THE DISABILITY DATA REPORT 2021

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disabilitydatainitiative

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TABLE OF CONTENTS

ACRONYMS

ADL	Activity of Daily Living
CRPD	Convention on the Rights of Persons with Disabilities
DHS	Demographic and Health Survey
GNI	Gross National Income
HDI	Human Development Index
HIC	High-Income Country
HH	Household
LMIC	Low- and Middle-Income Country
LSMS	Living Standard Measurement Study
Max	Maximum
Min	Minimum
MPI	Multidimensional Poverty Index
NA	Not available
NS	Not statistically significant
SD	Standard deviation
SDG	Sustainable Development Goals
WG	Washington Group
WGSS	Washington Group Short Set of questions

1. SUMMARY

Realizing the rights of persons with disabilities requires disability data and statistics. It requires statistics that are based on concepts that are in line with a human rights approach to disability, disaggregated by disability status, and reflect various aspects of the lives of persons with disabilities and their diversity. This report provides (i) a systematic analysis of the disability questions in national censuses and household surveys globally between 2009 and 2018 and (ii) indicators disaggregated across disability status for 41 countries with census or household survey data that are based on internationally comparable disability questions.

This report finds that disability questions of any kind are absent for 24% of countries and 65% of datasets. In addition, disability questions that meet international standards of comparability, i.e. those that collect information on functional difficulties (e.g. difficulty seeing, hearing, walking) have been increasingly adopted. Yet, only 84 of 180 countries and 16% of the household surveys and censuses under review have internationally comparable functional difficulty questions. In many countries' national household surveys and censuses, persons with disabilities continue to be invisible.

This report also presents a microdata analysis for 41 countries with censuses or national surveys with functional difficulty questions in four domains (seeing, hearing, walking, cognition). For 28 countries, data is also available for the self-care and communication domains, including 21 countries with the internationally tested Washington Group Short Set of questions. This report provides results on functional difficulty prevalence and education, work, health, standard of living and multidimensional poverty indicators for adults aged 15 and older with and without functional difficulties using several disaggregation methods.

In the 41 countries, functional difficulties are not rare. Across countries, the median share of the adult population with any functional difficulty stands at 12.6%, while the median share of households with adults with functional difficulty is at 27.8%. Functional difficulties are more common among women and older age groups and in rural areas. Seeing and walking difficulties tend to be the most common functional difficulties. The extent to which some of these functional difficulties might be preventable through policies that address environmental barriers and underlying health conditions needs attention.

This report finds significant inequalities associated with functional difficulties in terms of education, health, work and standard of living (e.g. electricity). A disability gap, i.e. a disadvantage for persons with functional difficulties compared to persons with no functional difficulty, is consistently found across countries and disaggregation method in terms of educational attainment, literacy, food insecurity, exposure to shocks, asset ownership, health expenditures and multidimensional poverty. This gap persists even though adults with functional difficulties are more likely to receive social protection. In addition, for a majority of countries, there is a disability gap for the employment population ratio, the youth idle rate, the share of adults in informal work, living conditions and domestic violence. For many countries and indicators, there is a graded association between functional difficulty and disadvantage, with persons with more severe difficulties experiencing worse disadvantages. A multidimensional analysis, either by considering multiple deprivations or on an indicator-by-indicator basis, shows large and consistent inequalities.

The stark inequalities shown in this report highlight the urgent need for policies for the rights and the wellbeing of persons with disabilities.

2. INTRODUCTION

Realizing the rights of persons with disabilities requires quality, policy-relevant disability data. There are various options when it comes to collect such data. One option is to gather environmental and policy data to identify changes that are required in terms of physical and social barriers (e.g. Banda-Chalwe et al 2014) or policy (e.g. Díaz Ruiz et al 2015). Another option is to have a qualitative and participatory exercise involving multiple stakeholders including persons with the lived experience of a disability and civil society (e.g. Banks et al 2021). While these options may go a long way in understanding the situation of persons with disabilities and informing policy and advocacy efforts, they would not provide nationally representative information on individuals and households and may be difficult to compare across countries.

Quality and policy-relevant statistics are therefore needed. Statistics need to be presented by disability status and based on a human rights approach to disability. They should also reflect the diversity of persons with disabilities and various aspects of their lives. For instance, there is a need for statistics on access to general services such as education and health services and on social and economic justice issues (e.g. employment, poverty). This "disability data gap" has consequences, in the lack of attention to disability in policy and in the lives of persons with disabilities. For example, a person with disability may not be considered as poor and eligible for benefits if their income is above the national poverty line when in fact they may have high out-of-pocket costs for basic services (e.g. health care). Awareness of, and statistics on, such costs are lacking.

Global reporting on disability rights and human development indicators is essential to inform and support disability policy and advocacy worldwide. In particular, there is a need to monitor data and produce statistics disaggregated by disability status, related to the rights stipulated in the Convention on the Rights of Persons with Disabilities (CRPD) that has been ratified by 182 countries. Article 31 of the CRPD requires that States Parties "collect appropriate information, including statistical and research data, to enable them to formulate and implement policies to give effect to the present Convention".

The United Nations (UN) Sustainable Development Goals (SDGs) adopted by Heads of States in 2015 as part of the 2030 Agenda for Sustainable Development also need to be monitored for persons with disabilities.

While awareness of the disability data gap and data collection tools have improved (United Nations 2019), there remains a need to produce statistics on disability in a consistent and systematic basis as national statistics offices rarely disaggregate statistics by disability status. There have been efforts to develop global disability data portals (Leonard Cheshire 2018; United Nations 1990; United Nations 2018). However, these efforts have so far used a variety of disability measures, limiting their international comparability.

Using national census and household survey data, the disability data initiative (ddi) provides:

(i) A systematic analysis of the disability questions in national censuses and household surveys globally.

(ii) Indicators disaggregated across disability status for countries with census or household survey data that have internationally comparable disability questions.

This report documents the availability of questions on disability between 2009 and 2018

in national censuses and surveys. This report also presents disaggregation results for 41 countries with censuses or national surveys with functional difficulty questions in at least four domains (seeing, hearing, walking, cognition). For some countries, data is also available for the self-care and/or communication domains and the Washington Group Short Set of questions (Altman 2016) is used. This report covers functional difficulty prevalence and selected indicators for persons with and without functional difficulties. More background is in Method briefs (Appendix 3) and more results are available in Country briefs (Appendix 4) and in Results tables on the ddi website (https://disabilitydata.ace.fordham.edu/).

3. REVIEW OF DATASETS AND THEIR DISABILITY QUESTIONS: METHOD AND RESULTS

This report starts with a systematic analysis of the disability questions in national censuses and household surveys globally. Survey and census questionnaires from 2009 to 2018 were retrieved from the online International Household Survey Network Microdata catalog, the World Bank Microdata Library catalog, the International Labor Organization survey catalog, the repository of census questionnaires maintained by the United Nations Statistics Division, and the websites of individual National Statistical Offices. The resulting pool of censuses and surveys included 828 datasets and 1,486 dataset-years from 180 countries and territories (countries thereafter). The review covered countries in East Asia and the Pacific (30), in Europe and Central Asia (46), Latin America and the Caribbean (29), Middle East and North Africa (18), North America (2), South Asia (8) and Sub-Saharan Africa (47).

Disability can be defined in a variety of ways, which gets reflected through various questions in surveys (Appendix 3 Method briefs #1 and #2). Each dataset questionnaire was searched for any disability question. If disability questions were found, they were categorized as follows: (i) questions of the Washington Group (WG) Short Set (WGSS) covering six domains (seeing, hearing, walking, cognition, self-care, communication); (ii) functional difficulty questions (four to six of the domains in (i) but not the same wording as in the WGSS questions and/or answers); (iii) activity of daily living (ADL) questions; (iv) broad activity limitation question (e.g. "are you limited in the kind of, or amount of, work you do due to a health condition or impairment?"); (v) general disability question (e.g. "do you have a disability?"); (vi) other disability questions (e.g. "do you receive disability benefits?"). Only questions as per (i) and (ii) are considered to be internationally comparable questions on disability as recommended by the United Nations Principles and Recommendations for Population and Housing Censuses (2017, p. 207). Questions need to cover at least the four essential domains of functional difficulties (seeing, hearing, walking, cognition).

The rest of this section describes and discusses the main results out of this dataset review. The entire set of results is available in the Dataset Review Results Tables.

As shown in Table 3.1, disability questions of any kind are found in 76% of the countries and 35% of the datasets under review. In other words, one important finding in this review is that disability questions are absent for 24% of countries and 65% of datasets. Collecting data on disability in censuses and surveys should become standard, as it is for sex or age.

Table 3.1 also shows the share of countries and datasets with functional difficulty questions: 47% of the countries and 16% of the datasets under review have functional difficulty questions in their surveys or censuses. Separating out countries and surveys with the WGSS and with other functional difficulty questions, 33 countries and 45 datasets have the WGSS, while 64 countries and 88 datasets have other functional difficulty questions. Although the WGSS is a concise and internationally tested tool, it remains rare on a global scale. Our analysis of datasets over the 2009-2018 shows however that the WGSS has been increasingly adopted[1].

[1] Our review does not reflect the recent adoption of the WGSS (2019, 2020). As per a private communication with the WG secretariat, some countries reported to the WG secretariat to have used the WGSS in data collection and yet are not found to have the WGSS in the datasets reviewed in this report.

TABLE 3.1: RESULTS OF THE REVIEW OF DATASETS

Note: Functional difficulty questions could be the WGSS or other functional difficulty questions. The number of countries or datasets with functional difficulty questions does not add up to the numbers of countries or datasets with the WGSS and with other functional difficulty questions as some countries or datasets have both.

Countries or datasets	**Number of countries**	**Share of countries**	**Number of datasets**	**Share of datasets**
Under review in the study	180	100.0%	828	100.0%
With at least one disability question of any kind	136	75.6%	293	35.4%
With functional difficulty questions	84	46.7%	131	15.8%
- With the Washington Group Short Set (WGSS)	33	18.3%	45	5.4%
- With other functional difficulty questions	64	35.6%	88	10.6%

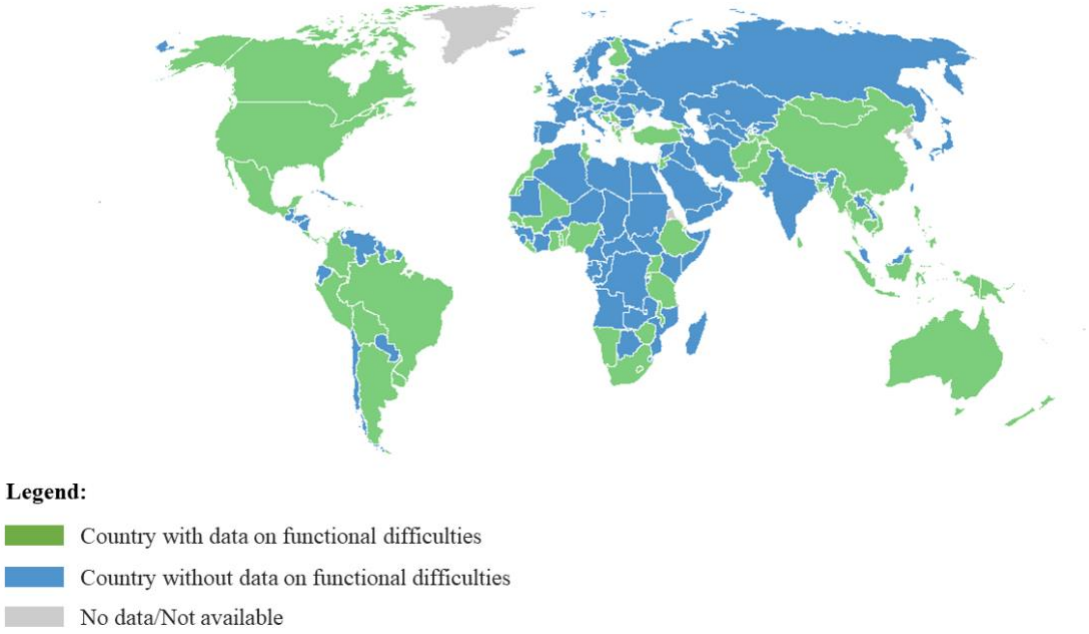
Source: Own calculations based on dataset review described in the text.

Notes: The number of countries or datasets with functional difficulty questions does not add up to the numbers of countries or datasets with the WGSS and with other functional difficulty questions as some countries or datasets have both.

Figure 3.1 below maps countries that were found to have data on functional difficulties, i.e. with the WGSS or other functional difficulty questions. On a similar note, countries and datasets with the WGSS and with other functional difficulty questions from 2009 to 2018 are listed in the Dataset Review Results Tables.

FIGURE 3.1: COUNTRIES WITH AND WITHOUT FUNCTIONAL DIFFICULTY QUESTIONS IN NATIONAL CENSUSES OR SURVEYS (2009-2018)

Table Supporting Figure 3.1



Source: Own research and review of questionnaires

As shown in Figure 3.1, functional difficulty questions tend to be available in Asia, in North and Latin America and in some countries in Sub-Saharan Africa. Most countries in Europe and Central Asia, Middle East and North Africa do not have national datasets with functional difficulty questions.

In addition, this review also found a consistent pattern of asking only the most basic question: "do you have a disability?"[2]. This is a lost opportunity as such a question cannot be meaningfully used in international research as it may mean different things to different respondents and responses may not be reliable due to stigma around disability[3].

This analysis of survey and census questionnaires has several important limitations. It covers surveys and censuses that

[2] This is not shown in Table 3.1 or Figure 3.1.

[3] Further background materials on disability questions are in Appendix 3 Method brief #2 and detailed results for each of the six types of disability questions are in Mitra, Chen et al (2021) for low- and middle-income countries.

had questionnaires available in English, French, Portuguese, or Spanish. It does not cover surveys with a focus on children (e.g. Multiple Indicator Cluster Survey). The list of datasets under consideration is not exhaustive in that some were not covered as their questionnaires were not available in a language that researchers understood[4]. It is also possible that some datasets were missed.

Nonetheless, this dataset review is valuable in that it shows regions of the world where internationally comparable disability data is missing and it supports calls for further disability data collection globally. In many countries and datasets, persons with disabilities are invisible. Much work remains to be done to implement Article 31 of the CRPD for States Parties "to collect appropriate information, including statistical and research data, to enable them to formulate and implement policies to give effect to the present Convention".

[4] This limitation due to language may affect countries and regions of the world differently.

4. ANALYSIS OF MICRODATA: METHODS

The rest of this report uses 45 national datasets for 41 countries to estimate indicators disaggregated across disability status for countries with census or household survey data that have internationally comparable disability questions. The analysis was conducted using Stata 16.0. Results are estimates and are nationally representative. Standard errors are not presented for conciseness. For datasets with a complex design, estimates are weighted.

A. DISABILITY MEASUREMENT

Disability is notoriously difficult to define (Appendix 3 Method brief #1). In fact, in some cultures, the word and the notion do not exist. In this report, disability is defined as an interactional notion, one that results from an individual with a health condition interacting with the environment. Disability is measured through self-reported functional difficulties (e.g. difficulty seeing, hearing, walking) (Appendix 3 Method brief #2). Functional difficulties vary in terms of their type (e.g. seeing, hearing), degree (from mild to extreme) and age at onset (from birth to old age).

The datasets under study all have questions on functional difficulties that meet at least the United Nations (2017) *Principles and Recommendations for Population and Housing Censuses*. They are listed in Table 4.1. Twenty-five datasets have the questions of the internationally tested Washington Group (WG) Short Set (WGSS) covering six domains (seeing, hearing, walking, cognition, self-care, and communication) (Altman 2016)[5,6].

The other 20 datasets include some datasets that have questions similar to the WGSS but with modifications of either the wording of questions or the answer scale, and other datasets that do not adopt the WGSS but have functional difficulty questions in four to six domains as per United Nations (2017)[7].

Disability is measured solely based on selected functional difficulties, and thus does not capture all persons with disabilities, in particular persons with psychosocial and mental health disabilities. Given the very incomplete nature of the measure under use, we refer to "persons with functional difficulties" and not to persons with disabilities, a broader group.

To identify a specific 'functional difficulty status' group, a threshold needs to be set on the answer scale of functional difficulties. Recognizing that identification and categorization lead to imperfect results and potentially varying ones depending on the threshold, the disability data initiative uses three ways to partition individuals based on functional status (Appendix 3 Method brief #3).

A. First, for all datasets, individuals are in two categories:

[5] More information is available at www.washingtongroup-statistics.com

[6] For four countries (Nigeria, Senegal, South Africa, Uganda), results are from two datasets: the DHS and another dataset. The DHS was used only to estimate indicators related to family planning and domestic violence in the four countries and to cell phone ownership for Uganda.

[7] Details on how datasets with other functional difficulty questions differ from the WGSS are in Table 4.1.

- No functional difficulty.

- Any functional difficulty in at least one domain (respondents answer Yes for datasets with Yes/No answers, or reports at least Some difficulty for graded scales).

B. For datasets with graded answer scales, individuals are in three categories:

- No difficulty for all domains.

-Some difficulty in at least one domain but no A lot of difficulty or Unable to do responses across all domains.

- A lot of difficulty or Unable to do in at least one domain.

C. Finally, and again only for datasets with graded answer scales, following the recommendation of the WG, individuals are grouped as follows:

- No difficulty or Some difficulty for all domains

- A lot of difficulty or Unable to do in at least one domain.

Data tables available on the disability data initiative website include results for the three categorizations above.

While the WGSS was initially developed for use in censuses for individuals 5 years of age and older, the six domains may not be adequate to capture disability among children (Loeb et al 2018). We therefore calculate disability indicators only for adults 15 years and older and their households.

The analysis conducted at the household level categorizes households depending on the functional difficulty status of its members aged 15 and older along the three ways of partitioning the population described above.

TABLE 4.1: MICRODATASETS UNDER STUDY

Country	Dataset	Year(s)	Disability questions
Afghanistan	Living Conditions Survey	2016	WGSS
Bangladesh	Household Income and Expenditure Survey (HIES)	2016	WGSS
Cambodia	DHS	2014	WGSS
Colombia	National DHS	2015	Other functional (1) (3)
Djibouti	Enquete Djiboutienne aupres des Menages	2017	Other functional (4)
Dominican Rep.	Population and Housing Census	2010	Other functional (1) (3) (4)
Ethiopia	Economic and Social Survey (LSMS)	2015	WGSS
Gambia	Labor Force Survey	2018	WGSS
Haiti	DHS	2016	WGSS
Indonesia	Population and Housing Census	2010	Other functional (2) (3) #
Kiribati	Population and Housing Census	2015	Other functional (2) (3)
Liberia	Household Income and Expenditure Survey (HIES)	2016	WGSS
Malawi	Third Integrated Household Survey (LSMS)	2010	WGSS
Maldives	DHS	2009	WGSS
Mali	DHS	2018	WGSS
Mauritius	Census of Population	2011	Other functional (3)

Mexico	Population and Housing Census	2010	Other functional (1) (3)
Morocco	Census	2014	Other functional (2) (3)
Myanmar	Population and Housing Census	2014	Other functional (3) (4) (5)
Namibia	Household Income and Expenditure Survey (HIES)	2015	WGSS
Nigeria	General Household Survey Panel (LSMS)	2018, 2012	WGSS
	DHS	2018	WGSS
Pakistan	DHS	2017	WGSS
Panama	Population and Housing Census	2010	Other functional (1) (4)
Papua New Guinea	Household Income and Expenditure Survey (HIES)	2009	Other functional (2) (5)
Peru	Encuesta Nacional De Hogares	2016	Other functional (3)(4)
Philippines	Population and Housing Census	2010	Other functional (1)
Puerto Rico	Census of Population	2010	Other functional (1)(3)(5)
Rwanda	Labor Force Survey	2018	WGSS
Senegal	Census	2013	WGSS
	DHS	2018	WGSS
South Africa	General Household Survey	2018	WGSS
	DHS	2016	WGSS
Suriname	Census	2012	Other functional (3)
Tajikistan	Survey of Water, Sanitation, and Hygiene	2016	WGSS
Tanzania	National Panel Survey (LSMS)	2014	WGSS
Timor Leste	DHS	2016	WGSS
Tonga	Census	2016	WGSS
Uganda	National Panel Survey (LSMS)	2010	WGSS
	DHS	2016	WGSS
Uruguay	Census	2011	Other functional (4) (5)
Vanuatu	Population and Housing Census	2009	Other functional (2) (4) (5)
Vietnam	Population and Housing Census	2009	Other functional (2) (4) (5)
West Bank/Gaza	Expenditure and Consumption Survey	2009	Other functional (3)(4)
Zimbabwe	Poverty Income Consumption Survey	2017	Other functional (3)

Notes: WGSS stands for Washington Group Short Set. Other functional refers to functional difficulty questions that are not identical to the WGSS. DHS stands for Demographic and Health Survey. LSMS stands for Living Standard Measurement Study. For Nigeria, consumption data was not available for 2018, so the analysis used 2012 data for expenditures.

(1) Yes/No answer (2) Answer scale is different from that in the WGSS (3) Wording of one question or more is different from the WGSS (4) Does not have the selfcare domain (5) Does not have the communication domain # Communication and cognition domains are in a single question

For Colombia and Papua New Guinea, the answer scale is reversed: 1. Cannot at all 2. A lot of difficulty 3. Some difficulty 4. No difficulty

B. INDICATORS

This report uses various indicators to capture the rights and human development situation of persons with disabilities. The indicators are in Table 4.2 and described in Appendix 3 Method Brief #5. The list of indicators was developed by reviewing the questionnaires of datasets in light of the provisions of the CRPD and the SDGs that they could inform (IWGHS 2018; OHCHR 2021). Indicators known to be particularly suited to assess the situation of persons with disabilities were included (United Nations 2019, Mizunoya et al 2013): employment population ratio, economic insecurity (using proxy variables food insecurity, exposure to shocks) and indicators that may reflect the extra costs of living with disabilities for households (health expenditures as a share of total consumption expenditures), as well as material wellbeing indicators (asset ownership, living conditions) that might be affected due to the extra costs of living with disabilities.

This report and Results Data Tables on the ddi website compare indicators across groups by functional difficulty status to establish the size of the gap that may be associated with disability, i.e. the disability gap or inequality associated with disability. For each dataset and indicator, we set 100 observations as the minimum requirement to produce estimates disaggregated across functional difficulty status. Results are presented in tables. The difference across functional difficulty status and its statistical significance is noted in a separate column. Statistical significance is based on a t-test (*, **, and *** at the 10%, 5% and 1% levels respectively). We use the term disability gap to refer to a difference that is statistically significant and refers to a disadvantage for persons with functional difficulties.

There may be patterns of disadvantage that affect subgroups of persons with disabilities and their households, such as women and rural residents. Results tables on the ddi website give a disability disaggregation of subgroups of the population by sex, rural/urban and age when the sample size is above 100.

C. SCOPE OF THE STUDY AND LIMITATIONS

The countries and territories under study are described in Appendix 2. They were picked due to the availability of national survey or census data that at least meet the United Nations (2017) *Principles and Recommendations for Population and Housing Censuses*. They vary greatly in terms of life expectancy at birth, Gross National Income per capita and human development as measured by the human development index. They are also heterogeneous with regards to their legislative and policy backgrounds with respect to disability as shown in Appendix 2. All but four have ratified the CRPD, 13 countries have constitutional guarantees on the rights of persons with disabilities and 26 countries have anti-discrimination legislations in the workplace.

This analysis has some limitations. Results in this report are based on censuses and household surveys that do not include population members that are not in a household, such as the institutionalized and the homeless population. The data under use are affected by a mortality bias, as adults with functional difficulties may be disproportionately affected by premature mortality. It does not identify persons with a variety of disabilities, including psychosocial and mental health ones, which are counted under persons with no difficulty. For indicators that are

captured at the household level in a survey (e.g. assets, food insecurity), there is no information on how resources are distributed within the household. It is possible that disability, as well as sex and age, impact resource allocation across members of the household. No information is available on this in the datasets under study. For these reasons, this analysis may lead to underestimates of disability inequalities.

Additionally, results come from a variety of surveys and censuses that may use different questions to capture indicators such as food insecurity or literacy, leading to results that are not entirely comparable across countries. For functional difficulty questions, what persons may understand from the questionnaire and how they reply can differ given different languages[8], cultures, interviewer training and other contextual factors in ways that are beyond the purview of the researchers.

Only three factors that may contribute to intersectional disadvantages with disability are considered (sex, rurality, age). Many others are not covered (e.g. immigration status, ethnicity, indigeneity).

At the same time, results from this study contribute to a growing international literature on disability inequalities. This report uses a variety of datasets from 2009 to 2018 with functional difficulty information on all adults in a household and detailed information that indicate whether equal rights have been respected and human development has been achieved. It is intended to add to a literature that notably relied on the 2002-2004 World Health Survey (WHO-World Bank 2011; Mitra and Sambamoorthi 2013) and for some countries, it provides a comprehensive assessment of the situation of persons with disabilities shortly before the COVID-19 pandemic broke out.

[8] The WG has a translation protocol to help preserve the meaning of the questions, but it is not known whether that protocol was used for the data sets with the WGSS.

TABLE 4.2: INDICATORS UNDER STUDY

Indicator	CRPD Article	SDG indicator	Results table
Prevalence			
Adults with functional difficulties			P1
Adults with functional difficulties by type of functional difficulty			P2
Households with functional difficulties			P3
Education			
Adults who have ever attended school	24		E1
Adults who have less than primary school completion	24		E2
Adults who have completed primary school	24		E3
Adults who have completed secondary school or higher	24		E4
Adults who can read and write in any language	24	4.6.1	E5
Household heads who have ever attended school	24		E6
Children age 6 to 14 who are not enrolled in school	24	4.1.4	E7
Household education expenditures out of total consumption expenditures	24		E8
Work			
Employment population ratio	27		W1
Youth idle rate	27	8.6.1	W2
Working individuals in manufacturing	27	9.2.2	W3
Women in managerial positions	27	5.5.2	W4
Adults in informal work	27	8.3.1	W5
Health			
Adults in households using safely managed drinking water	25	6.1.1	H1
Adults in households using safely managed sanitation services	25	6.2.1	H2
Women with family planning needs met	6, 25	5.6.1	H3
Women subjected to violence in the previous 12 months	16, 25	16.1.3	H4
Standard of living			
Adults in households with electricity	28	7.1.1	S1
Adults in households with clean cooking fuel	28	7.1.2	S2
Adults in households with adequate housing	28		S3
Adults in households owning assets	28		S4
Adults in households with a mobile phone	28	5.b.1	S5
Adults in food insecure households	28	2.1.2	S6
Adults in households that experienced a shock recently	28		S7
Household health expenditures out of total consumption expenditures	28	3.8.2	S8
Adults in households receiving social protection	28	1.3.1	S9
Multidimensional analysis			
Adults who experience multidimensional poverty, i.e. deprivations in more than one dimension of wellbeing (education, health, work, standard of living)	24, 25, 27, 28		M1

Notes: Relevant SDG indicators are listed. The SDG indicators maybe different from the indicators measured in this report. For instance, indicator 8.3.1 measures Proportion of informal employment in total employment while this report measures the proportion of adults doing informal work. All indicators are proportions. For Children age 6 to 14 in households who are not enrolled in school, children are not separated by disability status. It reflects the share of out of school children in households with and without an adult with a functional difficulty.

5. PREVALENCE OF FUNCTIONAL DIFFICULTIES

This section describes and discusses the main results on prevalence. Information on the methodology is in Appendix 3 Method brief #4.

The entire set of results on prevalence in available in the Prevalence Results Tables.

A. MAIN RESULTS

The median prevalence of functional difficulties for adults aged 15 and older among the 41 countries stands at 12.6%. As shown in Figure 5.1, it ranges from a low of 4.1% in the Philippines to a high of 48.1% in Colombia. Only two countries have prevalence rates below 5% (Philippines, Panama) and seven countries have prevalence rates above 20% (Timor Leste, Puerto Rico, Pakistan, Maldives, Haiti, Papua New Guinea, Colombia).

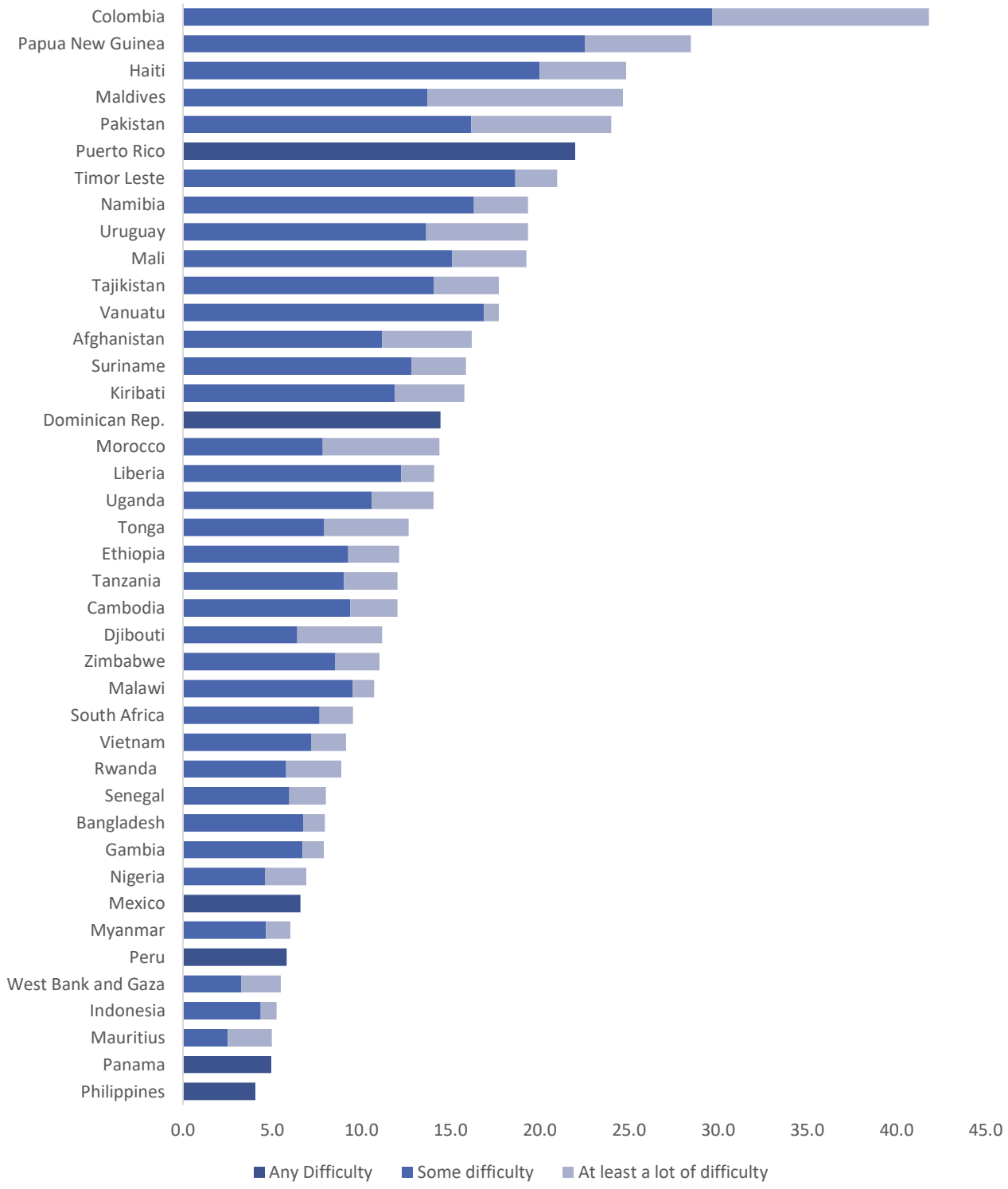
In the countries with a graded answer scale, having 'some difficulty' is more common than having 'at least a lot of difficulty'. The median prevalence of 'some difficulty' and 'at least a lot of difficulty' stand at 9.4% and 2.5% respectively. Figure 5.1 below gives the prevalence rate of 'any functional difficulty' at the individual level from the lowest to the highest with a breakdown for 'some difficulty' and 'at least a lot of difficulty' for countries with a graded answer scale.

The prevalence of functional difficulties is higher at the household level than at the individual level in all countries. As shown in Figure 5.2, the household level prevalence ranges from a minimum of 9.4% in the Philippines to a maximum of 68.3% in Colombia. The median household level prevalence stands at 27.8%, i.e. more than one in four households has a functional difficulty.

Functional difficulties tend to be more common in rural areas, affect older age groups more than younger ones, as well as women more than men. In most countries, seeing and walking difficulties are more prevalent than hearing, cognition, self-care or communication difficulties as shown in Figure 5.3.

FIGURE 5.1: PREVALENCE OF FUNCTIONAL DIFFICULTIES AMONG ADULTS AGE 15 + (%)

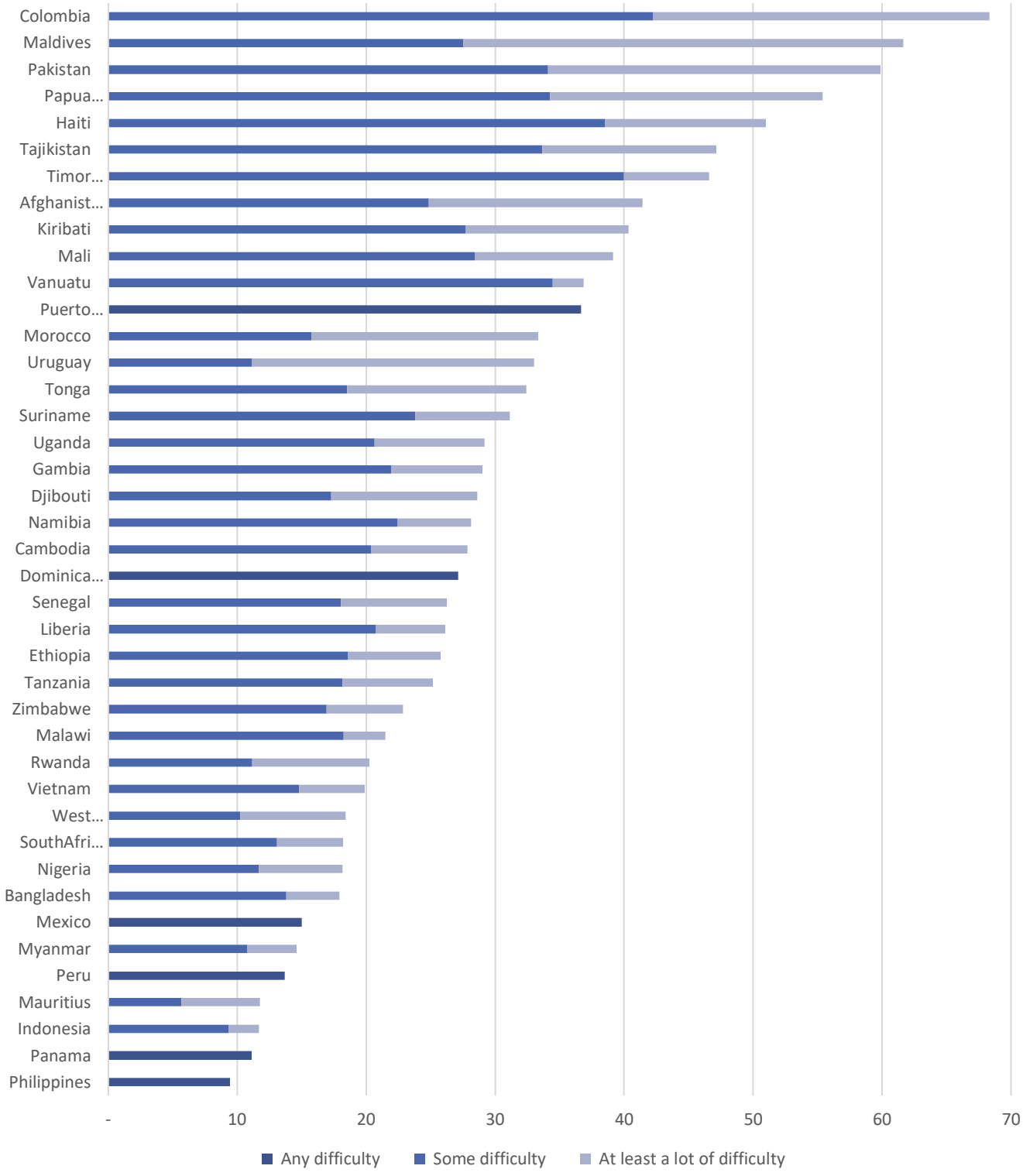
Table Supporting Figure 5.1



Source: Own calculations based on datasets in Table 4.1

FIGURE 5.2: PREVALENCE OF FUNCTIONAL DIFFICULTIES AMONG HOUSEHOLDS (%)

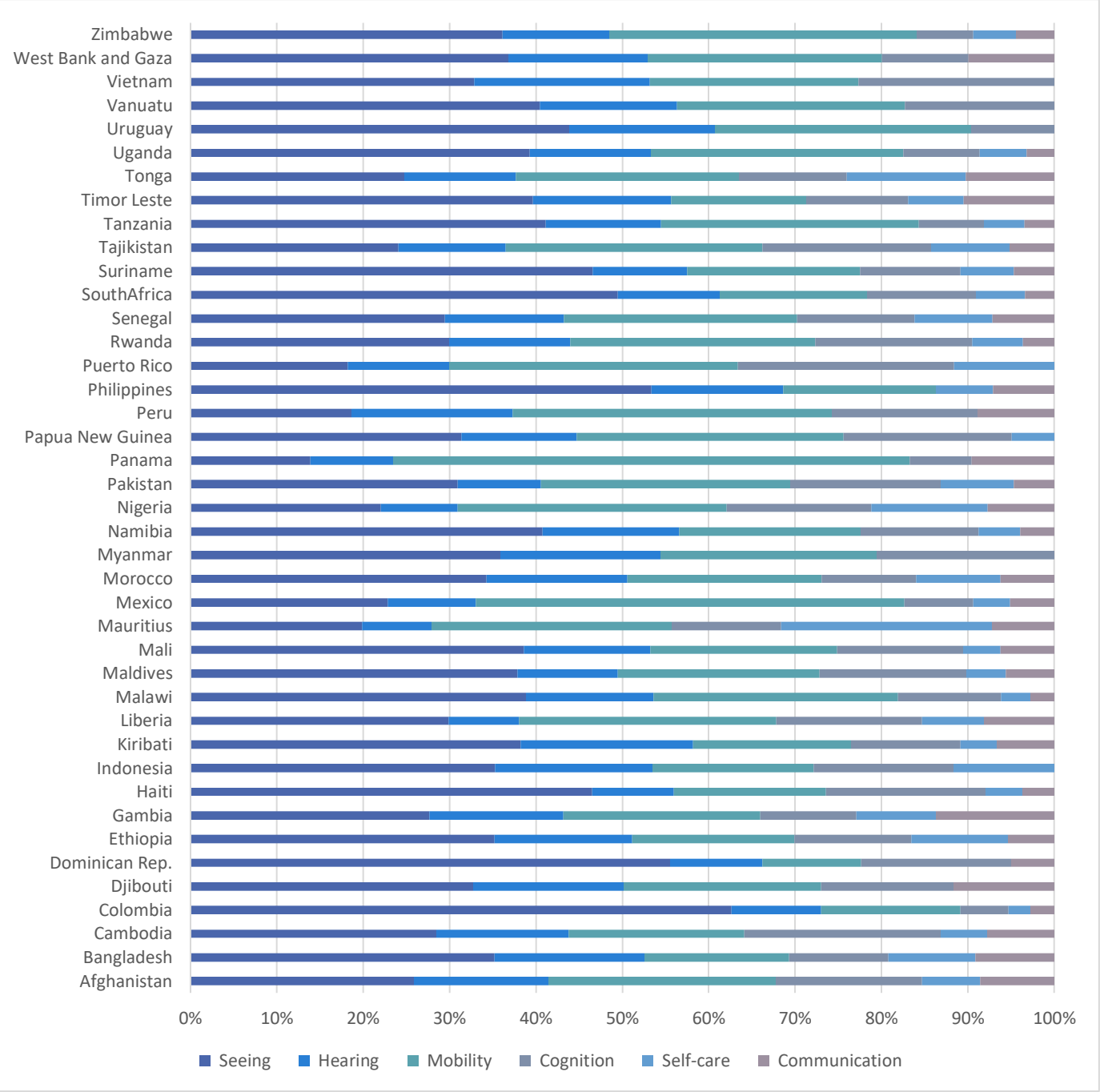
Table Supporting Figure 5.2



Source: Own calculations based on datasets in Table 4.1.

FIGURE 5.3: TYPES OF FUNCTIONAL DIFFICULTIES AMONG ADULTS WITH ANY DIFFICULTY (%)

Table Supporting Figure 5.3



Source: Own calculations based on datasets in Table 4.1

Notes: Although the Philippines Census questionnaire had a question on cognitive difficulty, there was no information on this in the datafile. For Indonesia, communication and cognition domains are together under cognition.

B. DISCUSSION

Overall, functional difficulties affect sizeable proportions of individuals and households. Based on national data for 41 countries, this study estimates that disability is highly prevalent among adults and their households. Only two countries have prevalence rates below 5% among adults 15 and older and the median prevalence of any functional difficulty among adults in the 41 countries stands at 12.6%.

This result is overall in line with estimates of global prevalence among adults of the last decade that use different datasets, survey questions and methodology[9] (WHO-World Bank 2011, Mitra and Sambamoorthi 2014).

Functional difficulties tend to be more common among women than men, in rural areas compared to urban areas, as well as among older individuals. More research is needed on such patterns, notably on the higher prevalence found among women in this report and in other studies (WHO-World Bank 2011; Mitra and Sambamoorthi 2014).

The national prevalence estimates in this paper may offer a lower estimate of prevalence given that only four to six functional difficulties are measured. More data collection efforts are needed for instance using the Washington Group Enhanced short set or Extended set of questions to capture psychosocial and mental health-related functional difficulties.

In this study's findings, there is considerable variation in the prevalence of functional difficulties across the 41 countries. Variation could be due to various factors including differences in the underlying age and sex population structures, environmental barriers, access to assistive devices and healthcare, but also differences in survey questions, translations and survey staff training. Although the disability questions used in this report are deemed internationally comparable, there are still some differences in the questions used that could drive the differences in prevalence estimates across countries. First, there are differences between the 21 countries with the WGSS, on the one hand, and the 20 countries with other functional difficulty questions, on the other. There is more variability in prevalence estimates among the countries with other functional difficulty questions (min: 4.1%, max: 41.8%, sd=9.6) compared to the countries with the WGSS (min: 6.9%, max: 24.9%; sd=5.8)[10]. This is to be expected as countries with other functional difficulty questions used varied

[9] Using the 2002-2004 World Health Survey (WHS) for 59 countries and with a score that aggregates answers to 15 questions in the WHS on difficulties experienced in eight domains (vision, mobility, cognition, self-care, pain, interpersonal relationships, sleep and energy, affect), WHO-World Bank (2011) estimated a global prevalence of 15% among adults. Still using the WHS, but this time for 54 countries and only four questions and domains (seeing, concentrating, moving around, self-care), Mitra and Sambamoorthi (2014) find a prevalence of 14% for all adults. As part of the Global Burden of Disease (GBD) study (Murray and Lopez 1996), disability prevalence is regularly estimated: it is inferred from data on health conditions and impairments alone using assumptions on distributions of limitations that may result from health conditions and impairments that last six months or more. For instance, the 2004 GBD study (WHO 2008) suggests that globally, among adults over the age of 15, 19.4% have a severe or moderate disability and 3.8% have a severe disability.

[10] These minima, maxima and standard deviations are for individual level prevalence rates.

wording in questions and answers [11] and sometimes do not have the self-care and communication domains. In addition, even among countries with the WGSS, there may be differences in the way the questions are implemented (e.g. placement and labeling within a questionnaire, training of census/ survey workers on how to administer the questions) or environmental factors (e.g. awareness and potential stigma around functional difficulties) that could also influence how the questions are perceived and prevalence estimates.

In addition, while the WGSS or other functional difficulty questions can be used to estimate prevalence, they do not show in and of themselves if and how some functional difficulties might be avoidable. Functional difficulties may be preventable, at least in part. There is evidence that, at least in some LMICs, only a minority of persons with at least a lot of difficulties use assistive devices (e.g. glasses, hearing aids, wheelchairs) (e.g. Eide and Mmatli 2016, Mitra 2018). This could be due to a variety of reasons including the lack of availability of assistive devices or services, or their lack of affordability. More broadly, rehabilitation needs are large and are rarely fulfilled in LMICs, and poverty may prevent individuals from taking measures to reduce their functional difficulties.

The extent to which some of the functional difficulties might be preventable through policies that address environmental barriers to healthcare or in the community, assistive devices, and underlying health conditions needs attention.

Most of the countries under study are LMICs. The sizeable prevalence found in LMICs is consistent with the *World Report on Disability* (p. 30) but stands in contrast to results in earlier studies that had typically shown higher disability prevalence in high income countries (HIC) compared to LMICs (e.g. Helander 1999). This result of earlier studies is due, at least in part, to the fact that LMICs used to primarily use impairment questions which are not internationally comparable and lead to low prevalence estimates. This report uses functional difficulty questions that are deemed internationally comparable. The sizeable prevalence found in LMICs in this study using functional difficulty questions suggests that disability is an important international development issue and that there is a need for further research on the factors related to development that may have an impact on prevalence and inclusion.

[11] It is perhaps not surprising that Colombia and Papua New Guinea have the highest prevalence rates as their answer scale is the reserve of the WGSS as follows: 1. Cannot do at all; 2. A lot of difficulty; 3. Some difficulty; 4. No difficulty.

6. EDUCATION

This section describes and discusses the main results on education. The entire set of results on education in available in the Education Results Tables.

This report uses several indicators on educational outcomes for adults and their households. The first one is the share of the adult population who has ever attended school. In addition, the highest level of educational attainment achieved is captured through three indicators: share of adults with less than primary school completion, the share of adults with primary school completion and the share of adults with secondary school completion or higher. The report also includes results for the literacy rate defined as the share of individuals who can read and write in any language (SDG indicator 4.6.1). At the household level, we compare for households with and without an adult with a functional difficulty, the share of household heads with less than primary school completion, the out of school rate for children age 6 to 14 in the household (SDG indicator 4.1.4) and the share of household expenditures dedicated to education (e.g. tuition, books). For children ages 6 to 14 who are not enrolled in school, it should be noted that children are not separated by disability status. Instead, the out-of-school rate is disaggregated depending on whether children live in households with and without an adult with a functional difficulty.

A. RESULTS

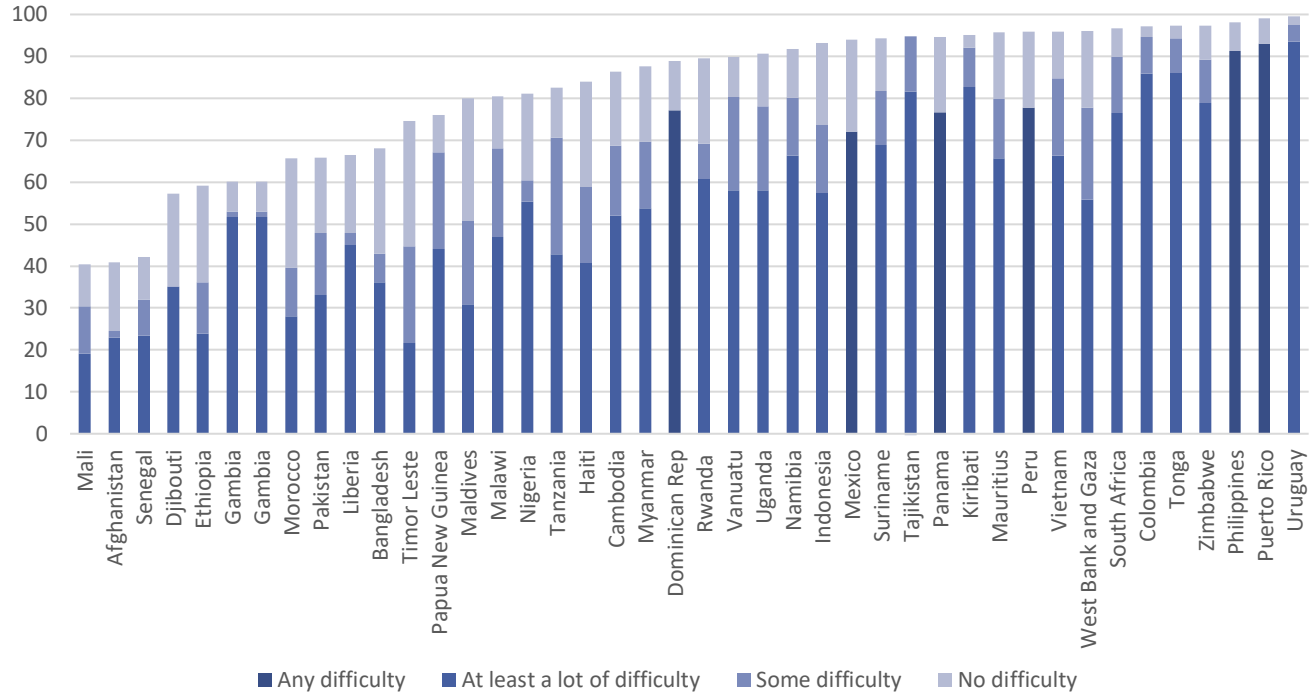
For the share of adults who ever attended school, educational attainment indicators and literacy rates, results consistently point at adults with functional difficulties being worse off in all countries. For instance, in the Philippines, the ever attended school rate is at 91% for persons with any difficulty compared to 98% for persons with no difficulty.

In addition, there is a gradient in the disability gap for educational indicators, i.e. persons with some difficulties are worse off than persons with no difficulty, but better off than persons with at least a lot of difficulty. This is illustrated in Figure 6.1 for the 35 countries with a graded answer scale. For instance, in Mali, the ever attended school rates stand at 19%, 30% and 40% for persons with at least a lot of difficulty, some difficulty and no difficulty respectively.

Women and rural residents tend to have lower ever attended school rates, educational attainment indicators, and literacy rates compared to men and urban residents, respectively. The disability gap for these educational outcomes also tends to be larger among women than men and in rural areas compared to urban areas, leading to vast differences in most countries in terms of educational outcomes between men with no functional difficulty and women with functional difficulties, and urban residents with no functional difficulty and rural residents with functional difficulties. In all countries, literacy rates are higher for younger age groups compared to older ones, reflecting an improved access to schooling across generations. At the same time, this report finds that the disability gap is larger among the younger age groups with a median at 11 percentage points for adults ages 15 to 29, compared to seven and six percentage points for adults ages 30 to 44 and adults 45 to 64 respectively.

FIGURE 6.1: EVER ATTENDED SCHOOL RATES (%)

Table Supporting Figure 6.1



Source: Own calculations based on datasets in Table 4.1.

Note: For each country, the ever attended school rate for a particular functional difficulty group is at the level of the top of the bar in the relevant color in the legend. For instance, for persons with no difficulty, the ever attended school rate is at the very top of the entire bar.

At the household level, the share of household heads who ever attended school is lower among households with any functional difficulty compared to households with no difficulty in 37 out of 41 countries. For children's out of school rates, results are mixed. While for most countries, there is no pattern across household functional difficultly status, in 10 countries there is a significantly higher share of children who are out of school in households with functional difficulties while in five countries the opposite is found. Finally, the share of household expenditures spent on education tends to be similar for households with and without an adult with a functional difficulty in most countries.

B. DISCUSSION

This report adds to a growing literature showing that adults with disabilities tend to have lower educational attainment (United Nations 2019, pp.81-83). This report finds that gaps in ever attended school rates, educational attainment and literacy rates are consistently found across countries for the entire population of adults and for subgroups (by sex, rural/urban, all age groups). At the same time, the disability gap is larger for women and rural residents than for men and urban residents respectively. Women and rural residents with disabilities seem to experience intersectional disadvantages reflected in worse education indicators.

The disability gaps in education indicators found in this report result at least in part from lower school attendance rates among children with disabilities (Filmer 2008; Mizunoya et al 2018; United Nations 2019). A disability onset in childhood or youth may impact education due to a variety of factors that interact with each other, notably a lack of resources and environmental barriers. Under the CRPD, "States Parties recognize the right of persons with disabilities to education <…> States Parties shall ensure an inclusive education system at all levels and lifelong learning." National education policies need to specifically include children with disabilities. Teacher training systems need to mainstream the skills and knowledge of inclusive education. The broader environment, whether physical, structural and attitudinal, needs to make it possible for children to get to school. With respect to attitudes, children, parents and community members need to be sensitized to create enabling environments that promote access to education.

The larger disability gap on literacy rates found for the youngest age group is cause for concern. It suggests that, with universalization efforts for primary and secondary education, a priority in SDG Goal 4, attendance among children with disabilities needs to improve fast. Otherwise, inequality across disability status in terms of literacy may be widening and feed into a disability and development gap, a situation where disability related inequalities may expand as countries develop (Groce and Kett 2013). Disability-inclusive universalization policies are necessary so as to avoid the increase in inequality and the marginalization from schools for children with disabilities.

The disability gaps in education found in this report could be due to other factors (Cutler et al 2010). It may be that having less education results from early life conditions such as extreme poverty or malnutrition that also lead to functional difficulties. Having less education may put persons at higher risk of getting a health condition or injury and a resulting functional difficulty perhaps through jobs with risky working conditions or lack of access to health care. Research and policies that aim to prevent the onset of functional difficulties among persons with low educational attainment are necessary.

This report finds a gradient in the disability gap for educational indicators, i.e. that persons with some difficulties are worse off than persons with no difficulty, but better off than persons with at least a lot of difficulty. The group of persons with some functional difficulties should not be ignored in research and policy and data on functional difficulties should be collected with a graded answer scale rather than yes/no.

Finally, the mixed results on children out of school rates and the absence of a difference found for education expenditures depending on the household's functional difficulty status is surprising given the results from a small but growing literature on the negative relationship

between parental disability and children's educational outcomes (e.g. Mont and Nguyen 2013). The data sets used in this study could be used in further research on parental disability and children's school enrollment and outcomes.

7. WORK

A. BACKGROUND

Article 27 of the CRPD "recognizes the right of persons with disabilities to work, on an equal basis with others; this includes the opportunity to gain a living by work freely chosen or accepted in a labor market and work environment that is open, inclusive and accessible to persons with disabilities". It also prohibits all forms of employment discrimination, calls for reasonable accommodation in the workplace, promotes access to vocational training and self-employment opportunities. This section describes and discusses the main results on work indicators. The entire set of results is available in the Work Results Tables.

The term "work" is broad and includes both paid and unpaid work. Unpaid work can be, for instance, working in a family enterprise. Meanwhile, paid work means being employed by another person or organization whether in the formal or informal economy. This report uses five work indicators for adults. The first one is the employment population ratio, also called the employment rate. It captures the share of the adult population who is employed, i.e. working for pay or those who are self-employed.

The youth idle rate measures the share of youth aged 15-24 years who are not enrolled in school and are not employed (SDG indicator 8.6.1). We measure the share of the employed in the manufacturing sector (SDG 9.2.2) and the share of women who hold managerial positions (SDG 5.5.2). Finally, the informal work indicator[12] captures the share of the adult population who do informal work, i.e. who are self-employed, those who work for a microenterprise of five or few employees or in a firm that is unregistered and those who have no written contract with their employers. It also includes persons who work unpaid, including for a family business.

Except for the youth idle rate which focuses on adults ages 15 to 24, the work indicators are generally reported for all adults ages 15 and older. For seven countries for which the Demographic and Health Survey (DHS) females and males modules were used (Cambodia, Colombia, Haiti, Maldives, Mali, Pakistan, Timor Leste), the work information in DHS covers ages 15 to 49 and ages 15 to 54 for women and men respectively.

B. RESULTS

Adults with any functional difficulty have significantly lower employment population ratios in 30 out of 40 countries. For adults with at least a lot of difficulty, this is the case for 29 out of 35 countries. The disability gap in the employment population ratio ranges from a low of 2 percentage points in Malawi to a high of 48 percentage points in Mauritius. The median stands at eight percentage points.

[12] It is related to, but is not exactly the same as, SDG indicator 8.3.1.

For 15 of the 35 countries, there is a gradient in the employment population ratio, with persons with some difficulty having lower employment population ratios than persons with no difficulty but higher ones than persons with at least a lot of difficulty.

As shown in Tables 7.1 and 7.2, while women consistently have lower employment population ratios than men, the disability gap in the employment population ratio tends to be larger for men than for women with a median gap of 10 and five percentage points respectively. It is also often larger for older age groups.

Four countries have a reverse gap, i.e. a larger employment population ratio for persons with any difficulty compared to persons with no difficulty (disaggregation a: Colombia, Papua New Guinea, Timor Leste, Vanuatu). However, for all of them except Colombia, this result only holds for persons with some difficulty and not persons with at least a lot of difficulty with disaggregation b.

The youth idle rate shows a similar pattern as the employment population ratio across countries with a disability gap in 22 out of 38 countries. The disability gap in the youth idle rate is larger in rural areas compared to urban areas. In most countries, the share of persons in manufacturing and the share of women in managerial positions are similar across functional status but are significantly lower for persons with functional difficulty in 12 and eight countries respectively.

Adults with any functional difficulty are significantly more likely to do informal work in 26 out of 37 countries. Persons with some and at least a lot of difficulty have a higher rate of informal work in respectively 17 and 20 out of 29 countries.

C. DISCUSSION

Overall, employment population ratios are lower for persons with functional difficulties compared to persons with no difficulty in most countries.

The significance and magnitude of the gap varies considerably across contexts. This may come from the variety of survey questions that capture work. It is noteworthy that most of the countries that do not have a disability gap are countries with DHS datasets, where work questions are only asked among a subsample of adults who are young or middle aged and do not capture older adults.

There are also contextual variations in the accessibility of the work environment, the availability of workplace accommodations, and the presence of discrimination. The cultural and social context also matters in so far as negative attitudes toward the employment potential of persons with disabilities in society at large or within the household might limit access to work. The policy context is also relevant: for instance, are there vocational rehabilitation programs available? Are there disability cash transfer programs? Such programs, depending on how they are designed and put into practice, might facilitate or limit access to work for persons with disabilities.

In addition, the results in this report point out that work differences across functional difficulty status are more pronounced among males than females. For women, barriers to work may well be primarily gender-related.

This paper finds a significantly higher proportion of adults with functional difficulties who do informal work in a majority of countries. Other

studies do find a higher share of workers with disabilities in self-employment compared to workers without disabilities in several countries (e.g., Eide and Kamaleri, 2009; Mitra and Mizunoya 2013). The data used in this study does not help us determine if they are constrained into informal work due to barriers to the formal sector, which should be the subject of further research.

TABLE 7.1: FEMALES' EMPLOYMENT POPULATION RATIO (%)

Country	No Difficulty	Any difficulty	Difference	Statistical Significance
Afghanistan	15	12	3	***
Bangladesh	11	8	3	***
Cambodia	76	71	4	*
Colombia	55	61	-6	***
Djibouti	10	11	-1	NS
Dominican Rep.	35	26	9	***
Ethiopia	43	38	5	**
Gambia	42	40	1	NS
Haiti	43	53	-11	***
Indonesia	46	29	17	***
Kiribati	33	31	3	***
Liberia	70	65	5	**
Malawi	74	73	1	NS
Maldives	40	41	-1	NS
Mali	53	49	3	NS
Mauritius	39	10	29	***
Mexico	37	18	19	***
Morocco	15	9	7	***
Myanmar	46	24	22	***
Namibia	58	56	2	NS
Nigeria	53	49	5	NS
Pakistan	17	23	-6	***
Panama	39	15	25	***
Papua New Guinea	67	70	-3	*
Peru	62	35	26	***
Puerto Rico	40	12	27	***
Rwanda	50	34	16	***
Senegal	20	18	1	***
South Africa	37	29	8	***
Suriname	41	36	5	***
Tajikistan	17	14	3	**
Tanzania	83	76	6	***
Timor Leste	26	37	-12	***

Tonga	39	27	12	***
Uganda	68	64	4	NS
Uruguay	55	28	28	***
Vanuatu	58	60	-2	***
Vietnam	73	34	39	***
West Bank and Gaza	17	9	8	***
Zimbabwe	64	65	-1	NS

Source: Own calculations based on datasets in Table 4.1

*Notes: *, **, *** indicate that the difference is statistically significant at the 10%, 5% and 1% levels respectively. NS stands for not significant*

TABLE 7.2: MALES' EMPLOYMENT POPULATION RATIO (%)

Country	**No Difficulty**	**Any difficulty**	**Difference**	**Statistical significance**
Afghanistan	69	55	14	***
Bangladesh	79	53	26	***
Cambodia	90	88	3	NS
Colombia	89	92	-3	***
Djibouti	34	30	4	*
Dominican Rep.	60	44	16	***
Ethiopia	62	58	5	*
Gambia	61	60	1	NS
Haiti	71	79	-8	***
Indonesia	81	61	20	***
Kiribati	49	45	4	***
Liberia	79	77	2	NS
Malawi	82	80	2	NS
Maldives	96	90	6	***
Mali	87	93	-6	***
Mauritius	73	22	51	***
Mexico	76	41	35	***
Morocco	70	41	29	***
Myanmar	81	52	29	***
Namibia	67	58	9	***
Nigeria	66	53	13	***
Pakistan	97	93	4	**
Panama	73	35	38	***
Papua New Guinea	66	71	-5	***
Peru	78	46	32	***
Puerto Rico	51	16	35	***
Rwanda	65	44	21	***
Senegal	58	45	13	***

South Africa	53	42	11	***
Suriname	71	61	10	***
Tajikistan	57	40	17	***
Tanzania	90	80	9	***
Timor Leste	62	79	-17	***
Tonga	61	49	12	***
Uganda	74	67	7	**
Uruguay	76	45	30	***
Vanuatu	77	79	-2	***
Vietnam	82	48	34	***
West Bank and Gaza	57	32	25	***
Zimbabwe	74	69	5	***

Source: Own calculations based on datasets in Table 4.1

*Notes: *, **, *** indicate that the difference is statistically significant at the 10%, 5% and 1% levels respectively. NS stands for not significant*

8. HEALTH

This section presents results for four indicators on health for adults and their households. The first two are indicators that are proxies for health and capture some of the living conditions of the household an adult is part of: the share of adults living in households with safely managed drinking water (CRPD Article 25, SDG indicator 6.1.1) and the share of adults living in households with safely managed sanitation (CRPD Article 25, SDG indicator 6.2.1). For selected DHS micro-datasets, we also report the share of women who self-report that they have their family planning needs met through modern contraceptive methods (CRPD Article 23, SDG indicator 5.6.1) and the share of women reporting being subject to domestic violence by their intimate partner in the past 12 months (CRPD Article 16, SDG indicator 16.1.3). Domestic violence may be physical, psychological or sexual violence.

Indicators are reported for all adults ages 15 and older except for family planning and domestic violence which are reported for women only and for a smaller age range (ages 15 to 49).

A. RESULTS

The entire set of results on health for these indicators is available in the Health Results Tables.

For the share of adults with safely managed drinking water and the share with safely managed sanitation, persons with functional difficulties have significantly lower shares in 24 and 20 countries, respectively, out of 39 countries. For about 10 countries, there is a gradient in this gap, with persons with some difficulty having a lower of access to safe water or sanitation than persons with no difficulty but a higher share than persons with at least a lot of difficulty. For a handful of countries, there is a reverse gap with persons with functional difficulties having higher rates of access than persons with no functional difficulties (e.g. Afghanistan, South Africa).

Table 8.1 has results on the share of women who have their family planning needs met. Results vary across countries. In two of the 11 countries (Cambodia, Haiti), women with any difficulty are significantly less likely to have their family planning needs met through modern contraceptive methods, while in three countries (Maldives, Mali, Pakistan), women with any difficulty are significantly more likely to have their needs met. For the remaining countries, there is no difference across functional difficulty status groups.

Table 8.2 presents results on women reporting being subject to violence by their intimate partner in the past 12 months. In all countries except Haiti, Senegal and Timor Leste, the rate of violence is significantly higher for women with any difficulty compared to women with no difficulty. The disability gap is the largest in Uganda at 14 percentage points, 66% of women with any difficulty reporting violence compared to 52% for women with no difficulty.

TABLE 8.1: WOMEN REPORTING FAMILY PLANNING NEEDS MET (%)

Country	No Difficulty	Any Difficulty	Difference	Statistical Significance Of Difference
Cambodia	57	50	6	*
Colombia	87	87	-1	NS
Haiti	42	31	11	***
Maldives	38	47	-9	***
Mali	41	46	-5	*
Nigeria	35	38	-3	NS
Pakistan	44	48	-4	*
Senegal	54	59	-5	NS
South Africa	80	79	0	NS
Timor Leste	46	50	-4	NS
Uganda	54	54	0	NS

Source: Own calculations, DHS datasets in Table 4.1

*Note: *, **, *** indicate that the difference is statistically significant at the 10%, 5% and 1% levels respectively. NS stands for not significant*

TABLE 8.2: WOMEN REPORTING BEING SUBJECT TO DOMESTIC VIOLENCE IN THE PREVIOUS 12 MONTHS (%)

Country	No Difficulty	Any difficulty	Difference	Statistical significance of difference
Cambodia	28	41	-13	**
Haiti	33	36	-2	NS
Mali	48	54	-6	*
Pakistan	32	40	-8	***
Senegal	21	19	2	NS
South Africa	23	29	-6	**
Timor Leste	40	41	-1	NS
Uganda	52	66	-14	***

Source: Own calculations, DHS datasets from Table 4.1

*Note: *, **, *** indicate that the difference is statistically significant at the 10%, 5% and 1% levels respectively. NS stands for not significant*

B. DISCUSSION

This section presented results for four health indicators on water, sanitation, family planning and domestic violence. Access to clean water and adequate sanitation is critical to maintaining public health. They fall under SDG Goal 6 "to ensure the availability and sustainable management of water and sanitation for all". We find that persons with functional difficulties have a significantly lower share of access to safely managed water and sanitation in respectively 24 and 20 countries out of 39 countries.

The data used in this report for water and sanitation have important limitations. Persons with disabilities may face more challenges in accessing adequate water and sanitation and hygiene due to a lack of access within the household resulting from a lack of financial resources to adapt water or sanitation facilities. It may also result from barriers in public environments. We do not have any data on how persons with functional difficulties specifically access water or sanitation facilities, as we only estimate the share of persons with functional difficulties who live in households with adequate water or sanitation. Further research is needed with individual level data that might be able to capture such barriers.

Family planning allows individuals to achieve desired family size, birth spacing and improve health outcomes for infants, children, women, and families. Access to contraceptives prevents unsafe sex, abortions, HIV (human immunodeficiency virus), and other sexually transmitted infections, which constitute significant risk factors for women's mortality and morbidity (Glasier et al 2006). Yet, women with disabilities and their access to these services have been neglected for decades because of the widespread assumption that persons with disabilities are not sexual or sexually active (Milligan et al 2001). This report finds mixed results on family planning across eight countries with some countries with no difference across functional difficulty status, while two countries exhibit a disability gap. The sample size was too small (below 100) to disaggregate further and isolate persons with at least a lot of difficulty (as per disaggregation b and c).

Intimate partner violence is a public health issue and a violation of human rights. Article 16 of the CRPD stipulates that States should put in place legislation and policies to protect women with disabilities from exploitation, violence and abuse. SDG Goal 5 calls for "the elimination of all forms of violence against all women and girls in the public and private sphere". Despite the international policy efforts undertaken against violence, there is still little cross-country comparable evidence on disability and domestic violence despite anecdotal accounts of a higher risk of violence for women with disabilities in many countries. One exception is the meta-analysis by Hughes et al (2012) covering 26 studies on the relationship between disability and domestic violence. They find that on average women with disabilities are 1.5 times more likely to be subject to violence compared to women without a disability. Their analysis aggregates odds ratios that were computed based on different definitions of disability or violence. The findings of this report with internationally comparable data on disability and violence confirm this result with a disability gap in domestic violence in five out of eight countries. Not finding a disability gap in all countries for domestic violence is surprising and suggests potential limitations in the data and the need for further research on the risk of violence for women with disabilities, especially in LMICs (Dowse et al 2016). During the pandemic, as

domestic violence has increased (Cousins 2020), there is an urgent need to strengthen mechanisms to prevent violence and support all women victims of violence, including women with disabilities.

9. STANDARD OF LIVING

This section describes and discusses the main results on standard of living. The entire set of results is available in the Standard of Living Results Tables. This section presents results for nine indicators related to the standard of living for adults and their households. They inform CRPD Article 28 on "Adequate standard of living and social protection" and include the share of adults in households with electricity (SDG 7.1.1); using clean fuel for cooking (SDG 7.1.2); with adequate housing; who own assets; who own a cell phone (SDG 5.b.1); who are food insecure (SDG 2.1.2), who have recently experienced a shock (e.g. flooding, drought); who receive social protection (SDG 1.3.1).

A. RESULTS

Table 9.1 presents an overview of the results across countries for electricity, using clean fuel for cooking, with adequate housing; who own assets; who own a cell phone. It shows a disability gap in close to all countries for assets and cell phone ownership and in more than half of countries for electricity, clean fuel and adequate housing. The mean and median difference across functional difficulty status is under five percentage points for all indicators except for cell phone ownership at seven percentage points.

Table 9.2 shows the share of food insecure adults in 12 countries. The share of food insecure adults is the proportion of adults living in households that experiences food insecurity. In all countries except Afghanistan, persons with functional difficulties have a significantly higher share of food insecure adults. In the 11 countries with a food insecurity disability gap, the gap is large with a median at 10 percentage points. For instance, in Namibia, the share of food insecure adults is at 35% for persons with any functional difficulty compared to 25% for persons with no difficulty.

Table 9.3 shows the share of adults in households who experienced a shock (e.g. flooding, drought) in nine countries. In all countries, persons with functional difficulties have a significantly higher share of adults who experienced a recent shock. The gap is sizeable between a low of five percentage points in Malawi and a high of nine percentage points in Uganda.

In 13 countries with detailed household expenditures data, Table 9.4 compares the share of total expenditures dedicated to health out of pocket expenditures for households with and without an adult with a functional difficulty. In all but two countries, households with any functional difficulty dedicate a significantly higher share of expenditures to health. For instance, in Bangladesh and West Bank Gaza, households with any functional difficulty dedicate 50% more of their total expenditures to health costs than households with no difficulty.

Table 9.5 shows the share of adults in households with social protection. The share of adults with social protection is the share of adults in households who have received social protection benefits in the past year or currently receive them (e.g. cash benefits, in kind transfers). In 10 out of 12 countries, the share of adults with social protection is higher among persons with functional difficulties. In these 10 countries, the difference is at six percentage points or below, except for Bangladesh and

Namibia with differences of 10 and 25 percentage points respectively.

TABLE 9.1: DIFFERENCE IN ADEQUATE STANDARD OF LIVING INDICATORS BETWEEN PERSONS WITH NO DIFFICULTY AND ANY DIFFICULTY ACROSS COUNTRIES (PERCENTAGE POINTS)

Difference	Electricity	Clean Cooking fuel	Adequate housing	Owns assets	Owns mobile
Mean difference	2.5	2.9	2.2	3.3	7.2
Median difference	1.5	2.2	2.2	3.1	7.1
Maximum difference	9.3	13.0	9.3	9.2	18.0
Minimum difference	-0.7	-7.6	-4.6	-2.2	0.3
Countries with a disability gap	30/38	28/36	26/37	35/38	34/36

Source: Own calculations based on datasets in Table 4.1

TABLE 9.2: ADULTS IN FOOD INSECURE HOUSEHOLDS (%)

Country	No Difficulty	Any difficulty	Difference	Statistical significance of the Difference
Afghanistan	92	89	3	***
Djibouti	10	14	-4	***
Ethiopia	29	41	-12	***
Liberia	59	69	-10	***
Malawi	52	58	-6	***
Namibia	25	35	-10	***
Nigeria	39	53	-14	***
Peru	3	4	-1	*
South Africa	54	65	-12	***
Tanzania	47	63	-16	***
Uganda	21	34	-13	***
West Bank and Gaza	26	36	-10	***

Source: Own calculations based on datasets in Table 4.1

*Note: *, **, *** indicate that the difference is statistically significant at the 10%, 5% and 1% levels respectively.*

TABLE 9.3: ADULTS WHO EXPERIENCED SHOCKS RECENTLY (%)

Country	No Difficulty	Any difficulty	Difference	Statistical significance of the Difference
Afghanistan	59	66	-7	***
Bangladesh	14	18	-4	***
Djibouti	8	10	-2	**
Ethiopia	58	66	-8	***
Liberia	68	74	-6	***
Malawi	66	71	-5	***
Nigeria	50	56	-6	***
Tanzania	77	85	-9	***
Uganda	42	51	-9	***

Source: Own calculations based on datasets in Table 4.1

*Note: *, **, *** indicate that the difference is statistically significant at the 10%, 5% and 1% levels respectively.*

TABLE 9.4: HOUSEHOLD HEALTH EXPENDITURES OUT OF TOTAL CONSUMPTION EXPENDITURES (%)

Country	No Difficulty	Any difficulty	Difference	Statistical significance of the Difference
Afghanistan	0	0	0	***
Bangladesh	4	6	-2	***
Djibouti	0	1	-1	***
Liberia	0	0	0	NS
Malawi	1	2	-1	***
Namibia	1	1	0	***
Nigeria	1	1	0	**
Peru	3	4	-1	***
Tajikistan	2	5	-3	***
Tanzania	3	5	-2	***
Uganda	8	10	-2	**
West Bank and Gaza	4	6	-2	***
Zimbabwe	1	2	-1	***

Source: Own calculations based on datasets in Table 4.1

*Note: *, **, *** indicate that the difference is statistically significant at the 10%, 5% and 1% levels respectively. NS stands for not significant*

TABLE 9.5: ADULTS IN HOUSEHOLDS RECEIVING SOCIAL PROTECTION (%)

Country	No Difficulty	Any difficulty	Difference	Statistical significance of the Difference
Bangladesh	4	15	-10	***
Ethiopia	14	17	-3	**
Liberia	18	23	-5	***
Malawi	19	17	2	***
Namibia	7	32	-25	***
Nigeria	13	9	4	***
Papua New Guinea	47	53	-6	***
Peru	41	44	-3	***
South Africa	57	62	-6	***
Tanzania	6	11	-5	***
West Bank and Gaza	34	41	-6	***
Zimbabwe	3	5	-2	***

Source: Own calculations based on datasets in Table 4.1

*Note: *, **, *** indicate that the difference is statistically significant at the 10%, 5% and 1% levels respectively.*

B. DISCUSSION

This section presented results on nine indicators related to standard of living. A disability gap, i.e. a disadvantage for persons with functional difficulties compared to persons with no functional difficulty, is consistently found across countries in terms of food insecurity, exposure to shocks, asset ownership and larger health expenditures. For a majority of countries, there is a disability gap for electricity, clean fuel and adequate housing and adults with functional difficulties tend to receive social protection more often than persons with no difficulty.

Access to social protection programs, even disability-targeted ones, has been shown to be restricted by a variety of barriers, including unclear eligibility criteria (Banks et al 2017). It needs to be the subject of policy and research attention to ensure access and investigate their adequacy in alleviating poverty.

Most of the countries under study in this report are LMICs where, due to the variability of income over time and the difficulty to measure it for workers doing informal work, poverty is often measured through assets/living conditions or consumption expenditures. Several studies show that households with disabilities have fewer assets and worse living conditions compared to other households (World Bank 2009) or a higher prevalence in lower asset quintiles (Bernabe-Ortiz et al 2017; Hosseinpoor et al 2013; Kuper et al 2016). This result however, has not been consistent and several studies find no significant association (Trani and Loeb 2010) or varied results across countries (Mitra et al 2013). This report contributes to this literature by covering many countries and using consistent disability and standard of living measures across countries. The disability gap was consistent across countries for asset

ownership and found for a majority of countries for electricity, clean fuel, adequate housing. This adds to a body of evidence documenting persons with disabilities being more often materially worse off.

Many studies use consumption expenditures instead of income to measure poverty. Several country studies have found that households with disabilities have lower expenditures than households without (e.g. Mont & Cuong (2011) (Vietnam)). Results have been more mixed in cross-country studies where disability in adulthood is associated with a higher probability of being in poverty in some countries but not in others (Filmer 2008; Mitra et al 2013).

However, using consumption expenditures is problematic to assess the well-being of households with disabilities, as they may reflect additional expenditures associated with a disability, which may boost household expenditures, while at the same time making it difficult to acquire assets or have adequate living conditions. This report shows a consistent disability gap in asset ownership as well as higher health care out of pocket costs experienced by households with functional difficulties, consistent with a growing literature on the extra costs of living of households with disabilities (Banks et al 2021; Hanass-Hancok et al 2017; Mitra et al 2017). Poverty statistics based on consumption expenditures such as the $1.90 a day do not seem adequate to capture the situation of persons with disabilities given potential extra costs of living associated with disability. Instead, measures based on assets and living conditions may be more appropriate.

10. MULTIDIMENSIONAL ANALYSIS

This section describes and discusses results through a multidimensional lens whether with a multidimensional poverty measure or a dashboard, indicator by indicator, analysis. It synthesizes the deprivations or achievements considered earlier with respect to education, health, work and the standard of living and is thus relevant to several CRPD articles (24,25,27,28). It is also relevant to SDG 1 on poverty in all its forms.

A. MULTIDIMENSIONAL POVERTY

BACKGROUND

Recently, poverty on the international scene has increasingly been understood broadly in terms of disadvantage in various dimensions of well-being (Sen 2009; UNDP 2020), as reflected in SDG 1 with poverty "in all its forms". Poverty is multifaceted and can be measured by counting the number of deprivations experienced by an individual or household (Alkire and Foster 2011). Information on the methodology is in Appendix 3 Method brief #6. The entire set of results is available in the Multidimensional Results Tables.

FINDINGS

Figure 10.1 shows the headcount or the share of adults in multidimensional poverty, i.e. with more than one deprivation among four dimensions of wellbeing (education, employment, health, standard of living)[13]. In all 39 countries, persons with functional difficulties have a higher share of adults in multidimensional poverty, and the difference is statistically significant in all but one country (Djibouti). The median disability gap is sizeable at 11 percentage points based on any difficulty, and at six and 21 percentage points for some and at least a lot of difficulty respectively. This result is driven by disproportionately lower education attainment, employment-population ratios and asset ownership among persons with functional difficulties.

As shown in Figure 10.1, in terms of multidimensional poverty, persons with some functional difficulties are worse off than persons with no difficulty, but better off than persons who experience at least a lot of difficulty. At the same time, while persons with functional difficulties are disproportionately more likely to be multidimensionally poor, not all persons with functional difficulties are poor. Some persons with functional difficulties do not experience multiple deprivations.

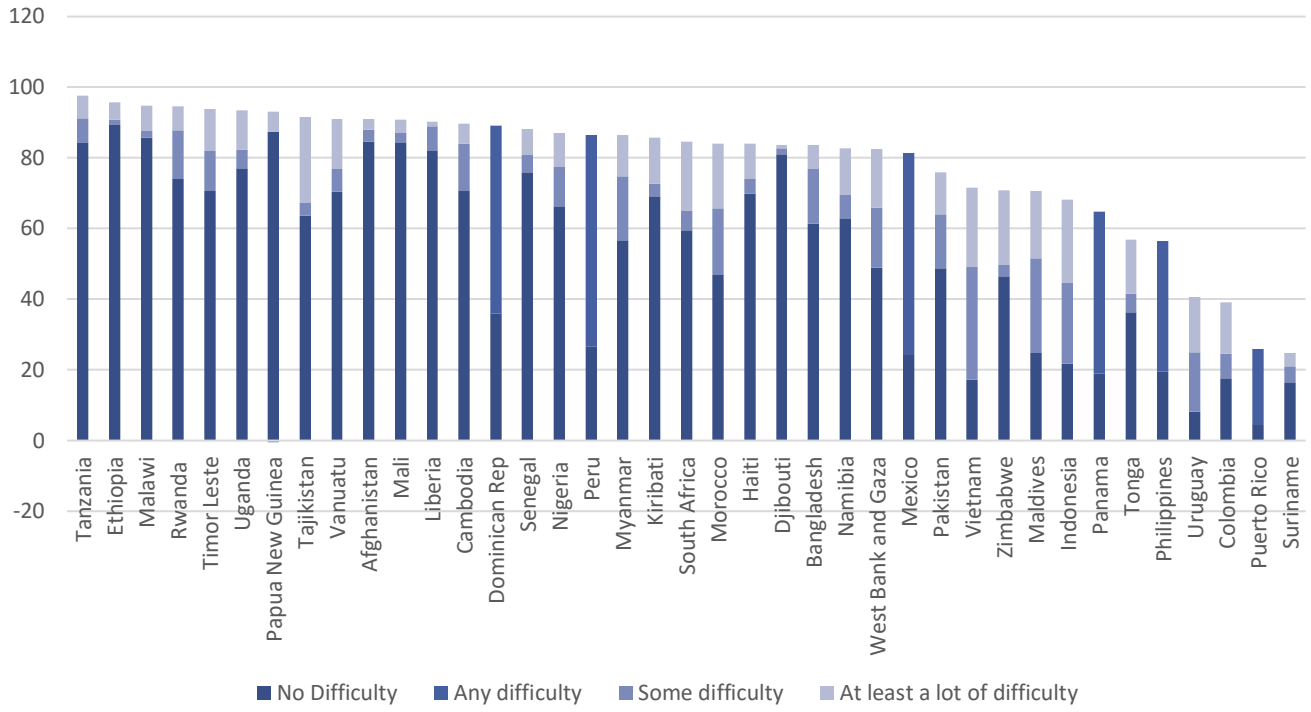
Table 10.1 shows by type of functional difficulty the share of adults in multidimensional poverty and the indicators that underlie the multidimensional poverty measure. More precisely, it gives the median share across all countries for each type of functional difficulty. While adults with all types of functional difficulties exhibit higher headcounts than adults with no difficulty, adults with self-care and communication difficulty have higher shares

[13] Details on the indicators and thresholds are in appendix 3 Method brief #6.

in multidimensional poverty compared to persons with other types of difficulties.

FIGURE 10.1: MULTIDIMENSIONAL POVERTY HEADCOUNT (%)

Table Supporting Figure 10.1



Source: Own calculations based on datasets in Table 4.1

Note: The multidimensional poverty measure is described in the report and in Method brief #6

TABLE 10.1: INDICATORS BY TYPE OF FUNCTIONAL DIFFICULTY (%)

Indicator	None	Seeing	Hearing	Mobility	Cognitive	Self-care	Communication
Adults who experience multidimensional poverty	60	72	83	82	83	91	87
Adults who have ever attended school	90	70	58	64	58	51	51
Adults who have completed secondary school or higher	18	8	5	6	5	6	6
Adults who can read and write in any language	68	46	38	39	34	25	32
Employment population ratio	56	41	37	29	29	25	30
Adults in households using safely managed drinking water	86	84	82	81	82	80	81
Adults in households using safely managed sanitation services	72	73	68	73	68	65	65
Adults in households with adequate housing	38	34	27	28	27	24	33
Adults in households owning assets	35	32	29	30	30	30	31

Source: Own calculations based on datasets in Table 4.1

B. DISCUSSION

As a group, persons with disabilities, on average, experience multiple deprivations at higher rates than persons without disabilities. This result suggests that persons with disabilities should be explicitly incorporated in policymaking and research agendas related to education, health, work and the standard of living.

This consistent association between disability and multidimensional poverty comes in contrast to the relatively more mixed evidence on disability and consumption expenditures (Filmer et al 2008).

This report contributes to a growing literature that has considered the association between disability and the experience of multiple deprivations such as non-employment, low educational attainment, social isolation, poor psychological well-being. These studies, recently reviewed in United Nations (2019) have found that disability is associated with a higher likelihood of experiencing multidimensional poverty while the very nature of deprivations may vary across countries. The global multidimensional poverty index (MPI) offers a measure of the experience of simultaneous deprivations at the household level and is increasingly used in international development policy and research (e.g. UNDP 2020). It has recently started to be disaggregated across disability status (Pinilla-Roncancio and Alkire 2020) but this effort is impeded by the inconsistent availability of disability data across countries in large household surveys such as the DHS or the LSMS.

C. MULTIDIMENSIONAL DASHBOARD

Multidimensional poverty considers the extent to which an adult may experience multiple deprivations. Another way to consider wellbeing or deprivations through a multidimensional lens is to consider indicators as part of a dashboard. The dashboard used in Table 10.2 includes 11 indicators that were commonly found in the 41 countries under study and include: ever attended school, educational attainment (secondary school or higher), literacy, employment population ratio, water, sanitation, electricity, clean fuel, adequate housing, asset ownership, cell phone ownership. It does not include indicators that were available for less than half of the countries (e.g. food insecurity).

Table 10.2 shows for each country, the share of indicators with a gap, which is the number of indicators with a disability gap out of the number of available indicators for that country. It ranges from a low of 50% in two countries (Afghanistan and Gambia) to a high of 100% in 11 countries (Indonesia, Kiribati, Mauritius, Mexico, Myanmar, Namibia, Peru, Puerto Rico, Senegal, Suriname, Uruguay). The median is at 80%. These results suggest that for the indicators covered in this study and covering education, work, health and the standard of living, inequalities are commonly found and for some countries are consistent across indicators.

TABLE 10.2: SHARE OF INDICATORS WITH A DISABILITY GAP IN EACH COUNTRY

Country	Share of indicators
Afghanistan	5/10
Bangladesh	7/10
Cambodia	8/10
Colombia	5/11
Djibouti	6/11
Dominican Rep	6/11
Ethiopia	8/11
Gambia	2/4
Haiti	8/10
Indonesia	11/11
Kiribati	10/10
Liberia	10/11
Malawi	7/11
Maldives	8/10
Mali	8/10
Mauritius	4/4
Mexico	11/11
Morocco	10/11
Myanmar	11/11
Namibia	11/11
Nigeria	8/11
Pakistan	7/10
Panama	10/11
Papua New Guinea	9/11
Peru	11/11
Philippines	8/10
Puerto Rico	3/3
Rwanda	8/10
Senegal	11/11
South Africa	6/11
Suriname	10/10
Tajikistan	5/9
Tanzania	8/11
Timor Leste	9/10
Tonga	6/11
Uganda	10/11
Uruguay	10/10
Vanuatu	9/11
Vietnam	10/11
West Bank and Gaza	7/11
Zimbabwe	8/9

Source: Own calculations based on datasets in Table 4.1.

11.CONCLUSIONS

This report provides a systematic analysis of the disability questions in national censuses and household surveys globally from 2009 to 2018 and for 41 countries. It also presents nationally representative estimates of disability prevalence and 27 socioeconomic indicators disaggregated across disability status where disability is measured through questions in national census or household surveys on functional difficulties (e.g. seeing, hearing) that are considered internationally comparable.

A. KEY FINDINGS

DATA REVIEW

One in four countries have national censuses or surveys that have no disability-related question at all. The general question "Do you have a disability?" remains commonly found in censuses and surveys, although it does not produce meaningful and internationally comparable data.

Forty seven percent of countries have functional difficulty questions in at least the four core domains as recommended for censuses (seeing, hearing, walking, cognition), including 18% of countries with datasets with the internationally tested Washington Group Short Set of questions.

PREVALENCE

In the 41 countries with microdata under study in this report, functional difficulties are not rare among adults and their households. Across countries, the median share of the adult population with any functional difficulty stands at 12.6%, while the median share of households with adults with functional difficulty is at 27.8%. Functional difficulties tend to be more common in rural areas, among older individuals and women.

Seeing and walking difficulties are the most common functional difficulties, followed by hearing and cognitive difficulties.

For countries with a graded answer scale for functional difficulties, having some difficulty is more common than at least a lot of difficulty.

EDUCATION, HEALTH, WORK AND STANDARD OF LIVING

There are inequalities associated with functional difficulties in terms of education, health, work and standard of living. A disability gap represents a significant disadvantage for persons with functional difficulties compared to persons with no functional difficulty. This report consistently found across countries a disability gap in terms of educational attainment, literacy, food insecurity, exposure to shocks, asset and cell phone ownership, health expenditures and multidimensional poverty. This gap persists even though adults with functional difficulties are more likely to receive social protection.

For a majority of countries, there is a disability gap for the employment-population ratio, the youth idle rate, the share of adults in informal work, living conditions (water, sanitation, electricity, clean fuel, adequate housing) and domestic violence. No pattern was found for family planning and the share of workers in manufacturing or managerial positions.

While persons with functional difficulties are disproportionately more likely to be multidimensionally poor, not all persons with functional difficulties are poor. Having a functional difficulty is not synonymous with being poor but increases the odds of being multidimensionally poor, even in the poorest countries.

For many countries and indicators, there is a graded association between functional difficulty and disadvantage. For instance, for multidimensional poverty, in all but three countries, persons with some functional difficulties are on average worse off than persons with no difficulty, but better off than persons who experience at least a lot of difficulty. For educational attainment, a gradient is found for all countries.

While inequalities are found for all types of functional difficulties, the largest gaps are for adults with self-care and communication difficulties.

For some indicators, functional difficulties interact with gender, age, and location (rural vs urban) so that there are pronounced intersectional disadvantages. For instance, for education, women had relatively larger disability gaps compared to men, while for work it is the opposite.

B. IMPLICATIONS

IMPLICATIONS FOR DATA COLLECTION

Disability remains absent or inadequate questions continue to be used in many countries and datasets. Functional difficulty questions should become standard in censuses and household surveys, as well as in the monitoring systems of NGOs and governments, to inform the development of disability-inclusive policies and programs. The use of the WGSS in surveys and monitoring systems would provide some of the necessary data for this monitoring to become feasible. The 2020 Census round is an opportunity to collect data on disability.

Given the positive relationship found between the severity of functional difficulties and the magnitude of the disability gap, answers to survey or census questions should avoid yes/no answers to functional difficulty questions.

While this report documents inequalities, it does not provide pathways to explain them. Information is lacking and data is needed on resources, structural factors (e.g., social norms, attitudes, and physical environment) and on health conditions which may lead to functional difficulties and/or deprivations. Data collection efforts that collect information on environmental factors such as the Model Disability Survey (e.g. Cieza et al 2018) are steps in this direction.

IMPLICATIONS FOR DATA ANALYSIS AND RESEARCH

This report demonstrates that for many countries, measuring disability inequalities is feasible. More work is needed to analyze data on functional difficulties in general, and by exploiting the richness of graded answer scales, in particular. The recommendation by the Washington Group to separate in analyses persons with at least a lot of difficulty, on the one hand, from persons with some and no difficulty, on the other, seems problematic: this report has shown that persons with some difficulty are at risk of deprivations. Analyses should try to incorporate the degree of functional difficulties through different categories as in this report (disaggregation b) or

a functional score rather than a simple binary (Loeb 2020; Mitra 2018).

A measure of functional difficulties should be included as a standard correlate in studies of poverty, inequalities or wellbeing. It would be inconceivable not to include age, sex, or marital status variables as correlates.

There is also a need to disaggregate poverty statistics or the MPI and more broadly relevant SDG indicators of the 2030 Agenda according to levels of functional difficulties.

This report shows higher health care out of pocket costs experienced by households with functional difficulties. This is consistent with a growing literature on the extra costs of living of households with disabilities (Banks et al 2021; Mitra et al 2017). Poverty statistics based on consumption expenditures such as the $1.90 a day do not seem adequate to capture the situation of persons with disabilities given potential extra costs of living associated with disability.

More specific policy implications need further analysis at the country level. For instance, to come up with policy insights in countries with low employment population ratios for persons with functional difficulties, one needs to conduct a root cause analysis. It could be due to how the underlying health conditions or impairments reduce the productivity of persons with functional difficulties for the types of jobs that are available. Another reason could be a lack of access to assistive devices. It could be due to structural factors, for instance, a physically inaccessible work environment and transportation systems or negative social attitudes in the community towards disability. Once the underlying causes for low employment rates among persons with functional difficulties are identified, it then becomes feasible to develop evidence-based programs and policies. The results and data presented in this report show the need for such analysis.

IMPLICATIONS FOR POLICY

Disability measured through four to six questions on functional difficulties is not rare. The scope to prevent functional difficulties through the removal of environmental barriers, or access to health care and rehabilitation services needs policy attention in public health.

Disability measured through functional difficulties is highly correlated with deprivations and poverty, whether material or multidimensional. Although most of the countries under study have ratified the CRPD and some have national disability policies and legislations, more policy work is needed to curb the inequalities across functional status shown in this report. Current economic systems and societies fail to provide ways to include persons with functional difficulties.

Despite social protection programs in some of the countries under study, including cash transfer programs, inequalities across functional difficulty status are stark. The exact impact of social protection programs related to disability needs to be assessed.

The results also show that disability is a crosscutting, not a specialist, issue. Disability needs to be considered in policies related to aging, gender, health and poverty. The findings imply that disability should not be seen as a policy issue that is the luxury of high-income and aging economies.

The findings provide evidence to demand interventions and policies for the rights and the wellbeing of persons with functional difficulties. This is particularly important in the context of the pandemic where inequalities may have been exacerbated (e.g. Suraweera et al 2021). To address disability inequalities, interventions in

education, social protection programs, healthcare coverage, and labor market interventions are necessary. This report highlights some of the gaps that need to be closed to make true on Agenda 2030's pledge to 'leave no one behind'.

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13.APPENDICES

APPENDIX 1: TABLES SUPPORTING GRAPHS

(i) Table Supporting Figure 3.1 on Countries with And Without Functional Difficulty Questions In National Censuses Or Surveys (2009-2018)

Country	Any functional difficulty questions
Afghanistan	1
Albania	1
Algeria	0
Andorra	2
Angola	0
Antigua and Barbuda	1
Argentina	1
Armenia	0
Australia	1
Austria	0
Azerbaijan	0
Bahamas	0
Bahrain	0
Bangladesh	1
Barbados	0
Belarus	0
Belgium	1
Belize	1
Benin	1
Bhutan	0
Bolivia	1
Bosnia and Herzegovina	1
Botswana	0
Brazil	1
Brunei Darussalem	0
Bulgaria	0
Burkina Faso	0
Burundi	0
Cabo Verde	0
Cambodia	1
Cameroon	0
Canada	1
Central African Republic	0

Chad	0
Chile	0
China	1
Colombia	1
Comoros	0
Congo, Dem. Rep.	0
Congo, Rep.	0
Costa Rica	1
Côte d'Ivoire	0
Croatia	0
Cuba	0
Cyprus	0
Czech Republic	1
Denmark	0
Djibouti	1
Dominica	0
Dominican Rep.	1
Ecuador	0
Egypt, Arab Rep.	0
El Salvador	0
Equatorial Guinea	0
Eritrea	2
Estonia	0
Eswatini	0
Ethiopia	1
Fiji	1
Finland	1
France	0
Gabon	0
Gambia, The	1
Georgia	1
Germany	0
Ghana	1
Greece	1
Grenada	0
Guatemala	0
Guinea	0
Guinea-Bissau	0
Guyana	0
Haiti	1
Honduras	0

Hungary	0
Iceland	0
India	0
Indonesia	1
Iran	0
Iraq	0
Ireland	1
Israel	1
Italy	0
Jamaica	1
Japan	0
Jordan	1
Kazakhstan	0
Kenya	0
Kiribati	1
Korea, Dem. Rep.	2
Korea, Rep.	0
Kosovo	0
Kuwait	0
Kyrgyz Republic	0
Laos	0
Latvia	1
Lebanon	0
Lesotho	1
Liberia	1
Libya	0
Liechtenstein	0
Lithuania	0
Luxembourg	1
Madagascar	0
Malawi	1
Malaysia	0
Maldives	1
Mali	1
Malta	0
Marshall Islands	1
Mauritania	0
Mauritius	1
Mexico	1
Micronesia, Fed. Sts.	1
Moldova	1
Mongolia	1
Monaco	2
Montenegro	0

Morocco	1
Mozambique	0
Myanmar	1
Namibia	1
Nauru	0
Nepal	0
Netherlands	0
New Zealand	1
Nicaragua	0
Niger	0
Nigeria	1
North Macedonia	2
Norway	0
Oman	0
Pakistan	1
Palau	1
Panama	1
Papua New Guinea	1
Paraguay	0
Peru	1
Philippines	1
Poland	0
Portugal	0
Qatar	1
Romania	0
Russian Federation	0
Rwanda	1
Samoa	1
San Marino	2
São Tomé and Principe	0
Saudi Arabia	0
Senegal	1
Serbia	1
Seychelles	0
Sierra Leone	0
Singapore	0
Slovak Republic	0
Slovenia	1
Solomon Islands	1
Somalia	0
South Africa	1
South Sudan	0
Spain	0
Sri Lanka	1

St. Kitts and Nevis	0
St. Lucia	0
St. Vincent and the Grenadines	2
Sudan	0
Suriname	1
Sweden	0
Switzerland	0
Syria	0
Taiwan	0
Tajikistan	1
Tanzania	1
Thailand	1
Timor-Leste	1
Togo	1
Tonga	1
Trinidad and Tobago	0
Tunisia	1
Turkey	1
Turkmenistan	0
Tuvalu	1
Uganda	1
Ukraine	0
United Arab Emirates	0
United Kingdom	0
United States	1
Uruguay	1
Uzbekistan	0
Vanuatu	1
Vatican City	0
Venezuela	0
Vietnam	1
West Bank/Gaza	1
Yemen	0
Zambia	0
Zimbabwe	1

Notes: a 1 indicates that a national survey or census has functional difficulty questions, a 0 that it does not and a 2 that no survey or census questionnaire was found.

(ii) Table Supporting Figure 5.1 on Prevalence of Functional Difficulties Among Adults

Country	Any Difficulty	Some difficulty	At least a lot of difficulty
Philippines	4.1		
Panama	4.9		
Mauritius		2.5	2.5
Indonesia		4.3	0.9
West Bank and Gaza		3.3	2.2
Peru	5.8		
Myanmar		4.6	1.4
Mexico	6.6		
Nigeria		4.6	2.3
Gambia		6.7	1.2
Bangladesh		6.7	1.2
Senegal		6.0	2.1
Rwanda		5.8	3.1
Vietnam		7.2	2.0
South Africa		7.7	1.9
Malawi		9.5	1.2
Zimbabwe		8.5	2.5
Djibouti		6.4	4.8
Cambodia		9.4	2.6
Tanzania		9.0	3.0
Ethiopia		9.3	2.8
Tonga		7.9	4.8
Uganda		10.6	3.5
Liberia		12.2	1.9
Morocco		7.9	6.5
Dominican Rep.	14.4		
Kiribati		11.9	3.9
Suriname		12.8	3.1
Afghanistan		11.2	5.0
Vanuatu		16.9	0.8
Tajikistan		14.0	3.7
Mali		15.1	4.2
Uruguay		13.6	5.7
Namibia		16.3	3.0
Timor Leste		18.6	2.3
Puerto Rico	22.0		
Pakistan		16.2	7.8
Maldives		13.7	11.0
Haiti		20.0	4.8
Papua New Guinea		22.5	5.9
Colombia		29.7	12.2

Source: Own calculations. Blank cells are not relevant for the graph.

Note: Countries are ordered from lowest to highest prevalence rates

(iii) Table Supporting Figure 5.2 on Prevalence of Functional Difficulties Among Households (%)

Country	Any difficulty	Some difficulty	At least a lot of difficulty
Philippines	9.4		
Panama	11.1		
Indonesia		9.3	2.4
Mauritius		5.7	6.1
Peru	13.7		
Myanmar		10.7	3.9
Mexico	15.0		
Bangladesh		13.8	4.1
Nigeria		11.7	6.5
South Africa		13.1	5.1
West Bank Gaza		10.2	8.2
Vietnam		14.8	5.1
Rwanda		11.1	9.1
Malawi		18.2	3.2
Zimbabwe		16.9	5.9
Tanzania		18.2	7.0
Ethiopia		18.6	7.2
Liberia		20.7	5.4
Senegal		18.1	8.2
Dominican Rep.	27.1		
Cambodia		20.3	7.5
Namibia		22.4	5.7
Djibouti		17.3	11.3
Gambia		21.9	7.1
Uganda		20.6	8.5
Suriname		23.8	7.3
Tonga		18.5	13.9
Uruguay		11.1	21.9
Morocco		15.8	17.6
Puerto Rico	36.7		
Vanuatu		34.4	2.4
Mali		28.4	10.7
Kiribati		27.7	12.6
Afghanistan		24.8	16.6
Timor Leste		40.0	6.6
Tajikistan		33.7	13.5
Haiti		38.5	12.5
Papua New Guinea		34.3	21.2
Pakistan		34.1	25.8
Maldives		27.5	34.1
Colombia		42.2	26.1

Source: Own calculations Cells are left blank when no result is reported in the figure.

Note: Countries are ordered from lowest to highest prevalence rates

(iv) Table Supporting Figure 5.3 on Prevalence of Functional Difficulties by Type (%)

Country	Seeing	Hearing	Mobility	Cognition	Self-care	Communication
Afghanistan	8.0	4.8	8.2	5.3	2.1	2.7
Bangladesh	5.2	2.6	2.5	1.7	1.5	1.3
Cambodia	6.7	3.6	4.8	5.3	1.3	1.8
Colombia	36.8	6.1	9.5	3.3	1.5	1.6
Djibouti	8.7	4.6	6.1	4.1	-	3.1
Dominican Rep.	11.4	2.2	2.3	3.6	-	1.0
Ethiopia	7.3	3.3	3.9	2.8	2.3	1.1
Gambia	3.9	2.2	3.2	1.6	1.3	1.9
Haiti	18.5	3.8	7.0	7.4	1.7	1.5
Indonesia	3.4	1.8	1.8	1.6	1.1	-
Kiribati	10.1	5.3	4.8	3.4	1.1	1.8
Liberia	6.6	1.8	6.5	3.7	1.6	1.8
Malawi	5.9	2.3	4.3	1.8	0.5	0.4
Maldives	15.2	4.7	9.4	6.8	1.8	2.3
Mali	11.7	4.5	6.6	4.4	1.3	1.9
Mauritius	1.8	0.7	2.5	1.1	2.2	0.6
Mexico	1.9	0.8	4.0	0.6	0.3	0.4
Morocco	10.0	4.7	6.5	3.2	2.8	1.8
Myanmar	3.5	1.8	2.4	2.0	-	-
Namibia	12.2	4.7	6.3	4.1	1.4	1.2
Nigeria	2.8	1.1	4.0	2.1	1.7	1.0
Pakistan	13.4	4.2	12.5	7.5	3.7	2.0
Panama	0.8	0.6	3.5	0.4	-	0.6
Papua New Guinea	15.3	6.5	15.2	9.5	2.4	
Peru	1.5	1.5	3.1	1.4	-	0.7
Philippines	3.0	0.8	1.0	-	0.4	0.4
Puerto Rico	7.1	4.6	13.0	9.7	4.5	-
Rwanda	3.9	1.8	3.7	2.4	0.8	0.5
Senegal	4.3	2.0	4.0	2.0	1.3	1.1
South Africa	6.7	1.6	2.3	1.7	0.8	0.5
Suriname	11.6	2.7	5.0	2.9	1.5	1.2
Tajikistan	8.3	4.3	10.2	6.7	3.1	1.8
Tanzania	7.0	2.3	5.1	1.3	0.8	0.6
Timor Leste	15.9	6.4	6.3	4.8	2.6	4.2
Tonga	6.4	3.3	6.7	3.2	3.6	2.7
Uganda	8.3	3.0	6.2	1.9	1.1	0.7
Uruguay	11.9	4.6	8.1	2.6	-	-
Vanuatu	12.2	4.8	7.9	5.2	-	-
Vietnam	6.0	3.7	4.4	4.1	-	-
West Bank and Gaza	2.9	1.3	2.1	0.8	-	0.8
Zimbabwe	5.8	2.0	5.7	1.0	0.8	0.7

Source: Own calculations. '-' stands for not available

(v) Table Supporting Figure 6.1 on Ever Attended School Rates (%)

Country	No Difficulty	Any difficulty	Some difficulty	At least a lot of difficulty
Afghanistan	41		25	23
Bangladesh	68		43	36
Cambodia	86		69	52
Colombia	97		95	86
Djibouti	57		35	35
Dominican Rep.	89	77		
Ethiopia	59		36	24
Gambia	60		53	52
Gambia	60		53	52
Haiti	84		59	41
Indonesia	93		74	57
Kiribati	95		92	83
Liberia	66		48	45
Malawi	80		68	47
Maldives	80		51	31
Mali	40		30	19
Mauritius	96		80	66
Mexico	94	72		
Morocco	66		40	28
Myanmar	88		70	54
Namibia	92		80	66
Nigeria	81		60	55
Pakistan	66		48	33
Panama	95	77		
Papua New Guinea	76		67	44
Peru	96	78		
Philippines	98	91		
Puerto Rico	99	93		
Rwanda	89		69	61
Senegal	42		32	23
South Africa	97		90	77
Suriname	94		82	69
Tajikistan	94		95	82
Tanzania	83		71	43
Timor Leste	75		45	22
Tonga	97		94	86
Uganda	91		78	58
Uruguay	100		97	94
Vanuatu	90		80	58
Vietnam	96		85	66
West Bank and Gaza	96		78	56
Zimbabwe	97		89	79

Source: Own calculations.

Note: Cells are left blank when no result is reported in the figure.

(vi) Table Supporting Figure 10.1: Multidimensional Poverty Headcount (%)

Country	No Difficulty	Any difficulty	Some difficulty	At least a lot of difficulty
Tanzania	84		91	98
Ethiopia	89		91	96
Malawi	86		88	95
Rwanda	74		88	95
Timor Leste	71		82	94
Uganda	77		82	93
Papua New Guinea	87		87	93
Tajikistan	64		67	92
Vanuatu	70		77	91
Afghanistan	85		88	91
Mali	84		87	91
Liberia	82		89	90
Cambodia	71		84	90
Senegal	76		81	88
Nigeria	66		77	87
Myanmar	57		75	86
Kiribati	69		73	86
South Africa	60		65	85
Morocco	47		66	84
Haiti	70		74	84
Djibouti	81		83	84
Bangladesh	61		77	84
Namibia	63		69	83
West Bank and Gaza	49		66	83
Pakistan	49		64	76
Vietnam	17		49	72
Zimbabwe	47		50	71
Maldives	25		52	71
Indonesia	22		45	68
Peru	27	60		
Mexico	24	57		
Tonga	36		42	57
Dominican Rep.	36	53		
Panama	19	46		
Uruguay	8		25	41
Colombia	18		25	39
Philippines	20	37		
Suriname	16		21	25
Puerto Rico	4	21		

Source: Own calculations.

Notes: Cells are left blank when no result is reported in the figure. Countries are ordered from largest to lowest multidimensional poverty headcount for persons with difficulties.

APPENDIX 2: COUNTRIES UNDER STUDY

Country	Life expectancy at birth (years)	GNI per capita	HDI Rank	CRPD ratification year	Constitutional guarantees	Anti-discrimination legislation for the workplace	Income support policies
Afghanistan	64.8	2,229	169	2012	No	No	NA
Bangladesh	72.6	4,976	134	2007	No	Yes	NC
Cambodia	69.8	4,246	144	2012	No	Yes	C
Colombia	77.3	14,257	83	2011	Yes	No	C
Djibouti	67.1	5,689	166	2012	No	Yes	
Dominican Rep.	74.1	17,591	89	2009	Yes	Yes	C, NC
Ethiopia	66.6	2,207	174	2010	No	Yes	C
Gambia	62.1	2,168	172	2015	Yes	No	C
Haiti	64.0	1,709	170	2009	No	Yes	C
Indonesia	71.7	11,459	110	2011	No	Yes	C
Kiribati	68.4	4,260	133	2013	No	Yes	C
Liberia	64.1	1,258	173	2012	No	Yes	C, NC
Malawi	64.3	1,035	174	2009	Yes	Yes	
Maldives	78.9	17,417	98	2010	Yes	Yes	
Mali	59.3	2,269	184	2008	No	No	C
Mauritius	75.0	25,266	66	2010	No	Yes	C, NC
Mexico	75.1	19,160	76	2007	Yes	Yes	C
Morocco	76.7	7,368	121	2009	Yes	Yes	C
Myanmar	67.1	4,961	148	2011	No	Yes	C
Namibia	63.7	9,257	129	2007	No	Yes	C, NC
Nigeria	54.7	4,910	161	2010	No	No	C
Pakistan	67.3	5,005	154	2011	No	No	C
Panama	78.5	29,558	58	2007	Yes	Yes	C
Papua New Guinea	64.5	4,301	156	2013	No	No	C
Peru	76.7	12,252	78	2008	No	No	C, NC
Philippines	71.2	9,778	111	2008	No	Yes	C
Puerto Rico	79.8	23235	NA	Signed only (2009)	NA	NA	
Rwanda	69.0	2,155	159	2008	Yes	Yes	C
Senegal	67.9	3,309	167	2010	No	Yes	C
South Africa	64.1	12,129	115	2007	Yes	Yes	NC
Suriname	71.7	14,324	98	2017	No	No	NA
Tajikistan	71.1	3,954	126	Signed only (2018)	No	No	C, NC
Tanzania	65.5	2,600	164	2009	No	Yes	C
Timor Leste	69.5	4,440	141	No action	Yes	Yes	NC
Tonga	70.9	6,365	105	Signed only (2007)	No	No	None
Uganda	63.4	2,123	160	2008	Yes	Yes	C
Uruguay	77.9	20,064	56	2009	No	No	C, NC

Vanuatu	70.5	3,105	140	2008	No	No	C
Vietnam	75.4	7,433	118	2015	No	Yes	C, NC
West Bank/Gaza	73.9	4,190	NA	2014	NA	NA	NA
Zimbabwe	61.5	2,666	150	2013	Yes	Yes	C

Sources: ILO (2017), UNDP (2020), OHCHR (2021b), World Policy Analysis Center (2021), World Bank (2021)

Notes: NA stands for not available. CRPD stands for the Convention on the Rights of Persons with Disabilities; GNI is the Gross National Income per capita in constant 2017 purchasing power parity (PPP) terms; HDI stands for the Human Development Index.

If the CRPD is not ratified by the country, the table indicates if it has been signed or if no action has been taken.

The key for constitutional guarantees is as follows: No = no specific provisions for the equality of persons with disabilities; Yes = the equality of persons with disabilities is guaranteed.

The key for anti-discrimination legislation is as follows: No = no explicit prohibition of workplace discrimination based on disability; Yes= disability-specific prohibition of workplace discrimination in at least one category (hiring processes, equal pay, or the provision of reasonable accommodation).

The key for income support policies is as follows: C = contributory program(s); NC = non-contributory program(s); left blank if no program anchored in legislation.

APPENDIX 3: METHOD BRIEFS

Method briefs can be found at: https://disabilitydata.ace.fordham.edu/method-briefs/

APPENDIX 4: COUNTRY BRIEFS

Country briefs can be found at: https://disabilitydata.ace.fordham.edu/country-briefs/


disabilitydatainitiative