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Data Resource Profile: The Disability Statistics Questionnaire Review Database (DS-QR Database): A Database of Population Censuses and Household Surveys with Internationally Comparable Disability Questions

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Abstract

Introduction

The 2030 Sustainable Development Agenda and the United Nations Convention on the Rights of Persons with Disabilities (CRPD) aspire to leave no one behind and call for the inclusion of persons with disabilities in all spheres of life. To monitor this goal of inclusion, CRPD's Article 31 requires state parties to collect data about the situation of persons with disabilities. The Disability Statistics – Questionnaire Review Database (DS-QR Database) reports on whether population and housing censuses and household surveys include internationally recommended disability questions for adults ages 15 and older.

Methods

The Disability Data Initiative (DDI), an international consortium of researchers, regularly retrieves and analyses a list of surveys and censuses from international catalogs, libraries and websites of national statistics offices. Questionnaires are reviewed to identify if they include internationally recommended questions on functional difficulties (e.g. difficulty seeing), more specifically (i) the Washington Group Short Set (WG-SS) or (ii) questions that meet at least the United Nations 2017 guidelines for disability measurement in censuses (other functional difficulty questions thereafter).

Results

The DS-QR Database includes the review results for the questionnaires of 3027 population censuses and surveys from 199 countries and territories collected from 2009 to 2023. The review has information on whether each dataset has the WG-SS or other functional difficulty questions and overall results per country, region, type of dataset and over time.

Conclusion

By identifying countries that collect internationally comparable disability data, the DS-QR Database can help researchers, policymakers and advocates determine whether countries fulfill their obligations as per CRPD Article 31. It can also assist in identifying which datasets use functional difficulty questions and can be used to research and monitor disability rights over time and across countries. The DS-QR Database is in a Supplementary file and will be accessible on a website upon publication of this article.

Keywords

Disability; human rights; household surveys; population and housing censuses; functional difficulties

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Key Features

What is unique about the dataset

The Disability Statistics – Questionnaire Review Database (DS-QR Database) reports on whether national population and housing censuses and household surveys around the world have internationally comparable disability questions.

Why the dataset was created

National population and housing censuses and household surveys are primary datasets for official statistics. The DS-QR Database was created to document if such datasets collect disability data in an internationally comparable way. This is important to monitor the 2030 Sustainable Development Agenda's goal of leaving no one behind and the United Nations Convention on the Rights of Persons with Disabilities across and within countries.

Details about the dataset: location, size, composition of the population

At the time of publishing, the DS-QR Database includes the review results for the questionnaires of 3027 population censuses and surveys from 199 countries and territories collected between 2009 and 2023. Results are downloadable in a tabular format.

Description of any data linkage

Not applicable

Main categories of data

The DS-QR Database results are available globally, disaggregated by the World Bank world regions and countries as well as by type of dataset.

How to collaborate and access the dataset

The DS-QR Database is accessible at the following link: https://www.ds-qr.disabilitydatainitiative.org/

Introduction

In the 2030 Agenda for Sustainable Development and the United Nations (UN) Convention on the Rights of Persons with Disabilities (CRPD), data is required to monitor the rights of persons with disabilities. The need for disability disaggregated data comes under Target 17.18 of the Sustainable Development Goals (SDGs) and is mandated under Article 31 of the CRPD, ratified by 191 countries as of October 2024. Article 31 of the CRPD requires that State Parties "collect appropriate information, including statistical and research data, to enable them to formulate and implement policies to give effect to the present Convention"[1]. Under Article 31 of the CRPD, the purpose of collecting data is to identify persons who are at risk of not having their rights upheld under the CRPD, in other words, to identify persons who disproportionately experience various forms of deprivations (e.g. poverty). Such identification and the disaggregation of human rights outcome indicators by disability status can guide policy under the CRPD. For instance, if youth with disabilities are more likely to be idle (not in school and not working), then barriers to education and jobs may need to be addressed through policy changes to guarantee that youth with disabilities are included.

National population and housing censuses (population censuses thereafter) and household surveys are primary data sources for official statistics and population data. Population censuses provide essential information on demographic and socioeconomic changes in a country, typically every decade. Household surveys may have varying objectives and can collect data on multiple topics, such as education, employment, health, or living standards, amongst others. Reviewing if and what disability-related questions are included in population censuses and household surveys helps assess if persons with disabilities, especially those with functional difficulties, are represented in official statistics within and across countries and if a country collects disability data as per CRPD's article 31.

The Disability Statistics - Questionnaire Review (DS-QR) Database was created to support monitoring the application of CRPD's Article 31. Broadly, the DS-QR Database is a comprehensive effort to monitor the availability of internationally comparable disability data in population and housing censuses (population censuses for short) and in household surveys. As of 2024, the DS-QR Database includes the results of the reviews of the questionnaires of 3,027 population censuses and household surveys from 199 countries and territories collected between 2009 and 2023. Thus, it broadens earlier efforts made by the investigators to review disability-related questions in specific types of household surveys [1–5]. The questionnaires were reviewed to identify questions on disability that reflect global good practice when collecting data on disability that is internationally comparable and that make it possible to disaggregate statistics by disability status. The DS-QR Database aims to identify datasets and countries that collect data on disability through national population censuses and household surveys that meet recent international good practice standards. This new database thus facilitates research and may inform policy and advocacy concerning disability data.

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[1] As per Article 31, "1. States Parties undertake to collect appropriate information, including statistical and research data, to enable them to formulate and implement policies to give effect to the present Convention. The process of collecting and maintaining this information shall: a) Comply with legally established safeguards, including legislation on data protection, to ensure confidentiality and respect for the privacy of persons with disabilities; b) Comply with internationally accepted norms to protect human rights and fundamental freedoms and ethical principles in the collection and use of statistics. 2. The information collected in accordance with this article shall be disaggregated, as appropriate, and used to help assess the implementation of States Parties' obligations under the present Convention and to identify and address the barriers faced by persons with disabilities in exercising their rights. 3. States Parties shall assume responsibility for the dissemination of these statistics and ensure their accessibility to persons with disabilities and others."

Methods

Disability measurement

Disability is complex and multifaceted, and there are various ways of collecting quantitative data on disability that may meet a variety of data needs. In fact, there is not a one-size-fits-all measure of disability that is appropriate for all data collection purposes [6]. Since the early 2000s, several internationally tested tools have been developed to facilitate disability data collection across countries. For example, the World Health Organization (WHO) has developed the Model Disability Survey (MDS) [7] and the WHO Disability Assessment Schedule 2.0 (WHODAS 2.0) [8]. These instruments provide different ways to assess disability, including activity limitations, participation restrictions and environmental barriers, providing a comprehensive picture of how disability impacts lives. However, in the case of MDS, the short questionnaire used 38 questions and WHODAS 2.0 is a tool that requires that interviewers have training to use it. Therefore, these tools are not suitable for collecting data in population censuses or general household surveys where only a few questions may be dedicated to disability.

To disaggregate human rights indicators based on disability status, a functional approach to disability can be used because questions on functional difficulties in core domains (e.g. walking) can be phrased straightforwardly and understood by respondents across contexts and can identify persons who are at risk of social exclusion and facing different deprivations. Indeed, under the aegis of the United Nations Statistical Commission, the Washington Group on Disability Statistics has developed and recommended several question sets to measure disability in population and housing censuses and household surveys, including the Washington Group Short Set of questions (WG-SS) focusing on six core functional domains: seeing, hearing, walking, cognition, self-care, and communication. The WG-SS uses a four-level answer scale (no difficulty, some difficulty, a lot of difficulty, or cannot do at all), which allows disaggregation via degree and type of disability. It does not use the term disability as it may be understood differently across cultures and could be stigmatised in some contexts [6].

The WG-SS has been tested and validated in several countries [9]. Nevertheless, it cannot satisfy all data needs. For instance, covering six domains, it does not capture all areas of functioning, particularly psychosocial and neurological functioning. However, it does provide a feasible way to collect disability data in population censuses and household surveys. Moreover, it enables monitoring of the SDGs and the CRPD with disability-disaggregated statistics. Appendix Table 1 includes the WG-SS questions.

The United Nations Principles and Recommendations for Population and Housing Censuses [10] (the UN (2017) guidelines thereafter) recommend the use of the WG-SS or at least functional difficulty questions in four core domains (seeing, hearing, walking, cognition) and, if possible, also in two more domains (self-care, communication) in censuses (referred here as 'other functional difficulty questions', thereafter). Other functional difficulty questions and their answers may be differently worded compared to the WG-SS, may have dichotomous (yes/no) answers (which does not allow disaggregation via the degree of disability), and may not have questions for the self-care and communication domains.

How many and which countries and datasets have the WG-SS or other functional difficulty questions remains unclear. Documenting which datasets have such questions can facilitate analysis towards understanding the achievements of policy goals by disability status, including global targets, such as Universal Health Coverage and the 2030 Agenda for Sustainable Development and Rehabilitation 2030. It also facilitates the monitoring of CRPD Article 31, which focuses on disability statistics and data. To fill this gap, the research team developed a consistent approach to identify relevant datasets, review the questionnaires and compile results.

Questionnaire review process

The questionnaire review was conducted annually including questionnaires from 2009 to 2023 and is expected to be regularly updated. The entire questionnaire review process is represented in Figure 1. It starts with the identification of a list of relevant datasets, followed by an examination of the questionnaire of each dataset. To identify the list of datasets for review, we first retrieved a list of population censuses and household surveys from 2009 to 2023 using the following sources: the International Household Survey (IHSN) Microdata Catalog, the World Bank Microdata Library, the International Labor Organization (ILO) Survey Catalog, the Food and Agriculture Microdata Catalogue, and the websites of individual National Statistical Offices (NSOs). Second, the list of datasets was curated using the following inclusion criteria: i) datasets needed to have the household or the individual as the unit of analysis and ii) datasets needed to cover adults ages 15 and older[2]. The dataset list includes national population censuses and surveys, including surveys from international programs, such as the Demographic and Health Survey (DHS), the Living Standards Measurement Study (LSMS), the Multiple Indicator Cluster Survey (MICS), the Survey of Income and Living Conditions (SILC), and Global FINDEX[3].

Third, the questionnaires of each dataset were downloaded from the selected catalogues and NSOs' websites. Some questionnaires were not available or were not in the languages used for the review (English, Spanish, French or Portuguese). Thus, some datasets could not be included in the dataset list for review.

Last, the examination of each dataset's questionnaire was conducted by a trained researcher and then checked by a second researcher when at least one disability question was found. The questionnaire of each dataset was searched for functional difficulty questions that meet international standards (WG-SS or other functional difficulties). The search also looked for other types of disability questions:

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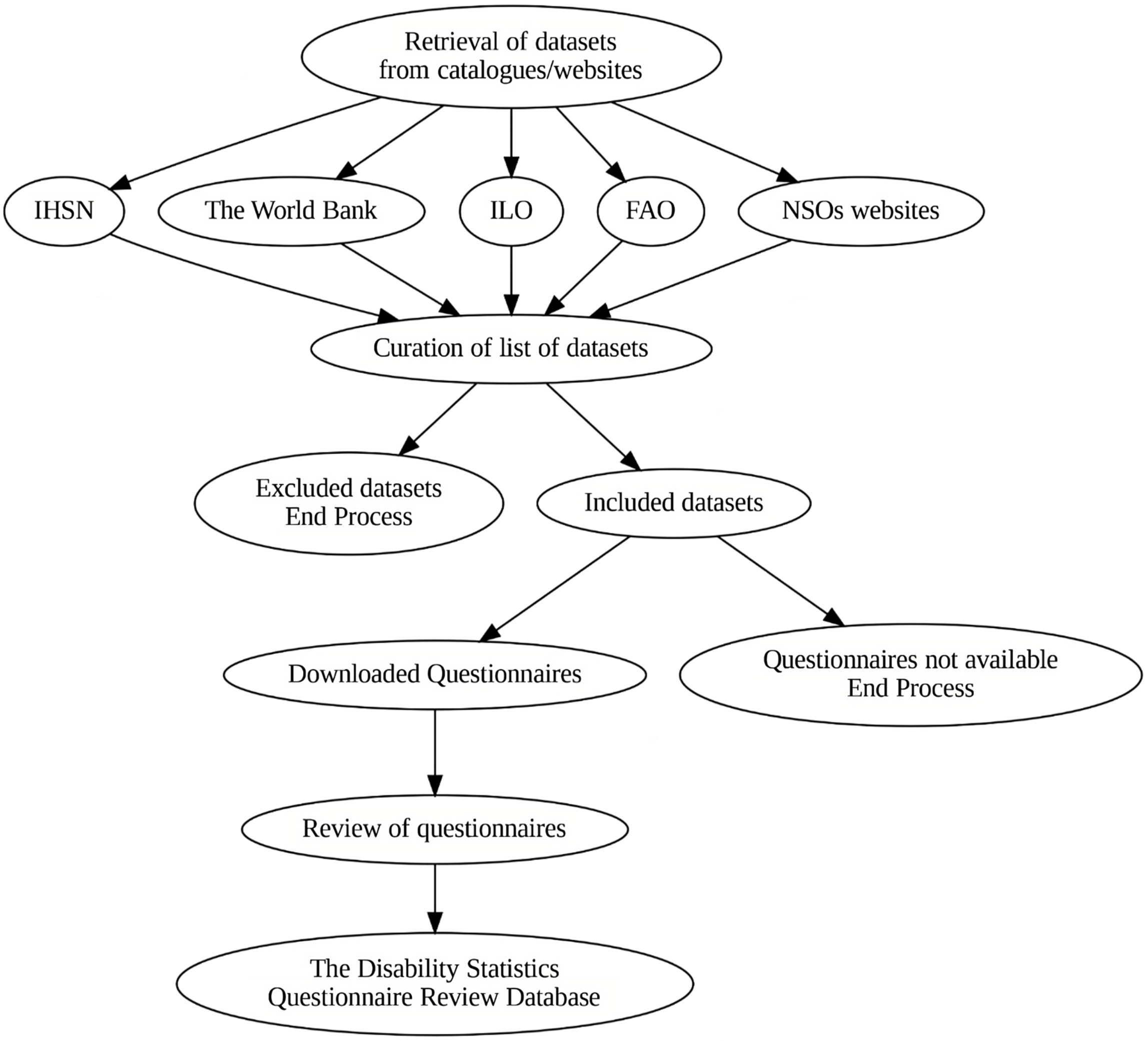
[2] Datasets that use other units of analysis such as classrooms or schools, health care centers, businesses were screened out. Datasets focused on children only were also excluded.

[3] Questionnaires of surveys in international programmes may vary across countries. One exception is the Global FINDEX survey, which is identical across the countries in any given year. Hence, it has only one entry in the database for all the countries where it is collected.

Figure 1: The questionnaire review process



broad activity limitation[4], activities of daily living (ADLs)[5], general disability[6] and other disability-related questions[7]. Only results related to functional difficulty questions meeting international standards were systematically recorded and analysed.

In order to find relevant questions, each questionnaire was searched looking for several disability-related words noted below in italics: *difficulty in seeing, hearing, walking, concentrating, remembering, self-care (bathing, dressing), communication, limited in usual activity/ies, limited in the amount of work / school or type of work / school or activities related to work / school, Activities of Daily Living (ADLs) (eating, toileting, urination, defecation, housework, shopping, cooking, managing money, taking medicine), disability, impairment (blind, deaf, mental, physical), benefits (pension, grant, cash), discrimination.*

Questions such as those capturing the "reasons why a person did not work or a child did not attend school" and where disability was one possible answer were not recorded. The reasons not to use this information were that it does not capture disability as a broad interactional notion grounded in human rights. Moreover, it is asked only for household members of working age who did not work or school-age children who did not attend school, which is only a subset of the population. Thus, it cannot capture the broader population of persons with disabilities. Such a question would also miss those with functional difficulties with successful participation

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[4] A broad activity limitation question asks the respondent if they are limited in their usual activities, such as attending work or school, due to an impairment or health condition. It captures an individual's capacity to undertake tasks and social responsibilities typical of persons in a similar age/sex group and may not apply to all adults.

[5] Similar to broad activity limitation questions, activities of daily living questions (ADLs) ask the respondent if they experience difficulties in basic daily activities such as walking a certain distance or performing self-care without help. ADLs may also include intermediate tasks such as shopping or housekeeping. Broad activity limitation and ADL questions are limited in their cross-country comparability as conceptions of 'usual activities' and 'daily activities' may vary considerably internationally.

[6] General disability questions ask respondents about their disability status in general and are usually of the form: Do you have a disability? They are sometimes followed by additional questions about the type of disability or impairments the respondent experiences. While general disability questions capture an individual's disability identity, perceptions and definitions of disability vary across individuals and contexts.

[7] Additional disability-related questions do not fall into any of the above categories. These include disability benefit questions about services or benefits (such as pensions, grants, or cash assistance) respondents receive due to their disability status. Discrimination questions ask respondents if they have experienced less favorable or exclusionary treatment, harassment or other forms of discrimination because of a disability.

outcomes in the workplace or in school perhaps due to accommodations. Therefore, using these questions would not make the disaggregation of employment and school outcomes based on disability status possible.

When functional difficulty questions were identified in the questionnaires, they were classified as to whether the questions were:

(i) WG-SS; or[8]

(ii) Other functional difficulty questions as defined earlier.

In the most recent round of reviews in 2023, some questionnaires were subject to a semi-automated review using a search engine-powered tool[9]. The tool was developed to streamline and standardise the search process. The same keywords used in the manual search were added to the search tool as query templates [11]. This improved the efficiency of the search process.

As of 2024, 3,027 population censuses and household surveys fielded between 2009 and 2023 were reviewed for 199 countries. This is a sample of the universe of population censuses and household surveys conducted worldwide. To get a sense of whether this sample of datasets might represent trends for all datasets worldwide and the potential representativeness of this sample, we estimated the proportion of the universe of datasets that were included in our review for five types of datasets: population censuses, DHS, Labour Force Surveys (LFS), Living Standards Model Survey (LSMS) and Multiple Indicator Cluster Survey (MICS). We used as the universe of datasets those extracted from the ILO Survey Catalog (for LFS) and the IHSN Catalog (for other types of datasets). We estimate that we have reviewed about half of the universe of datasets for each type so far.

Limitations

This work has several limitations. First, the list of datasets under consideration is not exhaustive. Some datasets were not covered because their questionnaires were not available in a language the authors understood (English, French, Portuguese, or Spanish). National datasets were prioritised, thus, the database does not cover recent focused research efforts (e.g. [12]) nor specific surveillance efforts in some sectors (e.g. education, health). We strived to review at the very least one dataset per country but could not review any datasets for several countries (e.g. Iceland, Eritrea). In addition, while the average number of datasets stood at 15 per country, it varies from a low of one in some countries (e.g. Bahamas) to a high of 165 in Mexico. Countries vary greatly in terms of the resources they dedicate to data and hence in terms of the number of datasets they have with some collecting one household survey every few years while others may collect dozens per year. This contributes to the heterogeneity in the number of countries and datasets we could include in the review across and within regions in addition to the varying availability of questionnaires in the languages used for review. It is possible that those datasets that were not reviewed exhibit different patterns in terms of disability questions compared to those that were reviewed, especially for countries where few datasets are reviewed. Therefore, results at the regional and country levels should be interpreted with caution.

Second, we focused only on reviewing the questionnaires rather than the quality of data collection at the community level. Hence, while functional disability questions may have been in a questionnaire, they may not have been asked during the field survey. We also did not have information on survey staff training on asking disability-related questions to the respondents. In addition, the list of search terms is not exhaustive: for instance, terms that seem outdated but might continue to be used in surveys, such as ‘handicap’, were not used.

Results

The DS-QR Database includes the results of questionnaire reviews for 3,027 datasets from 199 countries [13]. Results are included in an interactive platform and a downloadable file. The file contains a spreadsheet that lists all the reviewed datasets and whether they include the WG-SS and other functional difficulty questions. Moreover, when other functional difficulty questions are found, the database describes how they differ from the WG-SS. Information in this file can be used to identify datasets for analyses and to investigate the extent to which internationally comparable disability questions are included in population censuses and household surveys across or within countries. The tables and figures below are broad global and regional analyses of such results.

Table 1 shows the percentages of countries and datasets with functional difficulty questions as of 2024: 70.4% of the countries included in the search had at least one dataset with functional difficulty questions and 20.3% of the datasets under review have functional difficulty questions. We separated countries and datasets that included WG-SS and those with other functional difficulty questions. We find that 101 countries and 267 datasets have the WG-SS, while 93 countries and 346 datasets have other functional difficulty questions.

Table 1 also shows results separately for three periods: 2009-2013, 2014-2018 and 2019-2023. Results show that the adoption of the WG-SS has rapidly increased in recent years. The proportion of datasets with functional difficulty questions shows an increase from 12.0% to 21.4% between 2009-2013 and 2014-2018 and then a further rise to 27.3% in 2019-2023. This is driven by a sharp growth in datasets with the WG-SS from 2.5% in 2009-2013 to 9.4% in 2014-2018, and then up to 14.2% in 2019-2023.

Figure 2 shows results by type of datasets as follows: population censuses, DHS, HIES, LFS, LSMS, MICS and other

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[8] It is possible, but rare, for a single dataset to have both the WG-SS and other functional difficulty questions.

[9] The questionnaire review tool is available at: https://www.ds-review-tool.disabilitydatainitiative.org/.The tool uses the term-frequency inverse document frequency (TF-IDF) framework to compute the similarity between a query, i.e. the set of keywords and a document, i.e., a survey questionnaire. The more a keyword is found in a document, the more it is relevant to the document. The code for the questionnaire review tool is available at https://github.com/davidvicentealvarez/DS4DH-DDI-search_tool. For a selected questionnaire in the list, it detects all disability-relevant blocks of text and records the search results in a review log.

Table 1: Countries and datasets with functional difficulty questions globally and over time

	Number of countries	**% of countries**	**Number of datasets**	**% of datasets**
2009–2023				
Under review in the study	199	100.0%	3027	100.0%
With functional difficulty questions	140	70.4%	613	20.3%
– With the Washington Group Short Set (WG-SS)	101	50.8%	267	8.8%
– With other functional difficulty questions	93	46.7%	346	11.4%
2009–2013				
Under review in the study	183	100.0%	1146	100.0%
With functional difficulty questions	77	42.1%	137	12.0%
– With the Washington Group Short Set (WG-SS)	30	16.4%	29	2.5%
– With other functional difficulty questions	56	30.6%	108	9.4%
2014–2018				
Under review in the study	172	100.0%	1048	100.0%
With functional difficulty questions	90	52.3%	224	21.4%
– With the Washington Group Short Set (WG-SS)	64	37.2%	99	9.4%
– With other functional difficulty questions	42	24.4%	127	12.1%
2019–2023				
Under review in the study	150	100.0%	833	100.0%
With functional difficulty questions	79	52.7%	227	27.3%
– With the Washington Group Short Set (WG-SS)	62	41.3%	118	14.2%
– With other functional difficulty questions	31	20.7%	109	13.1%

Note: For the number and percentage of countries, results within each of the three periods (2009–2013, 2014–2018, and 2019–2023) do not add up to the total for the entire period (2009-2023). This is because some countries have datasets under review for more than one period, resulting in overlapping counts. The number of countries with the WG-SS and the number of countries with other functional difficulty questions do not add up to the number of countries with functional difficulty questions as some countries have datasets with the WG-SS as well as datasets with other functional difficulty questions. It is possible, but rare, for a single dataset to have both the WG-SS and other functional difficulty questions. Hence for the number of datasets with functional difficulty questions may not be the sum of the number of datasets with the WG-SS and the number of datasets with other functional difficulty questions.
Source: Authors' compilation using [13].

datasets[10]. All types of datasets show a progression, with the WG-SS being more often used in 2019-2023 compared to 2014-2018 and 2009-2013. In the 2019-2023 period, MICS shows the highest level in the percentage of datasets including the WG-SS (69.2%), followed by population censuses (50%), DHS (46.7%), HIES (30.8%), other datasets (12.7%) and LSMS (7.1%). Yet, except for population censuses and MICS, less than half of the datasets included the WG-SS or other functional difficulty questions in 2019-2023.

Figure 3 shows the percentages of datasets with functional difficulty questions. It represents the datasets with WG-SS or other functional difficulty questions, globally and by world region for three time periods (2009–2013, 2014–2018 and 2019–2023). It shows an increase in six out of the seven regions. East Asia & the Pacific, the Middle East & North Africa, North America and Sub-Saharan Africa, South Asia show the sharpest increases while in Latin America and the Caribbean, the percentage of datasets with functional difficulty questions increased but at a slower pace compared to other regions. Europe & Central Asia is the only world region where the percentage of datasets with functional difficulty questions did not increase over time.

Table 2 provides information on datasets with other functional difficulty questions and how they differ from the WG-SS, overall, by dataset type, and by world region. Across the different types of datasets, population censuses, LFS and other datasets tend to have other functional difficulty questions. Three HIES, one MICS and no LSMS dataset were found to have other functional difficulty questions.

Overall, 47% of the 346 datasets with other functional difficulty questions have dichotomous (yes/no) answers to functional difficulty questions. Across dataset types and world regions, questions with yes/no answers are more often found in miscellaneous surveys in North America, Latin America and the Caribbean and Sub-Saharan Africa. In addition, most datasets with other functional difficulty questions (87% overall) have functional difficulty questions that are differently worded compared to the WG-SS. This is the case across dataset types and world regions. Finally, 36% and 52% of datasets do not have questions on the self-care and

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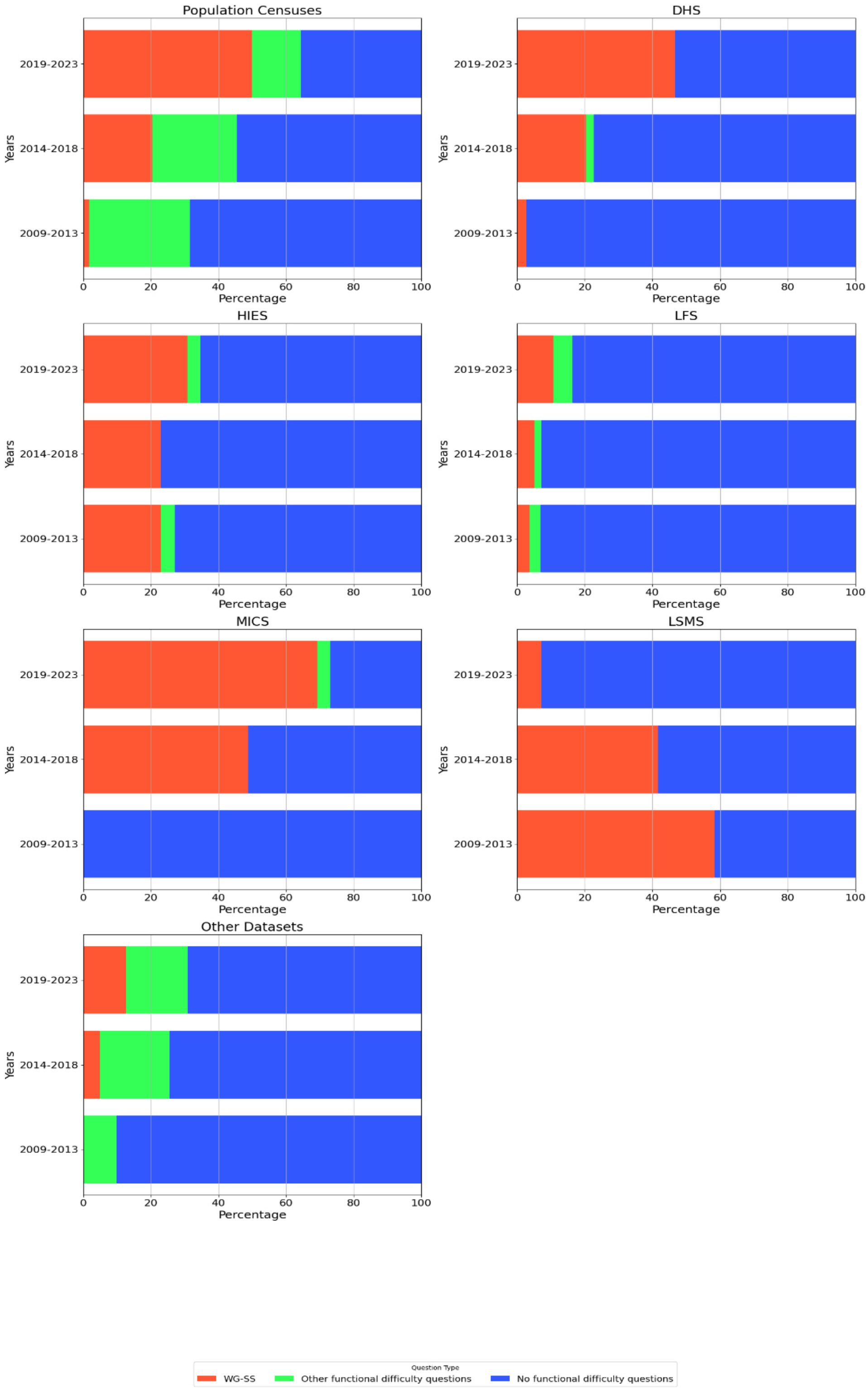
[10] The 3027 datasets under review are distributed across the different types of datasets as follows: 211 population censuses, 97 DHS, 122 HIES, 745 LFS, 38 LSMS, 97 MICS, 1717 other datasets. Other datasets include surveys that are not DHS, HIES, LFS, LSMS or MICS.

Figure 2: Datasets with functional difficulty questions by type of dataset (%)



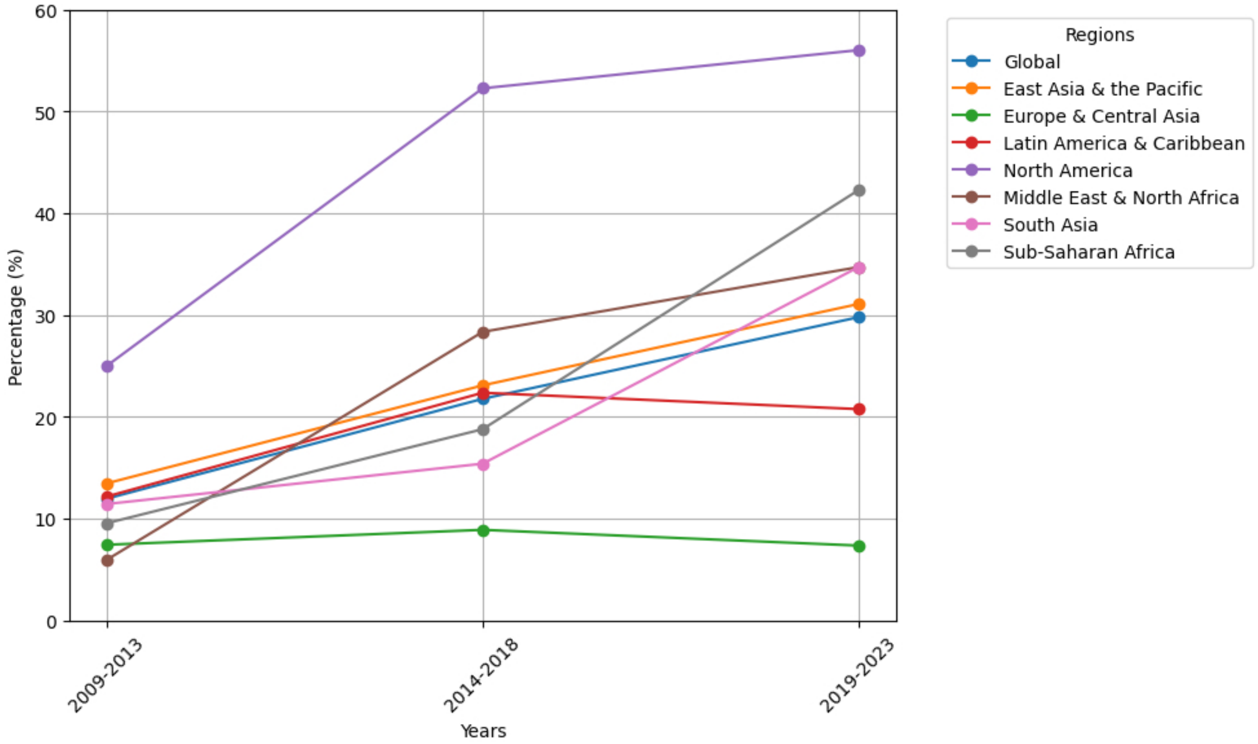
Source: Authors' compilation using [13]. Notes: Acronyms in Figure 2 are defined as follows: DHS (Demographic and Health Survey), Living Standards Measurement Study (LSMS), Multiple Indicator Cluster Survey (MICS), Household Income and Expenditure Survey (HIES). Other datasets include various surveys that are not part of the types of surveys above.

communication domains, respectively. There are significant regional differences in domain coverage, with Europe & Central Asia and Middle East & North Africa having a higher proportion of datasets without a question on self-care and North America having a larger percentage of datasets without a question on communication.

Discussion

The DS-QR Database provides the largest and most detailed record of whether national population censuses and surveys globally have internationally comparable disability questions. As of 2024, the DS-QR includes the results

Figure 3: Datasets with functional difficulty questions over time, globally and by region (%)



Source: Authors' compilation using [13].

Table 2: Datasets with Other functional difficulty questions in comparison to the WG-SS

	Number of datasets with other functional difficulty questions	% Datasets with Yes/No answers	% Datasets with graded answer scale different from the WG-SS	% Datasets with questions differently worded versus the WG-SS	% Datasets without a questio on selfcare	% Datasets without a question on communication
Overall	346	47%	24%	87%	36%	52%
By type of survey:						
– Population censuses	51	24%	24%	76%	45%	37%
– HIES	3	0%	33%	0%	0%	67%
– LFS	26	38%	27%	96%	69%	12%
– LSMS	0	0%	0%	0%	0%	0%
– MICS	1	0%	0%	100%	0%	0%
– Other datasets	265	52%	23%	86%	30%	58%
By world region:						
– East Asia & Pacific	52	8%	73%	87%	46%	46%
– Europe & Central Asia	28	43%	14%	71%	68%	50%
– Latin America & the Caribbean	65	49%	5%	74%	40%	5%
– Middle East & North Africa	24	17%	17%	75%	67%	17%
– North America	141	65%	20%	96%	21%	89%
– South Asia	10	30%	30%	70%	20%	20%
– Sub-Saharan Africa	26	54%	4%	85%	19%	15%

Source: Authors' compilation using [13].

of 3027 questionnaire reviews for 199 countries and territories collected from 2009 to 2023. Particularly, it offers information on whether each dataset has the WG-SS or other functional difficulty questions. The DS-QR Database can support researchers, policymakers and advocates to identify countries and datasets with internationally comparable functional difficulty questions and highlight where persons with disabilities may not be visible in official statistics. The DS-QR

Database can also inspire and help frame questionnaire review efforts for other groups, for example, based on migration status, sexual orientation or gender identity.

This article includes an analysis globally and across world regions and types of datasets revealing where and to what extent disability data is collected. About one out of five datasets reviewed for the 2009-2023 have functional difficulty questions with 140 countries having at least one dataset with functional difficulty questions. This includes 101 countries with at least one dataset with the WG-SS. Global trends suggest an increase in the percentage of datasets with the WG-SS in national population censuses and household surveys in recent years. Results show considerable heterogeneity in the collection of functional difficulty questions across types of datasets and world regions. For instance, in Sub-Saharan Africa, the availability of functional difficulty questions has markedly increased, while in Europe & Central Asia, they continue to be a rarity in surveys and censuses. In some parts of the world, targeted regional efforts and collaboration may be necessary to enhance disability data collection using internationally comparable disability questions.

The WG-SS and other functional difficulty questions that use a graded answer scale make it possible to analyse data not only via disability type but also in terms of severity. However, the review reveals that close to half of the datasets with other functional difficulty questions use a yes/no answer scale, making it impossible to identify groups and assess prevalence and inequalities based on severity levels. Furthermore, many datasets with other functional difficulty questions have questions using different wording compared to the WG-SS. In addition, more than a third of these datasets with other functional difficulty questions do not have the self-care and/or the communication domain, thus neglecting disabilities that relate to these domains. Hence, analysing datasets with other functional difficulty questions may lead to varying results compared to those with the WG-SS due to substantive differences in the questions and their answer keys (e.g. different prevalence).

Data access

The DS-QR Database is accessible at the following website: https://www.ds-qr.disabilitydatainitiative.org/.

Conclusions

There is an urgent global need to collect and analyse data related to disability based on functional difficulties. The DS-QR Database is a noteworthy resource that can inform the implementation of Article 31 of the CRPD and data analysis and collection efforts on disability. The DS-QR Database shows that more and more countries are collecting data using internationally comparable disability questions. The DS-QR Database can help researchers, policymakers, international organisations and civil society identify countries and datasets with functional difficulty questions that follow international good practice and highlight where persons with disabilities may not be visible in national or international statistics.

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Conflict of interests

Authors have no conflicts of interest to declare.

Ethics statement

This study did not require any ethics approval because we analysed the questionnaires of secondary datasets.

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Appendix Table 1: The Washington group short set of questions on disability

Introductory Statement: "The next questions ask about difficulties you may have doing certain activities because of a HEALTH PROBLEM."

(a) Vision	[Do/Does] [you/he/she] have difficulty seeing, even if wearing glasses?	**(d) Cognition**	[Do/does] [you/he/she] have difficulty remembering or concentrating?
(b) Hearing	[Do/Does] [you/he/she] have difficulty hearing, even if using a hearing aid(s)?	**(e) Self-Care**	[Do/does] [you/he/she] have difficulty with self-care, such as washing all over or dressing?
(c) Mobility	[Do/Does] [you/he/she] have difficulty walking or climbing steps?	**(f) Communication**	Using [your/his/her] usual language, [do/does] [you/he/she] have difficulty communicating, for example understanding or being understood?

For each question in (a) through (f), respondents are asked to answer with one of the following: 1. No Difficulty, 2. Some Difficulty, 3. A lot of difficulty, 4. Unable to do