feeling
- Q1. Do you have difficulty seeing, even if wearing glasses?
- Q2. Do you have difficulty hearing, even if using a hearing aid?
- Q3. Do you have difficulty walking or climbing steps?
- Q4. Do you have difficulty remembering or concentrating?
- Q5. Do you have difficulty with self-care such as washing all over or dressing?
- Q6. Using your usual (customary) language, do you have difficulty communicating for example understanding or being understood by others?

Each question has four response categories: "no difficulty", "some difficulty", "a lot of difficulty", and "cannot do it at all".

Because of the multiple questions and response options, it is possible to calculate several different measures of disability from the WGSS, which approximately represent increasing severity of disability. These are:

### Disability 1

At least one of the six questions is coded "some difficulty", "a lot of difficulty" or "cannot do it at all".

### Disability 2

At least one of the six questions is coded "a lot of difficulty" or "cannot do it at all", or two of the six are coded "some difficulty", "a lot of difficulty" or "cannot do it at all".

### **Disability 3**

At least one of the six questions is coded “a lot of difficulty” or “cannot do it at all”. This is the measure recommended for use with the WGSS internationally and therefore is the most commonly used measure.

### **Disability 4**

At least one of the six questions is coded “cannot do it at all”.

In this analysis we focus mainly on Disability 2 and Disability 3 out of this list because Disability 3 is that recommended by the Washington Group and Disability 2 produces the most similar prevalence to the Equality Act disability definition (EADD) measure.

## **6 . Washington Group Enhanced Short Set (WGES)**

The WGES includes, in addition to the Washington Group Short Set (WGSS) questions, additional questions covering upper body functioning and mental health (anxiety and depression). The additional questions are:

- Q7. Do you have difficulty raising a two-litre bottle of water from waist to eye level?
- Q8. Do you have difficulty using your hands and fingers, such as picking up small objects like a button or pencil, or opening or closing containers or bottles?
- Q9. How often do you feel worried, nervous or anxious?
- Q10. And thinking about the last time you felt worried, nervous or anxious, how would you describe the level of these feelings?
- Q11. May I ask, how often do you feel depressed?
- Q12. And thinking about the last time you felt depressed, how depressed did you feel?

The response categories for Q7 and Q8 are the same as for the earlier questions. For Q9 and Q11, the possible responses are: “daily”, “weekly”, “monthly”, “a few times a year” and “never”. For Q10 and Q12, the responses are: “a little”, “some” or “a lot”.

Questions 7 to 12 in pairs make up the three domains of upper body functioning, anxiety and depression, which are added to the six questions of the WGSS. For upper body, the level of difficulty coded is the “higher” response of Questions 7 and 8.

Use of the WGES allows the calculation of further measures of disability, which we have named “Disability 2+” and “Disability 3+”.

### **Disability 2+**

At least one of the WGSS questions and upper body domain is coded “a lot of difficulty” or “cannot do it at all”; or the respondent experiences “a lot” of anxiety or depression “daily”; or at least two of the total of nine domains are coded as “some” difficulty, which can include either at least “some” anxiety or depression “daily” or “a lot” of anxiety or depression “weekly”.

## Disability 3+

At least one of the first eight questions is coded “a lot of difficulty” or “cannot do it at all”; or the respondent experiences “a lot” of anxiety or depression “daily”. This is the most commonly used WGES disability measure internationally.

### Figure 1: Diagram of Washington Group measures of disability covering functionality and severity

Conceptual comparison of the chosen disability measures from WGSS and WGES

## 7 . Survey results

The Opinions and Lifestyle Survey (OPN) is a Great Britain household survey covering ages 16 years and over. The sample drawn for January 2019 was 2,200 cases, which achieved a response rate of 49% resulting in a responding sample of 1,069 cases. Using unweighted data, 315 of these cases were disabled based on the Equality Act disability definition (EADD). This relatively small sample size limits the breakdowns and comparisons that are feasible with the data.

Because of mainly age-related selection bias, the proportion of respondents aged 65 years and over was much higher than in the general population. Despite the application of non-response weightings, this is likely to have increased the reported prevalence of disability. The figures from the Annual Population Survey (APS) give a comparison that is more representative of the national population. For more explanation of these issues, see the section “More information on survey methods”.

The OPN sample can be used to compare the EADD with the Washington Group definitions, however, with potential bias as described previously, the APS provides a more reliable estimate of actual disability prevalence for the time period.

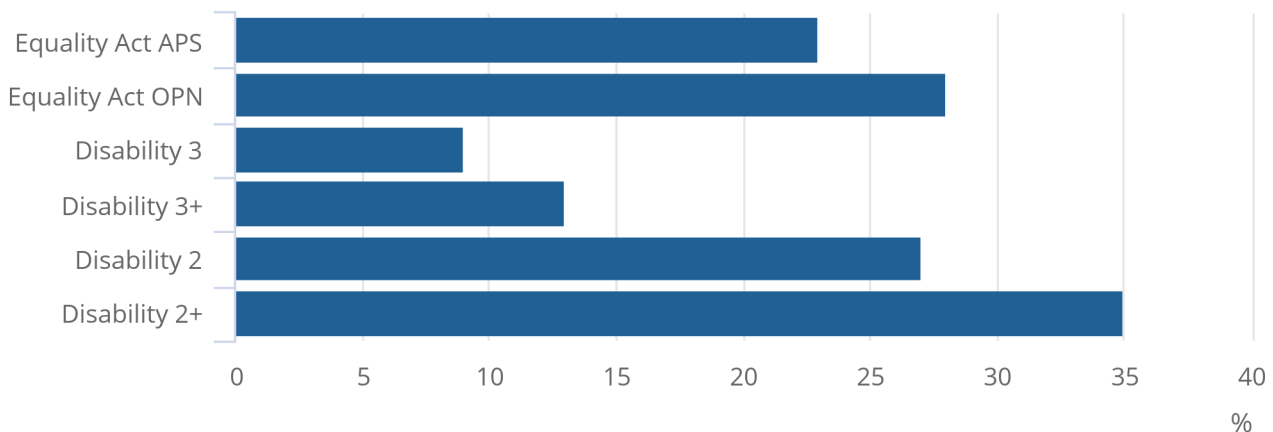
## 8 . Overall prevalence of disability

**Figure 2: The EADD prevalence of disability was three times the most common WGSS (Disability 3) measure used internationally**

Prevalence of disability according to different measures, Great Britain, 2018 to 2019

Figure 2: The EADD prevalence of disability was three times the most common WGSS (Disability 3) measure used internationally

Prevalence of disability according to different measures, Great Britain, 2018 to 2019



Source: Office for National Statistics – Annual Population Survey 2018 and Opinions and Lifestyle Survey January 2019

### Notes:

1. Disability 3 and Disability 3+ are the Washington Group recommended WGSS and WGES disability measures respectively.

The prevalence of disability according to the Equality Act disability definition (EADD) was 28% of the population. This is a slightly higher percentage than is usually found in Great Britain data, and may be affected by selection bias in the Opinions and Lifestyle Survey (OPN). The equivalent figure from the larger and more representative Annual Population Survey (APS) was 23%. However, the OPN results should still provide valid comparisons between different definitions.

The different Washington Group measures analysed gave disability prevalences ranging from 9% for Disability 3 of the Washington Group Short Set (WGSS) (19 percentage points less than the EADD based on the OPN) to 35% for Disability 2+ of the Washington Group Enhanced Short Set (WGES) (7 percentage points more than the EADD).

In relative terms, disability prevalence using the OPN EADD was around three times the prevalence based on Disability 3 and around twice the prevalence using Disability 3+, but approximately the same as Disability 2.

The proportion of individuals classed as disabled using the recommended Washington Group measures, even when including mental health (Disability 3+), was therefore much lower than using the EADD. The more inclusive WGES measures naturally gave higher figures than the WGSS. Only Disability 2+, which includes mental health as well as counting lower levels of severity, exceeded the EADD figure.

Table 1 in the accompanying dataset gives disability prevalence for each of the measures, along with the standard error and 95% confidence intervals, weighted and unweighted sample numbers. For completeness, the dataset contains analysis of WGSS measures Disability 1 and Disability 4 that have not been presented in this article.



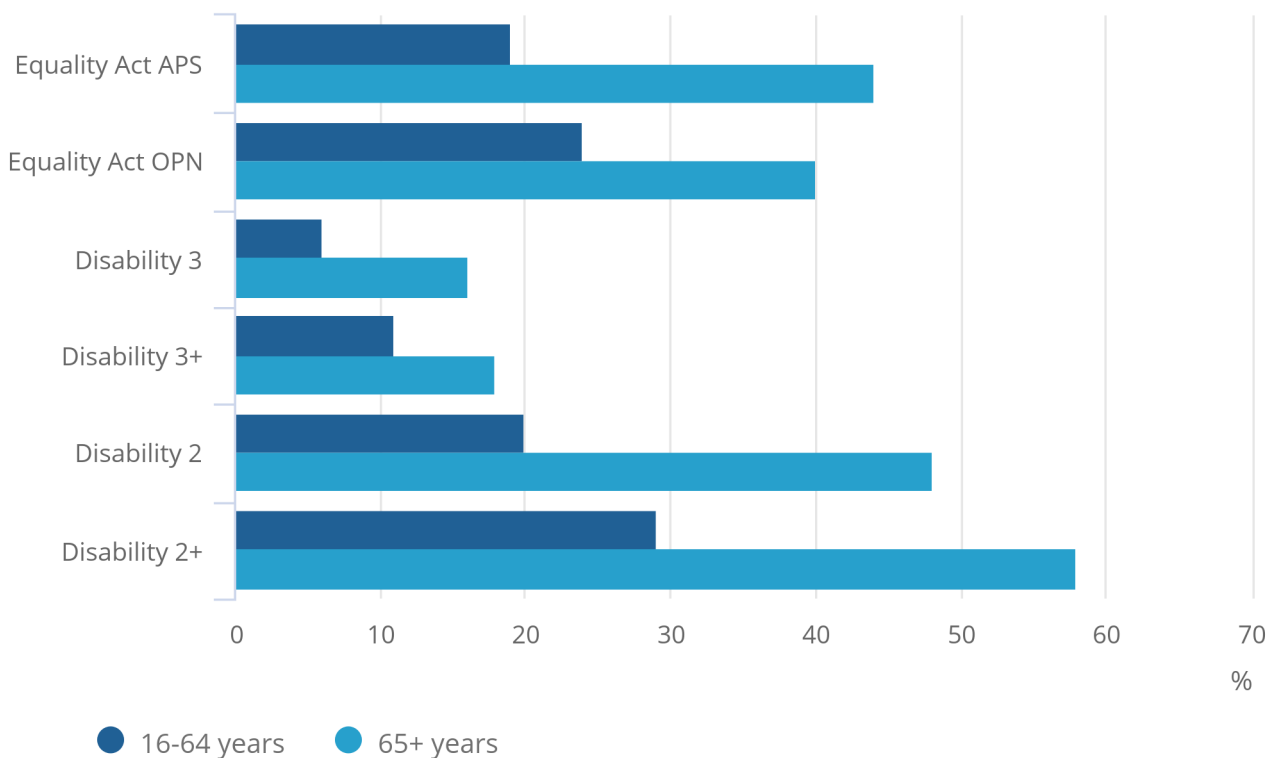
## 9 . Disability prevalence by age

**Figure 3: The prevalence of disability in older people (65 years and over) was much higher than in younger people using all measures**

Prevalence of disability according to different measures, by broad age group, Great Britain, 2018 to 2019

Figure 3: The prevalence of disability in older people (65 years and over) was much higher than in younger people using all measures

Prevalence of disability according to different measures, by broad age group, Great Britain, 2018 to 2019



Source: Office for National Statistics – Annual Population Survey 2018 and Opinions and Lifestyle Survey January 2019

Notes:

1. Disability 3 and Disability 3+ are the Washington Group recommended WGSS and WGES disability measures respectively.

The sample was divided into two broad age groups, 16 to 64 years and 65 years and over. The older age group showed a higher disability prevalence for all measures. For the Equality Act disability definition (EADD) based on the Opinions and Lifestyle Survey (OPN), 24% of younger people and 40% of older people were counted as disabled, a difference of 16 percentage points between the two age groups. The age difference was greatest when using the measures reflecting lower severity of disability.

The smallest age difference using the Washington Group measures was 7 percentage points for Disability 3+ and the largest was 29 percentage points for Disability 2+, where prevalence in the older group was twice the younger group. Thus, the absolute difference between age groups increased as the severity of the disability included reduced.

Comparing the EADD and Washington Group measures for the two age groups separately, for the younger age group, the absolute difference between the EADD prevalence and Disability 3 was 18 percentage points, and for Disability 3+, 13 percentage points. In relative terms, the EADD prevalence for the younger group was around four times Disability 3, and twice Disability 3+.

For the older age group, the absolute difference between the EADD prevalence and Disability 3 was 24 percentage points, and for Disability 3+, 22 percentage points. In relative terms, the EADD prevalence was around two-and-a-half times the Disability 3 prevalence and twice Disability 3+. Therefore, the relative difference between the EADD and Washington Group measures was much greater for younger people using the Washington Group narrower measure than for either young people using the broader measure, or older people based on either measure.

Table 2 in the accompanying dataset gives disability prevalence for each of the measures divided by broad age group, along with the standard error and 95% confidence intervals, weighted and unweighted sample numbers.

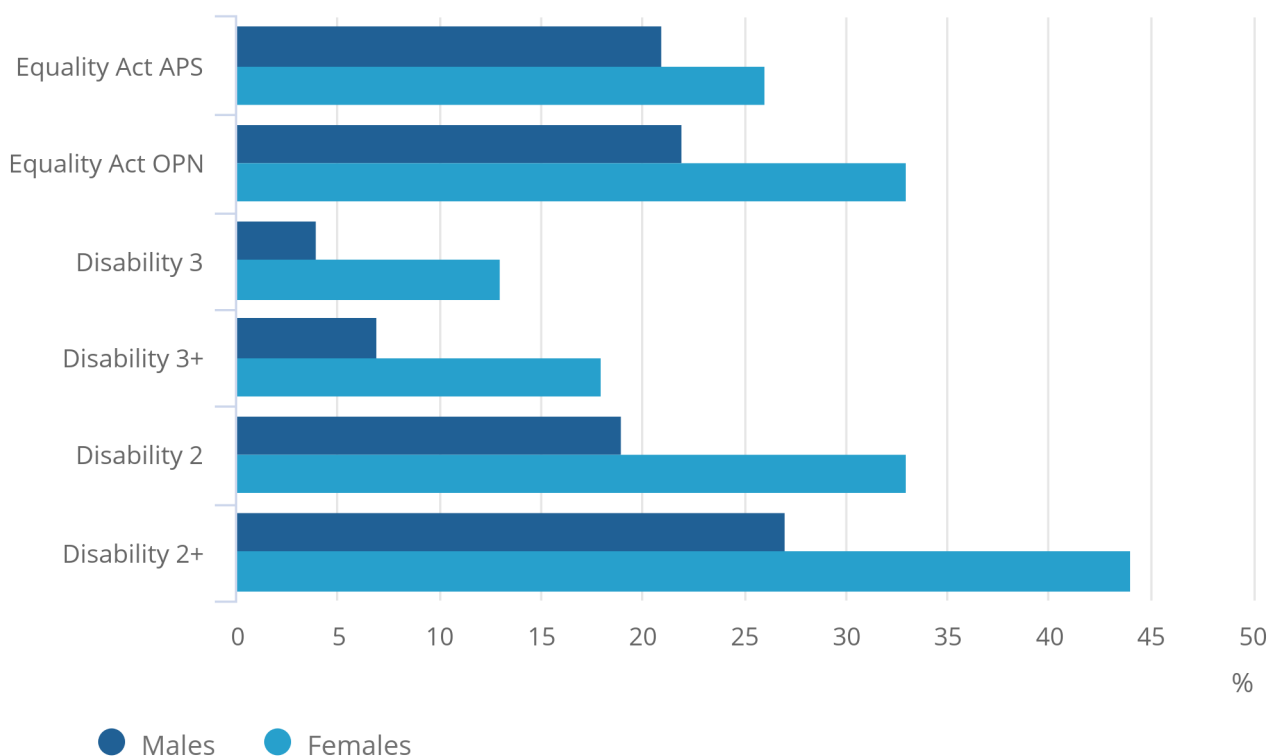
## 10 . Disability prevalence by sex

**Figure 4: The prevalence of disability was greater in women than in men using all measures**

Prevalence of disability according to different measures, by sex, Great Britain, 2018 to 2019

Figure 4: The prevalence of disability was greater in women than in men using all measures

Prevalence of disability according to different measures, by sex, Great Britain, 2018 to 2019



Source: Office for National Statistics – Annual Population Survey 2018 and Opinions and Lifestyle Survey January 2019

**Notes:**

1. Disability 3 and Disability 3+ are the Washington Group recommended WGSS and WGES disability measures respectively.

The relative difference between sexes was greater with all the Washington Group measures than with the EADD. For the Equality Act disability definition (EADD) based on the Opinions and Lifestyle Survey (OPN), 22% of men and 33% of women were counted as disabled, a difference of 11 percentage points. The difference between the sexes was narrower using the Annual Population Survey (APS) at only 5 percentage points. The figures for men were similar in the two surveys but those for women were higher in the OPN – the reason for this is unclear and may reflect an unquantified sampling bias or random variation in the fairly small OPN sample.

The smallest sex difference using the Washington Group measures was 9 percentage points for Disability 3 and the largest was 17 percentage points for Disability 2+. For both Disability 3 and 3+, the disability prevalence in women was more than twice that in men, a much greater sex difference than found with the EADD.

Comparing the EADD and Washington Group measures separately by sex, for men the absolute difference between the EADD prevalence and Disability 3 was 18 percentage points, and for Disability 3+, 15 percentage points. In relative terms, the EADD prevalence for men was five-and-a-half times the prevalence based on Disability 3, and around three times Disability 3+.

For women, the absolute difference between the EADD prevalence and Disability 3 was 20 percentage points, and for Disability 3+, 15 percentage points. In relative terms, the EADD prevalence for women was two-and-a-half times Disability 3, and nearly twice Disability 3+. Therefore, the relative difference between the EADD and Washington Group measures was somewhat smaller for women than for men. However, Disability 2 gave very similar prevalence to the EADD for both sexes.

Table 3 in the accompanying dataset gives disability prevalence for each of the measures divided by sex, along with the standard error and 95% confidence intervals, weighted and unweighted sample numbers.

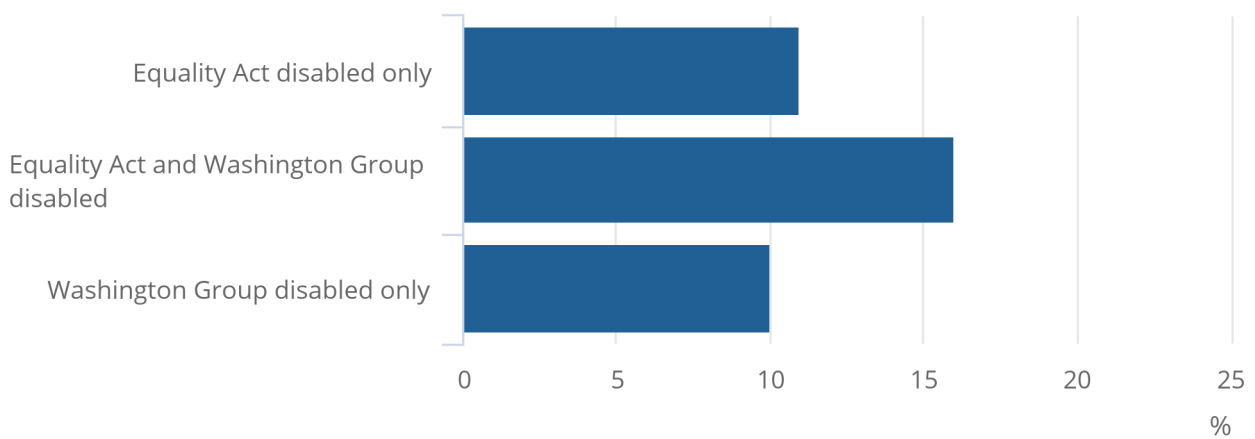
# 11 . Consistency in disability classification between the EADD and Washington Group measures

Figure 5a: Individuals classed as disabled by both the EADD and Disability 2 (WGSS) makes up less than half of the total number classed as disabled

Consistency in assigning disability between the Equality Act Disability Definition and selected Washington Group measures, Disability 2, Great Britain, 2019

Figure 5a: Individuals classed as disabled by both the EADD and Disability 2 (WGSS) makes up less than half of the total number classed as disabled

Consistency in assigning disability between the Equality Act Disability Definition and selected Washington Group measures, Disability 2, Great Britain, 2019



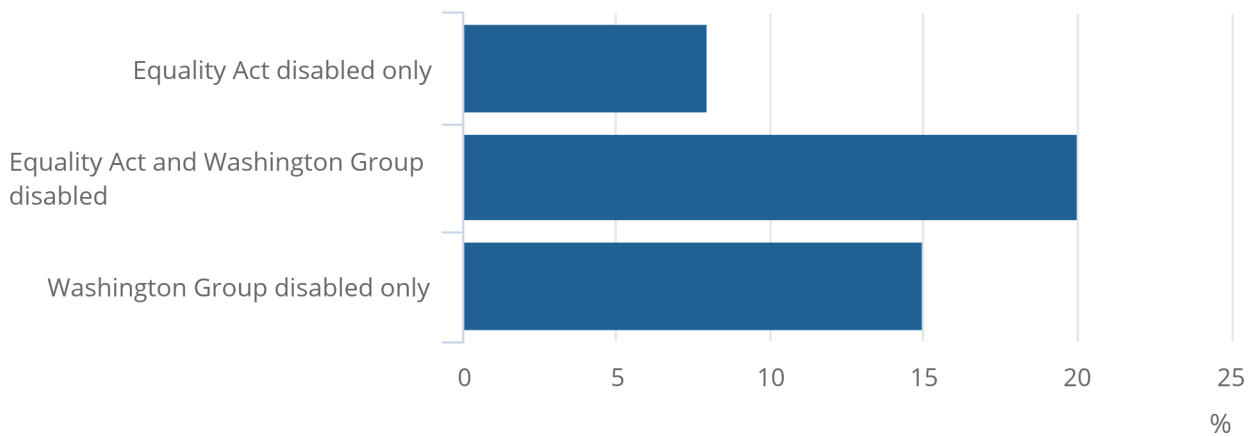
Source: Office for National Statistics –Opinions and Lifestyle Survey January 2019

**Figure 5b: Individuals classed as disabled by both the EADD and Disability 2+ (WGES) make up less than half of the total number classed as disabled overall**

Consistency in assigning disability between the Equality Act Disability Definition and selected Washington Group measures, Disability 2+, Great Britain, 2019

Figure 5b: Individuals classed as disabled by both the EADD and Disability 2+ (WGES) make up less than half of the total number classed as disabled overall

Consistency in assigning disability between the Equality Act Disability Definition and selected Washington Group measures, Disability 2+, Great Britain, 2019



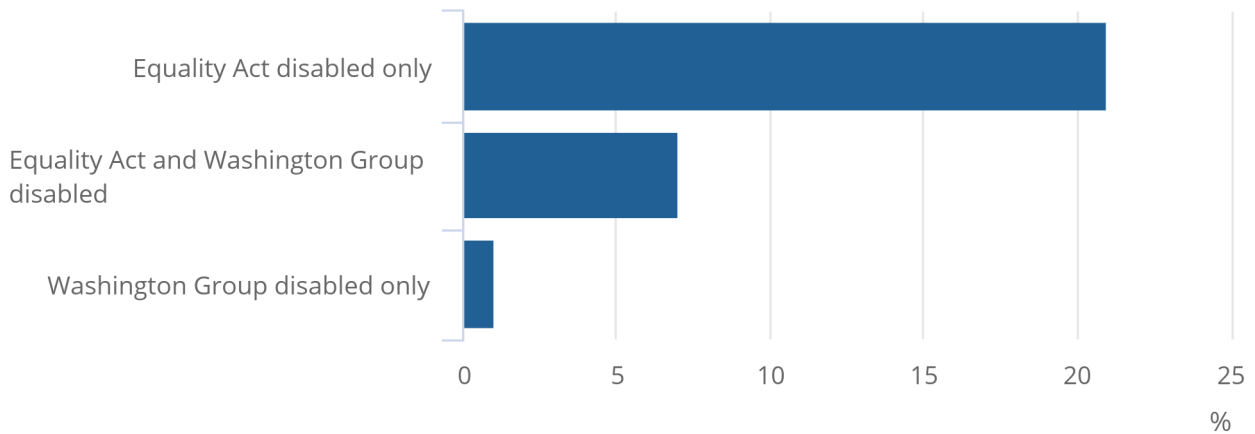
Source: Office for National Statistics – Opinions and Lifestyle Survey January 2019

**Figure 5c: Individuals classed as disabled by both the EADD and Disability 3 (WGSS) make up only a quarter of the total number classed as disabled overall**

Consistency in assigning disability between the Equality Act Disability Definition and selected Washington Group measures, Disability 3+, Great Britain, 2019

Figure 5c: Individuals classed as disabled by both the EADD and Disability 3 (WGSS) make up only a quarter of the total number classed as disabled overall

Consistency in assigning disability between the Equality Act Disability Definition and selected Washington Group measures, Disability 3+, Great Britain, 2019



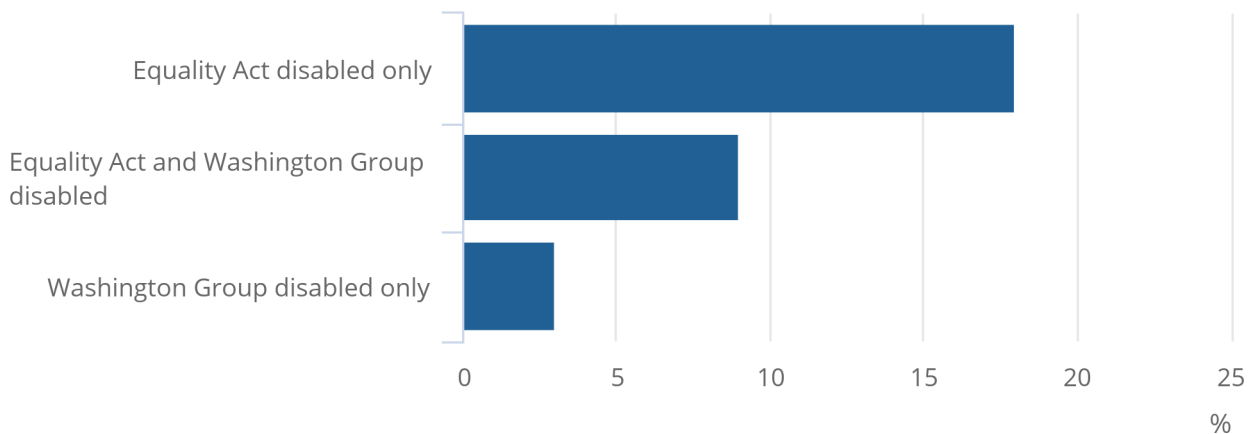
Source: Office for National Statistics – Opinions and Lifestyle Survey January 2019

**Figure 5d: Individuals classed as disabled by both the EADD and Disability 3+ (WGES) make up around a third of the total number classed as disabled overall**

Consistency in assigning disability between the Equality Act Disability Definition and selected Washington Group measures, Disability 3+, Great Britain, 2019

Figure 5d: Individuals classed as disabled by both the EADD and Disability 3+ (WGES) make up around a third of the total number classed as disabled overall

Consistency in assigning disability between the Equality Act Disability Definition and selected Washington Group measures, Disability 3+, Great Britain, 2019



Source: Office for National Statistics – Opinions and Lifestyle Survey January 2019

Because of the differences between the Equality Act disability definition (EADD) and the Washington Group questions, an individual could be classed as disabled according to the EADD only, any selected Washington Group definition only, or both EADD and Washington Group. These overlaps are illustrated in Figures 5a, 5b, 5c and 5d for Disability 2, Disability 2+, Disability 3 and Disability 3+ respectively. On the horizontal axis, 100% represents the total individuals in the sample. The two approaches classed substantially different groups of people as disabled.

The comparison between the EADD and Disability 2 showed more individuals classed as disabled by both measures together, at 16%, than by either separately. However, the numbers classed as disabled by one or other measure alone exceeded the “overlap” number by 5 percentage points, at 21%. For Disability 2+ the overlap was higher at 20%, while the non-overlapping cases exceeded the overlap by 3 percentage points. The numbers classed as disabled by the two measures separately were similar for Disability 2, and for Disability 2+ the number classed by the Washington Group Enhanced Short Set (WGES) was almost twice the EADD number.

For Disability 3 and Disability 3+ the overlap was much smaller, with the non-overlapping cases exceeding the overlapping ones by 15 and 12 percentage points respectively. For both of these measures, the numbers classed as disabled by the EADD greatly exceeded the Washington Group Short Set (WGSS) or WGES numbers. The biggest difference was for Disability 3, where the EADD-only cases exceeded the Washington Group-only cases by 20 percentage points.

Table 4 in the accompanying dataset compares the percentages and weighted numbers disabled and not disabled according to the EADD and each of the Washington Group measures calculated.



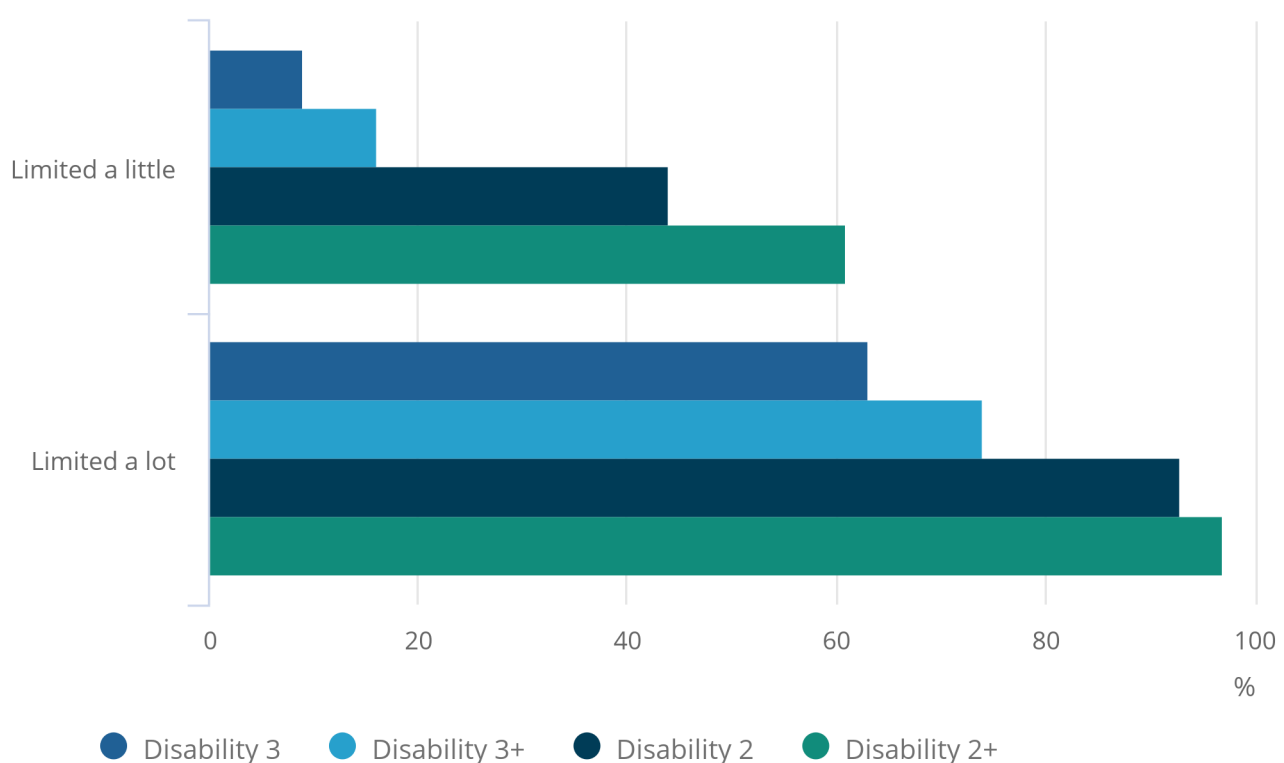
## 12 . Respondents who were EADD and Washington Group disabled: level of EADD limitation

**Figure 6: Respondents who reported a higher severity of limitation under the EADD were much more likely to be disabled according to one or more Washington Group measures**

Level of limitation measured by the EADD who were both EADD and Washington Group disabled, Great Britain, 2019

Figure 6: Respondents who reported a higher severity of limitation under the EADD were much more likely to be disabled according to one or more Washington Group measures

Level of limitation measured by the EADD who were both EADD and Washington Group disabled, Great Britain, 2019



Source: Office for National Statistics – Opinions and Lifestyle Survey January 2019

The difference between the measures can be explored further by analysing the level of limitation recorded for Equality Act disability definition (EADD) disabled. Respondents who were EADD disabled were more likely to be disabled under the Washington Group measures if they said they were limited “a lot” (in their daily activities) than if they were only limited “a little”.

For Disability 3 and Disability 3+ the percentage point difference is particularly wide between the severity levels at 54 and 58 respectively, explained perhaps by the level of limitation required to be disabled under these measures being “a lot of difficulty”. The gap is smaller for Disability 2 and Disability 2+ at 49 and 36 percentage points respectively. This would be expected with the lower level of difficulty required to count as disabled under these measures.



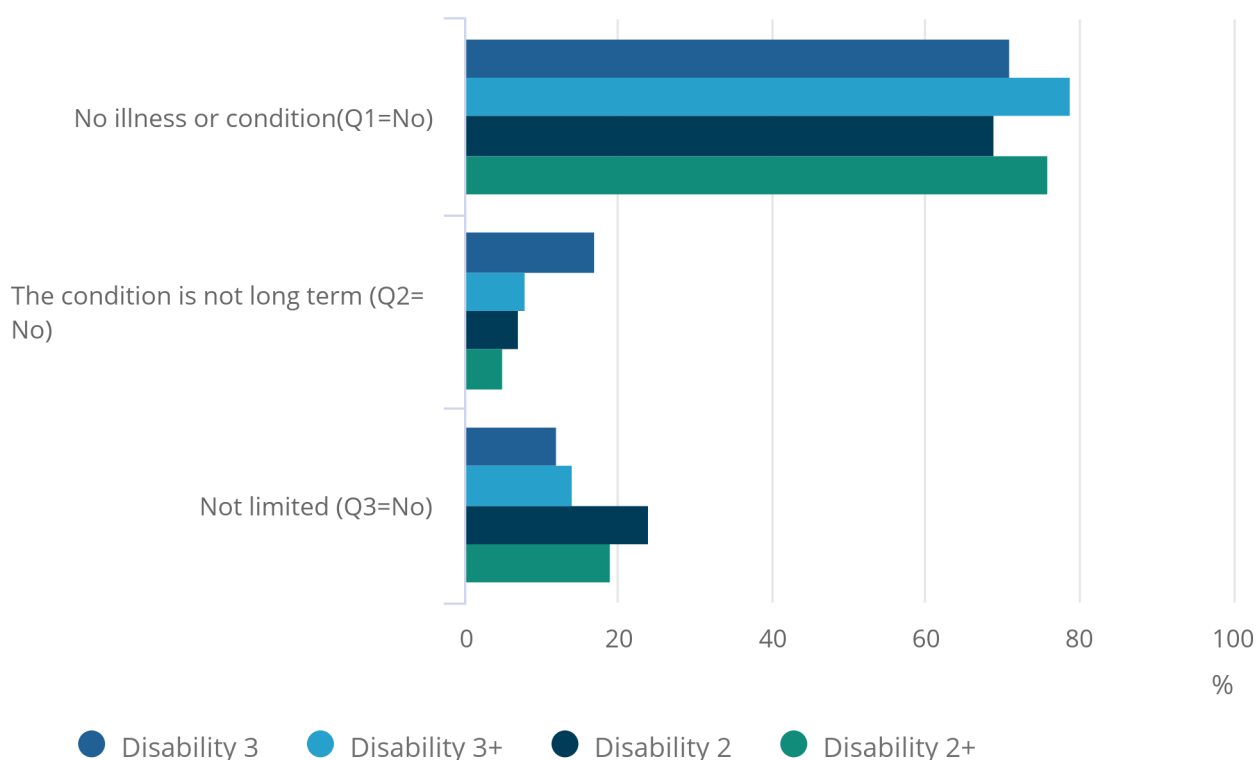
# 13 . Respondents who were Washington Group but not EADD-disabled

**Figure 7: Most of those who were disabled according to the Washington Group measures but not the EADD had not reported any health condition**

Reasons why individuals disabled using selected Washington Group measures were not disabled using the EADD, Great Britain, 2019

Figure 7: Most of those who were disabled according to the Washington Group measures but not the EADD had not reported any health condition

Reasons why individuals disabled using selected Washington Group measures were not disabled using the EADD, Great Britain, 2019



Source: Office for National Statistics – Opinions and Lifestyle Survey January 2019

A relatively small number of individuals were counted as disabled according to a Washington Group measure but not the Equality Act disability definition (EADD). Figure 7 shows a breakdown of those cases by stage of the EADD question. On the axis, 100% equals all cases disabled based on the Washington Group measure but not the EADD.

For both Disability 3 and Disability 3+, some three-quarters of these respondents did not say they had a physical or mental health condition in the first part of the EADD question, despite answering at least one Washington Group limitation question positively. They were therefore excluded (filtered out) at the first stage of the EADD questions. The relevant proportion was similar for Disability 2 and Disability 2+.

Table 5 in the accompanying dataset contains more detailed information on the comparison between respondents classed as disabled according to the EADD and selected Washington Group measures, covering for persons disabled using Washington Group but not EADD, the stage of exclusion from the EADD definition; and for persons disabled using both Washington Group and EADD, the level of EADD limitation.

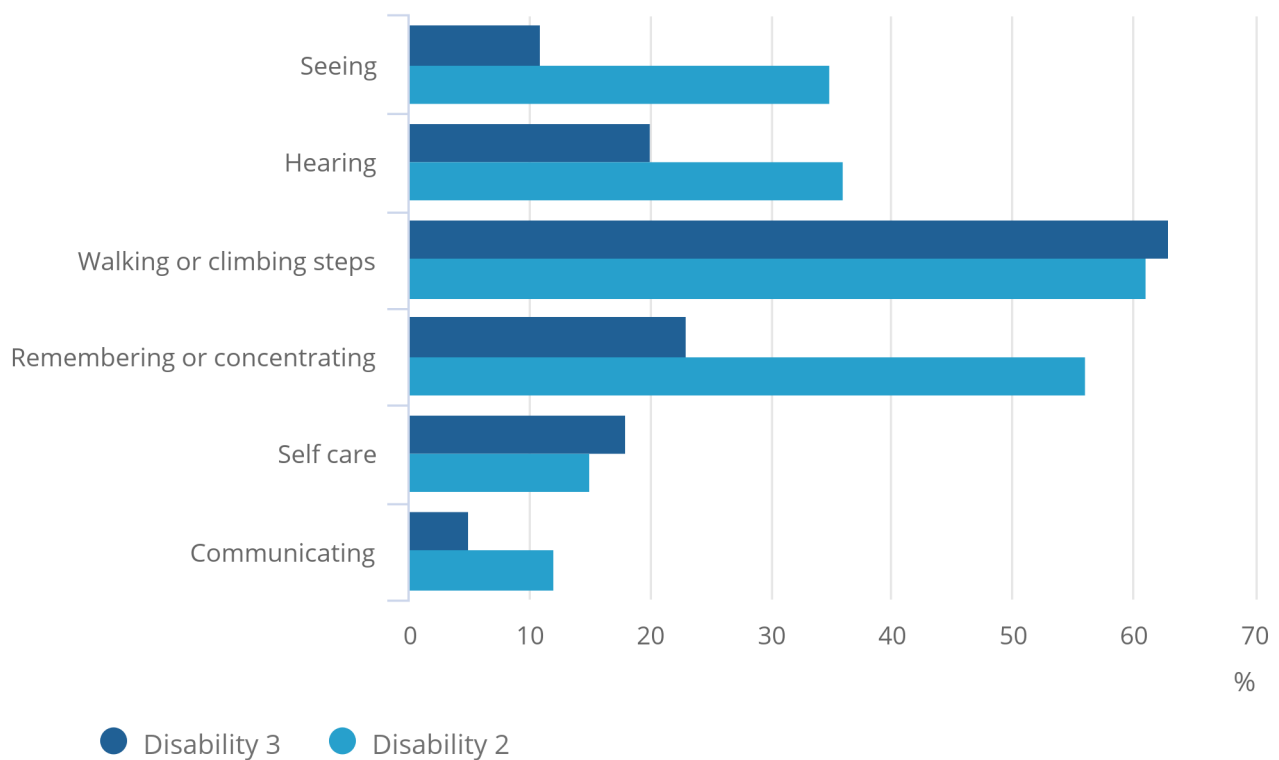
# 14 . Types of limitation reported in the Washington Group questions

Figure 8a: The most common functional limitations covered by the WGSS were walking or climbing steps, and remembering or concentrating

Type of functional limitation reported in the WGSS question set, Great Britain, 2019

Figure 8a: The most common functional limitations covered by the WGSS were walking or climbing steps, and remembering or concentrating

Type of functional limitation reported in the WGSS question set, Great Britain, 2019



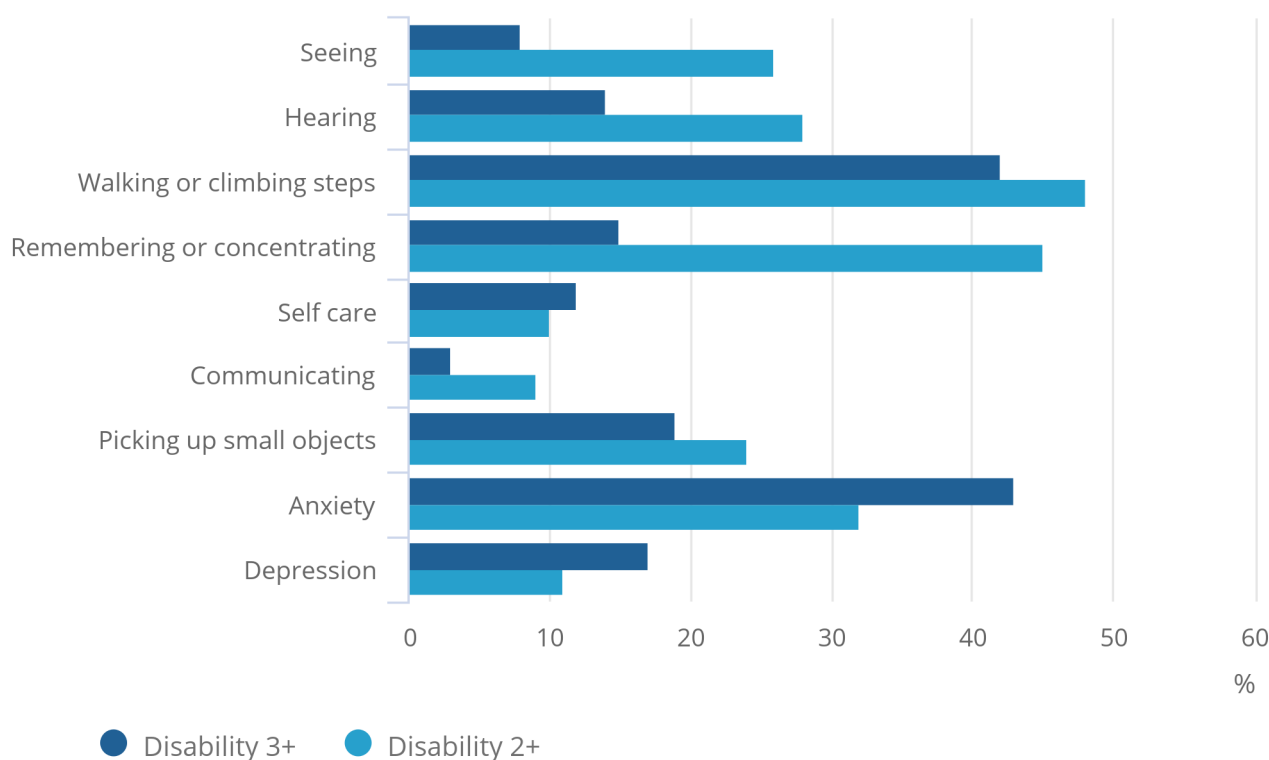
Source: Office for National Statistics – Opinions and Lifestyle Survey January 2019

**Figure 8b: The most common functional limitations covered by the WGES were walking or climbing steps, and remembering or concentrating**

Type of functional limitation reported in the WGES question set, ,Great Britain, 2019

Figure 8b: The most common functional limitations covered by the WGES were walking or climbing steps, and remembering or concentrating

Type of functional limitation reported in the WGES question set, ,Great Britain, 2019



Source: Office for National Statistics – Opinions and Lifestyle Survey January 2019

Figures 8a and 8b show, for each limitation covered by the Washington Group Short Set (WGSS) and wider Washington Group Enhanced Short Set (WGES) question sets, the percentage of individuals disabled according to the relevant definition who reported that limitation (whatever the severity). Respondents who reported limitation under more than one category are counted multiple times. It should be noted that the level of difficulty required for individual functions to be included under a particular Washington Group measure varies, with Disability 3 or Disability 3+ requiring at least “a lot of difficulty” whereas Disability 2 and Disability 2+ allow “some difficulty”.

The most common limitation was in walking or climbing steps, which was reported by 61% of those disabled according to the Disability 2 definition and 63% of those under Disability 3 of the WGSS. These proportions fell to 48% and 42% respectively when taking into account the wider coverage of Disability 2+ and Disability 3+ based on the WGES.

Difficulty remembering or concentrating was the next most common limitation among those disabled according to Disability 2 and Disability 2+, but was much less common in those covered by Disability 3 and Disability 3+. This may reflect the greater age difference in prevalence of disability when using the latter measures.

Of the conditions added by the WGES, anxiety was clearly the most common, and at 43% was as common among those covered by Disability 3+ as limitation in walking or climbing steps.

The distribution by Washington Group limitation of those respondents who were disabled using both the Equality Act disability definition (EADD) and one or more Washington Group measures can be calculated, but cannot be taken as representative of those who were disabled according to the EADD as a whole, or using the EADD only. Different Great Britain surveys contain varying lists of health conditions, impairments and functional limitations, which cannot be readily compared with the Washington Group questions.

Table 6 in the accompanying dataset gives the percentages and weighted numbers reporting each functional limitation for each of the Washington Group measures calculated.

## 15 . Discussion of the results

We found that the prevalence of disability based on the Washington Group Short Set (WGSS) measure Disability 3, which is the most commonly used version internationally, was only about a third of the prevalence according to the Equality Act disability definition (EADD).

The difference can be attributed partly to the exclusion of mental health issues from the WGSS, and partly to the higher severity threshold for inclusion in the Disability 3 measure. Only 1% of respondents who were defined as disabled using either Disability 3 or EADD were counted only in the former, so Disability 3 can be considered as effectively a subset of the EADD-disabled population.

Disability 3 is not a suitable measure for official disability statistics in Great Britain, because of its narrow scope relative to the requirements for monitoring under the Equalities Act. At the same time, it is important to recognise that the narrowly-defined scope of Disability 3 has benefits for international comparison. The list of specific physical limitations reduces the scope for subjectivity, while it can be argued that the exclusion of mental health increases comparability across cultures and languages.

For purposes of international comparison, it might be possible to create estimates of Disability 3 prevalence for Great Britain from EADD data. However, further testing would be needed to establish whether the “Disability 3 proportion” within the EADD population is consistent, and to clarify proportions by age and sex. The relative similarity of the EADD to the corresponding global activity limitation indicator (GALI) question in European surveys means that cross-European comparisons are already possible.

The Washington Group measure that gives disability prevalence most similar to the EADD is Disability 2 of the WGSS, while the highest prevalence is given by what we termed Disability 2+ of the Washington Group Enhanced Short Set (WGES). Although Disability 2 is more similar to the EADD in the included severity level, it lacks a wider range of limitations such as those relating to mental health, in the same way as Disability 3. As a result, the apparent comparability in prevalence is illusory: less than half of those classed as disabled by the EADD and Disability 2 are the same people. The measure is therefore probably more confusing than useful in the Great Britain context.

Finally, Disability 2+ based on the WGES gives a disability prevalence somewhat higher than the EADD, due to it including the wider range of limitations as well as having a lower threshold of severity than Disability 3 or Disability 3+. This is the closest Washington Group measure conceptually to the EADD. However, as with Disability 2, less than half of those classed as disabled by the EADD and Disability 2+ are the same people. Use of Disability 2+ to estimate disability prevalence is therefore similarly problematic in the Great Britain context. Its comparative value would also be limited as this is not a widely used measure internationally.

We can infer that the excess prevalence with Disability 2+ compared with the EADD is due mainly to individuals who responded positively to one (or more) of the Washington Group limitation questions, but did not consider themselves to have a health condition. At the same time, a substantial number of respondents must be included in the EADD prevalence because of a functional limitation that is not covered even by Disability 2+.

While we cannot explain this from the current study, the [Life Opportunities Survey](#), which ran from 2009 to 2014 – the most in-depth UK study on disability – found relatively large numbers of people limited by pain, fatigue or breathing problems, which are not among the WGES questions.

Since the EADD does not rely on mentioning any specific area of limitation, and has a relatively low threshold of severity, it is not surprising that individuals who are disabled according to the EADD are often not counted as disabled using one or more of the Washington Group measures. Conversely, people who are disabled according to a Washington Group measure might not consider their health condition to be long-term, might be prompted more effectively to include themselves by the specific list of functional limitations, or could have responded differently to the larger set of severity categories.

There could be some benefit in including the WGES in one or more Great Britain surveys in addition to the EADD, to provide greater detail of disability severity and area of limitation. However, this is unlikely to be achieved because in practical terms it would have to replace the existing detailed lists of health conditions or limitations. These reflect specific policy and administrative needs and users value their long-term continuity. Adding additional questions could impact on survey response, increase costs, and would have potential influence on reporting behaviour for the existing questions, which could affect comparability over time. In addition, our results suggest that the WGSS and WGES questions have insufficient coverage of common areas of limitation reported in the Great Britain population.



Pain and fatigue are included in the much larger [Washington Group Extended Set](#) of questions (WGEExS). This might make the coverage of the WGEExS more similar to the EADD, but based on our current study, no such assumption should be made. Because of its length, the WGEExS is likely to be feasible only in specialist surveys on health or disability; it is not seen as a general tool to investigate disability prevalence in a wider context.

In conclusion, the different approaches taken by the EADD and the Washington Group question sets result in the identification of substantially different (though overlapping) groups as disabled, and a range of different estimates of disability prevalence. Neither approach is inherently better than the other. There is a case for the usefulness of Disability 3 in particular for international comparisons in the context of the Sustainable Development Goals (SDGs). However, the EADD is essential to meet the needs of government policy and equalities monitoring and is therefore the priority for Great Britain official statistics.

## 16 . More information on survey methods

### About the survey

The Office for National Statistics (ONS) Opinions and Lifestyle Survey (OPN), previously known as the Omnibus Survey, is a small cross-sectional, telephone interview survey run monthly for eight months of the year. The survey covers Great Britain only, is asked of respondents aged 16 years and over and is a personal survey, that is, no proxy responses are allowed. Further information can be found in the [Quality and Methodology Information](#) report.

The OPN is comprised of modules of questions covering various topics such as housing, employment and smoking. It also includes the three questions necessary for creating a measure of disability aligned to the Equality Act disability definition (EADD).

The sampling frame for OPN 2019 was made up of Labour Force Survey (LFS) households from January 2017 and January 2019 who had agreed to be re-contacted. As the sample is those who agreed to be re-contacted, people with certain characteristics are more likely to appear in the sampling frame. This is likely to include those who have more time to take part in interviews, such as older people and people who are not employed.

During January 2019, a module of 12 questions that make up the Washington Group Enhanced Short Set (WGES) questions was added to the OPN. Prior to the interview period, the questions underwent testing with a sample of telephone interviews to ensure that the questions worked effectively in the field. Any issues that were picked up during testing were resolved by improvements to the guidance in the instruction pack sent out to the interviewers before the interview period.

The EADD and WGES questions were asked of the same respondents in different modules of the survey. As standard, the EADD questions were asked in the initial section of the questionnaire, then a module of questions on internet access was asked, with the WGES questions being the third module of the questionnaire. This allows comparison of the different measures of disability to be made at an individual level but minimising the interaction of the two measures within the body of the questionnaire. It was not possible to randomly allocate which set of disability questions was asked first.

### Acceptability of the questions

A questionnaire was given to interviewers after the data collection period on various aspects of the OPN survey, including one question about the Washington Group questions:

“How easy was it for respondents to answer the long set of questions on disability that was trialled in January 2019?”

Of the 24 interviewers who completed the questionnaire, the majority (58%) reported that respondents had found the questions either “easy” or “very easy” to answer. Only 4% (one interviewer) thought the respondents found the questions hard to answer.

## **Selection bias in the OPN**

Due to the way the OPN sample is chosen, a self-selection bias exists. This can be seen from the make-up of the responding sample, where a large proportion are 65 years or older – 45% of the sample compared with 28% for the Annual Population Survey (APS) 2018 sample (Great Britain, ages 16 years and over only).

To control for this apparent bias, non-response factors are applied to the weights to account for differential consent rates for participation in follow-up surveys, and calibration controls based on APS estimates of housing tenure, National Statistics Socio-economic Classification, economic activity and smoking are added to the usual age, sex and region controls.

Although age is used in calibration of the weights, the weights do not specifically account for disability. With the older population having higher proportions of disabled people we are likely to get more disabled people in our sample. This is unlikely to affect the comparisons between the different types of measures within this article, but the disability prevalence figures based on the OPN should not be assumed to be representative of the Great Britain population as a whole.