Measuring disability in humanitarian contexts

MSNA Cross-Crisis Analysis using Washington Group Short Set of Questions

May 2025

Abstract

People with disabilities are among the most affected yet some of the least visible in humanitarian crises. This report, funded by the Government of Norway and in partnership with UNICEF, presents a comprehensive cross-crisis analysis of disability data in humanitarian settings, drawing on representative, individual-level data collected across 26 Multi-Sector Needs Assessments (MSNAs) in 17 countries between 2022 and 2024—one of the largest cross-crisis datasets of its kind. By capturing both individual- and household-level data, this analysis ensures that the specific needs of persons with disabilities and their households—who are significantly more likely to experience multisectoral gaps—are accurately reflected. This distinction is critical for informing inclusive humanitarian planning and multisectoral programming, as it highlights which households face the most severe and complex needs. The findings reveal stark and consistent disparities: households with members with disabilities face significantly more severe and complex humanitarian needs across nearly all contexts. For example, in Lebanon (2023), nearly half (44%) of households with disabilities experienced multisectoral gaps compared to just 17% of those without; similarly large gaps were observed in Ukraine, Gaza, Mali, and Myanmar. Even after controlling for displacement status, age, year, and country, households with members with disabilities remain significantly more likely to face critical gaps in essential services—underscoring the need for targeted measures to advance access rates. Barriers to accessing services and humanitarian aid further compound existing vulnerabilities and reinforce patterns of exclusion. Since most reported barriers relate to food security, health, and livelihoods, access to key resources and services should be a central consideration when monitoring needs and designing inclusive programs that enhance access for persons with disabilities. Additionally, the percentage of school-aged children with disabilities accessing formal education is significantly lower in several countries, including Syria and Ethiopia, as indicated by WG-SS 3 data.

Reported disability prevalence, as captured through the Washington Group Short Set (WG-SS), remains below the WHO's global estimate of 16%, but aligns with findings from other large-scale surveys using the same tool. Prevalence rates are shaped by factors such as age, gender, and the profile of the respondent—with older individuals and female-headed or female-respondent households reporting significantly higher rates. The findings also expose methodological limitations affecting measurement: the use of proxy respondents, and shortcuts like screening or skip questions that bypass the full WG-SS module, contribute to underreporting the prevalence rate. Furthermore, the inclusion or exclusion of individuals under 18, as well as the lack of age-sensitive interpretation of self-care difficulties, can influence reported prevalence—alongside inconsistencies in tool adaptation, translation, and enumerator training. Together, the findings make a compelling case for systematically prioritizing disability inclusion in humanitarian assessments and programming. They also highlight the value of large-scale, comparable data collection in uncovering hidden patterns of exclusion and strengthening inclusive humanitarian action. This underscores the need for a deeper understanding of how assessments engage with people with disabilities and how these processes can be improved to include a broader spectrum of disabilities, such as psychosocial disabilities and chronic illnesses

About IMPACT

IMPACT Initiatives is a Geneva based think-and-do-tank, created in 2010. IMPACT is a member of the ACTED Group.

IMPACT's teams implement assessment, monitoring & evaluation and organisational capacity-building programmes in direct partnership with aid actors or through its inter-agency initiatives, REACH and Agora. Headquartered in Geneva, IMPACT has an established field presence in over 15 countries. IMPACT's team is composed of over 300 staff, including 60 full-time international experts, as well as a roster of consultants, who are currently implementing over 50 programmes across Africa, Middle East and North Africa, Central and South-East Asia, and Eastern Europe

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1. Introduction

Data on disability is crucial for inclusive humanitarian efforts. Until recently, the systematic collection and analysis of disability data had been neglected, due to various factors. However, in recent years, significant progress has been made in gathering and analysing data on persons with disabilities, leading to a shifting landscape. This change has been driven by data collection requirements outlined in the UN Convention on the Rights of Persons with Disabilities (CRPD)[1], now ratified by 192 countries, as well as the inclusion of disability within the 2030 Agenda and Sustainable Development Goals (SDGs)[2], which emphasizes the commitment to 'leave no one behind.' Over time, initiatives like the Sendai Framework for Disaster Risk Reduction[3], the Inter-Agency Standing Committee (IASC) Guidelines related to Inclusion of Persons with Disabilities in Humanitarian Action, the Charter on Inclusion of Persons with Disabilities in Humanitarian Action[4], and the Inclusive Data Charter[5][6] have established a robust normative framework that advocates for more tailored and inclusive programming, ensuring that individuals with disabilities are not sidelined in humanitarian efforts.

However, challenges in applying inclusive data collection methodologies in complex contexts, alongside recent calls for streamlining the Humanitarian Programme Cycle (HPC) and the current shift in humanitarian funding, highlight the need to assess, maintain, and strengthen existing approaches to disability inclusion in humanitarian research approaches. While significant progress has been made in improving data reliability on persons with disabilities and their unique challenges in humanitarian crises, these advances remain uneven across crises and over time. It is therefore essential to build on these gains in humanitarian research while working toward more streamlined coordination processes.

To provide an initial overview of disability among populations affected by crises, the Washington Group on Disability Statistics has worked, since 2001 on developing a set of six questions aimed at collecting data on the disability status of a given population within the frame of censuses and large-scale surveys[7]: the Washington Group Short Set on Functioning (WG-SS). This self-reporting module was designed to

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[1] OHCHR. *Convention on the Rights of Persons with Disabilities*. Office of the High Commissioner for Human Rights. Available at: https://www.ohchr.org/en/instruments-mechanisms/instruments/convention-rights-persons-disabilities

[2]United Nations Department of Economic and Social Affairs (UNDESA). *Sustainable Development Goals (SDGs) and Disability*. United Nations. Available at: https://social.desa.un.org/issues/disability/sustainable-development-goals-sdgs-and-disability#:~:text=Closely%20linked%20is%20Goal%2010,settlements%20inclusive%2C%20safe%20and%20sustainable.

[3]Disability Stakeholder Group. *Position Paper: SFDRR Political Declaration – Inputs from the Disability Stakeholder Group*. CBM Global, 2023. Available at: https://cbm-global.org/wp-content/uploads/2023/05/Final-Version-Position-Paper-SFDRR-Political-Declaration_Disability-Stakeholder-Group.pdf?ref=disabilitydebrief.org

[4] Humanitarian Disability Charter. *Charter on Inclusion of Persons with Disabilities in Humanitarian Action*. Available at: https://humanitariandisabilitycharter.org/

[5] Global Partnership for Sustainable Development Data. *Inclusive Data Charter*. Data for Sustainable Development. Available at: https://www.data4sdgs.org/initiatives/inclusive-data-charter

[6] For more information on IMPACT's commitment to the IDC, please refer to the following article: https://www.impact-initiatives.org/stories/committing-to-more-inclusivity-in-humanitarian-responses-impacts-engagement-with-the-inclusive-data-charter-idc/

[7] Washington Group on Disability Statistics**.** *The WG Primer: An Introduction to the WG Tools*. WG Resource Document No. 5, February 2023. Available at: https://www.washingtongroup-disability.com/fileadmin/uploads/wg/Documents/WG_Resource_Document__5_-_The_WG_Primer_-_An_Introduction_to_the_WG_Tools__February_2023_.pdf

maximise international comparability and, therefore, assesses the difficulties an individual may encounter performing basic tasks in six functional domains[8]. According to the Washington Group on Disability Statistics, the tool serves two key purposes: measuring the reported prevalence of disability within a given population and assessing the exclusion of people with disabilities[9]. Over the past years, it has been used as the main component in the MSNA research approach to provide an initial snapshot of the prevalence of needs and their severity among households with at least one individual with disabilities

Ahead of the 2025 MSNA cycle, IMPACT launched a research initiative to review the progress made in recent years, assess the effectiveness of MSNAs in capturing disability-related information, and identify areas for improvement in MSNA and other key data collection processes.

This report aims to consolidate lessons learned and good practices from disability data collection within REACH's Multi-Sector Needs Assessments, with a view to identifying approaches that can be replicated in other contexts or future rounds of data collection in the same country. It is intended for humanitarian and disability & inclusion actors at the global, regional, and country levels interested in how data on persons with disabilities is collected and analysed across crises. The findings can serve as a foundation for developing guidance and strengthening disability inclusion within humanitarian needs assessments.

The report aims to address the following objectives:

Objective 1: Reviewing the Inclusion of the Washington Group Questions in the 2023 MSNA Assessments and Evaluating the Impact of Research Design and Analysis Alternatives on Reported Disability Prevalence

A key aspect of strengthening disability data collection in humanitarian settings is assessing the use of the Washington Group Short Set (WGSS) in MSNAs and understanding its impact on reported disability prevalence. This objective analyses how the WGSS has been integrated into 2023 MSNA assessments across different crisis contexts.

Through this review, the study will assess the reported prevalence of disability as captured by MSNA data and compare it against existing guidelines and external data sources to determine its reliability. Additionally, it will examine the challenges IMPACT country teams face in incorporating the WGSS into their assessments, including methodological, operational, and contextual constraints. Identifying these challenges will help inform future adaptations and improvements in disability-inclusive data collection and analysis.

Research Question:
Using MSNA data, what is the reported prevalence of disability across various crisis contexts, and to what extent is this prevalence deemed reliable based on existing guidelines and external data sources? What challenges do IMPACT country teams face in incorporating the Washington Group Short Set into their assessments?

[8] Washington Group on Disability Statistics. *WG Short Set on Functioning: Washington Group Questionnaire No. 1.* Available at: https://www.washingtongroup-disability.com/fileadmin/uploads/wg/Documents/Questions/Washington_Group_Questionnaire_1_-_WG_Short_Set_on_Functioning.pdf

[9] Washington Group on Disability Statistics**.** *The WG Primer: An Introduction to the WG Tools.* WG Resource Document No. 5, February 2023. Available at: https://www.washingtongroup-disability.com/fileadmin/uploads/wg/Documents/WG_Resource_Document_5_-_The_WG_Primer_-_An_Introduction_to_the_WG_Tools_February_2023_.pdf

Objective 2: Understanding how disability impacts the severity of need in households

Understanding the intersection between disability and broader humanitarian dynamics is critical for effective advocacy and policy development and planning humanitarian response. This objective seeks to explore how disability—alongside other key demographic factors—shapes household and individual needs, capacities, and preferences in crisis settings.

By analysing MSNA findings, this research will highlight the specific ways in which persons with disabilities experience humanitarian crises differently and the extent to which their needs are currently addressed. These insights will contribute to strengthening advocacy efforts for disability inclusion and ensuring that programming and policy discussions within the humanitarian sector incorporate a more nuanced understanding of disability-related vulnerabilities.

Research Question:
How do disability and other critical demographic factors affect household and individual needs, capacities, and preferences in diverse crisis contexts?

2. Methodology

Country team consultation

The qualitative component of the study aimed at gathering the lessons learned from using the WG-SS for the MSNA. A total of 7 key informant (KI) interviews were conducted, using semi-structured data collection tools. Five of these KIs were IMPACT country team members who possessed knowledge on context-specific data relating to the deployment of the WG-SS, whilst two others were HQ focal points. Whilst only the missions that had participated in WG-SS data collection in the past two years were screened, selection of the KIs was limited by the availability of the respondents during the data collection phase and the in-country turnover of staff. Data transcripts were cleaned and analysed using MaxQDA software through an open coding methodology, which resulted in the identification of the most relevant themes.

The qualitative interview guide for IMPACT country teams explores integrating and using the Washington Group Short Set (WG-SS) in the Multi-Sector Needs Assessment (MSNA). It covers key areas, including in-country coordination on disability, motivations for adopting the WG-SS, and approaches to enumerator training. The guide also examines if any adaptations were made during data collection and their rationale when relevant, challenges encountered, and feedback from enumerators and respondents. Further, it addresses data cleaning complexities, the use of WG-SS data in MSNA analysis, and how findings were shared with coordination bodies and humanitarian actors. Finally, it gathers insights on the consistency of results with other disability data sources and seeks IMPACT country teams' reflections on the practicality, relevance, and feasibility of WG-SS in their context.

Review of MSNA survey questionnaires and methodology

Over the span of the years 2022, 2023, and 2024, IMPACT has gathered 26 Multi-Sector Needs Assessment (MSNA) datasets from 17 countries, where the Washington Group Short Set of questions was used following guidelines at individual-level, within representative household surveys.

Table 1: Mapping indicator availability across all MSNAs.

MSNA Year	AFG	BGD	CAR	DRC	ETH	IRQ	KEN	LBN	MLI	MMR	MOZ	NER	OPT	SOM	SYR	UGA	UKR
2024	Household level	no	no	no	yes	No	yes	no msna	yes	Yes	yes	no	no msna	yes	yes	yes	no
2023	yes	yes	yes	yes	not public	Yes	yes	yes	yes	Yes	no	yes	no msna	no	yes	no	yes
2022	Household level	no	yes	yes	no msna	no	no	yes	yes	No	no	no	yes	no	no	no	yes

In 8 of the 25 datasets, extra questions were added alongside the WGSS to clarify whether the information was provided by individuals with disabilities or their caregivers. For more details, please refer to the section on self vs proxy respondent.

In a few cases, there are additional questions to identify the head of the household, or a section specifically aimed at the head of the household. This constitutes a limitation for disaggregation at the analysis stage, as identifying the head of household requires data pairing with the demographic loop and is not always possible[10]. In one case, Afghanistan 2022/2024, disability data was collected at the

[10] Identifying the disability status of the head of household requires matching with age and gender of head of household, which doesn't work when multiple individuals have same age and gender in the same household.

household level instead of the individual level; otherwise, in all other MSNAs, data was collected at the individual level whenever the Washington group questions were used. In Mozambique 2024 and Bangladesh 2023, additional questions targeting whether impairment created specific challenges to accessing services (multiple choice) were added. In the Afghanistan 2023 MSNA, an additional question on access to required disability support services was added to the tool.

Alignment of indicators and quantitative analysis

The process of aligning and recoding all datasets for consistent meta-analysis included reviewing available indicators to assess whether and how they could be aligned, to produce broadly cross-crisis comparable results. Later, an alignment of response choices and analysis at the indicator level, where possible, was created to provide sufficiently comparable results. A cross-crisis sectoral analysis framework was aligned to ensure that sectoral scores computed in different contexts are comparable and meaningful across crises. Several aligned core indicators were analysed and disaggregated based on various demographic variables, including age, gender, and country. For more details on the alignment of all sectoral indicators across context through time, you can refer to the MSNA cross-crisis methodological notes.[11]. Additionally, IMPACT conducted a linear regression analysis of individual-level disability severity using all relevant predictors available in the dataset, including individual age, gender, respondent gender, head of household gender, displacement status, and fixed effects for year and country. This approach allows us to isolate the extent to which each predictor accounts for variation in observed disability severity at the individual level.

Limitations

This study faces several limitations that should be acknowledged when interpreting the findings. The conceptual framework underpinning the Living Standards Gaps (LSG) approach presents notable constraints. The selection, categorization, and aggregation of indicators at both sectoral and multisectoral levels are based on a framework that lacks a conceptual foundation. This limitation is further compounded by the restricted number of sectors and indicators included in the analysis, with critical gaps such as the absence of protection-related indicators and limited representation of health indicators. Moreover, the meta-analysis of MSNAs across diverse contexts highlights several methodological and contextual inconsistencies. Notably, the analysis does not account for key contextual factors, including the provision of humanitarian assistance, seasonal dynamics, and broader socio-political changes, all of which may significantly affect needs but are not reflected in the current framework.

From a methodological perspective, the analysis is limited by variations in sampling strategies and data collection methodologies between countries and across years. These inconsistencies include differences in coverage, population group representation, and levels of missing data, which in turn affect the comparability, representativeness, and precision of the findings. The geographical scope and demographic coverage are often limited, potentially excluding the most vulnerable populations from the analysis. Finally, the study is constrained by its reliance on available MSNA data from a limited number of countries and specific years. As such, generalizations across humanitarian settings should be made with caution. For additional context on the methodological challenges and conceptual limitations associated with the MSNA cross-crisis analysis, please consult the MSNA Cross-Crisis Brief published in 2023.

[11] The indicator alignment and aggregation process for the 2022 and 2023 MSNA can be found in the composite level methodological note for 2023, the indicator level methodological note for 2023 and the methodological note for 2022.

3. Literature review

The concept of disability within the humanitarian sector has been subject to various interpretations over time, yet a few key resources provide clear and comprehensive definitions. The Preamble to the Convention on the Rights of Persons with Disabilities (CRPD) acknowledges that disability is "*an evolving concept*" while emphasizing that "*disability results from the interaction between persons with impairments and attitudinal and environmental barriers that hinder their full and effective participation in society on an equal basis with others*" (United Nations, 2006). This perspective moves beyond the traditional medical model, which views disability as an individual deficit, towards a more dynamic, interactional approach. The World Report on Disability (2011) further reinforces this perspective, asserting that disability should not be considered an inherent attribute of an individual but rather as an interaction between individuals and societal norms: "*Disability is interpreted in relation to what is considered normal functioning, which can vary based on the context, age group, or even income group*" (World Health Organization & World Bank, 2011). Given this contextual variability, multiple factors—including socio-economic status, age, and environmental conditions—must be considered when defining disability at the individual or household level.

Beyond foundational definitions, global frameworks have significantly influenced the conceptualisation of disability, particularly in crisis contexts. The Sendai Framework for Disaster Risk Reduction emphasizes the importance of a multi-hazard, inclusive, and risk-informed approach, advocating for the open exchange and dissemination of disaggregated data, including information on disability status, sex, and age (UNDRR, 2015). Similarly, the Charter on Inclusion of Persons with Disabilities in Humanitarian Action, launched at the World Humanitarian Summit, promotes the collection and analysis of disability data through an intersectional lens, recognizing that the experiences of persons with disabilities are shaped by multiple overlapping factors (World Humanitarian Summit, 2016). The Inter-Agency Standing Committee (IASC) Guidelines related to Inclusion of Persons with Disabilities in Humanitarian Action (2019) also refer to data collection with people with disability. In alignment with these efforts, agencies such as the United Nations Office for the Coordination of Humanitarian Affairs (OCHA) have developed recommendations to ensure the inclusion of disability-disaggregated indicators in its Indicator Registry—further integrating disability into humanitarian response frameworks (OCHA, 2020)—as well as in the Facilitation Package for the Humanitarian Programme Cycle (HPC), which supports the inclusion of disability-disaggregated People in Need (PIN) figures in the Humanitarian Needs Overview and Response Plan (HNRP) template (2026).

In addition to global commitments, international organizations and donor agencies have contributed to developing disability-inclusive policies and guidelines. For instance, Australia's Department of Foreign Affairs and Trade (DFAT) has embedded disability inclusion within its humanitarian mandate, providing tools to support more inclusive approaches (DFAT, 2017). Furthermore, the Disability and Emergency Risk Management for Health guidelines from WHO offer specific guidance on collecting and utilizing disability data in humanitarian health programs (WHO, 2013). The United Nations High Commissioner for Refugees (UNHCR) has similarly recognized the importance of disability data, issuing 2019 guidelines to facilitate disability-disaggregated data collection for forcibly displaced populations (UNHCR, 2019). Additionally, United Nations Children's Fund (UNICEF) and Humanity & Inclusion (HI) have jointly developed guidelines for ensuring humanitarian support is tailored to the needs of children with disabilities, emphasising the necessity of an intersectional analysis incorporating both sex and age in data disaggregation (UNICEF & HI, 2020). This aligns with UNICEF's Core Commitments for Children, which stress the importance of inclusive needs assessments, as well as recent global guidance on strengthening disability inclusion in Humanitarian Needs Overviews (HNOs) and Humanitarian Response Plans (HRPs) (UNICEF, 2023)

The collection of data on disability prevalence across populations has long been recognized as a complex and challenging task, despite the development of multiple guidelines and toolkits. In 2011, the World Health Organization (WHO) has estimated that approximately 15% of the global population lives with some form of disability, with 2–4% experiencing significant difficulties in functioning (WHO, 2011). However, several scholars have criticized the widespread citation of this statistic, noting that it is based on data from 2004 and lacks more recent updates (Mazurana, Marshak, & Spears, 2023). Even within the same WHO report, it is acknowledged that disability measurement methodologies vary across countries, leading to significant differences in reported prevalence. As stated in the report: *"Operational measures of disability vary according to the purpose and application of the data, the conception of disability, the aspects of disability examined – impairments, activity limitations, participation restrictions, related health conditions, environmental factors – the definitions, question design, reporting sources, data collection methods, and expectations of functioning" (WHO, 2011).* Following an updated analysis of available data on the prevalence of disability worldwide, WHO revised its global estimate in 2022, indicating that 16% of the world's population with some form of disability.

One of the primary sources of variation in disability prevalence data is the categorization of disability. Different assessment tools adopt distinct approaches to classification. Some tools, such as the Washington Group Set of Questions, focus specifically on functional impairments, whereas others, such as those used by the Institute of Health Metrics and Evaluation, conflate health conditions, including chronic illnesses, with disability. These divergent categorizations contribute to inconsistencies in reported prevalence and complicate comparative analysis across studies. Beyond the issue of categorization, the methods used to collect disability data further influence reported prevalence rates. Data collection strategies range from national censuses, which aim to provide comprehensive population coverage (WHO, 2011), to targeted humanitarian assessments that adopt an intersectional approach to disability and its impact on service delivery (Mazurana, Marshak, & Spears, 2023). The methodological choices made in these studies, including survey design, sampling strategies, and data collection techniques, significantly shape the understanding of disability prevalence and its implications for policy and program design.

Across the literature, several toolsets are frequently cited as the most common approaches to collecting data on persons with disabilities in humanitarian settings. One of the most widely used is the Washington Group (WG) Set of Questions, which has also been integrated into Multi-Sector Needs Assessments (MSNAs). The Washington Group on Disability Statistics was established following a 2001 meeting convened by the United Nations Statistics Division (UNSD), UNICEF, the Statistical Office of the European Communities, and the United States Centres for Disease Control and Prevention (CDC). This gathering of national statisticians and government officials aimed to develop internationally comparable measures of disability. A key outcome was the formation of the Washington Group, tasked with creating standardized tools for disability data collection (Washington Group, 2025).

Unlike diagnostic tools or legal frameworks, the WG approach focuses on disaggregating data and identifying individuals with activity limitations who may be at risk of exclusion due to environmental barriers. Its primary objective is to enable comparisons between persons with disabilities and the general population, while also identifying a minimum set of questions that support non-discriminatory self-identification and enhance the comparability of data on this population group both across countries and within countries, in humanitarian contexts. The tool consists of several sets of questions, including the Short Set, Extended Set, and Child Functioning Module. Of these, the Short Set of Questions is the

most widely used (Leonard Cheshire & Humanity and Inclusion, 2018).[12] The WG Short Set has been implemented in over 100 countries, through census and ad hoc assessments, and integrated into data collection efforts by major agencies, international NGOs (INGOs), and disability-focused alliances, such as the Stakeholder Group of Persons with Disabilities, the International Disability Alliance, and the International Disability and Development Consortium. Additionally, governmental agencies in the United States, Australia, Uganda, and South Africa have incorporated the WG questions into their national data collection frameworks (Development Initiative, 2020).mDespite its widespread adoption, the WG methodology has limitations, particularly regarding its applicability beyond its original scope. The tool was designed primarily for disaggregating data in household surveys and censuses rather than for project-based assessments or administrative data collection. While it can be useful for disaggregating populations in programmatic or administrative contexts, its findings should be interpreted cautiously (Development Initiative, 2020). Data collected through this approach may lack representativeness of the broader population and often rely on responses from individuals who may not be trained data collection specialists. Its functional approach, relying on the evaluation of one's ability to see, walk, hear, communicate, remember and self-care, results in an inability to capture psychosocial disabilities, as well as chronic health conditions (Hall et al., 2022). Additionally, recent studies in the US have highlighted that the WG short set of questions' substantial limitations, be it in identifying individuals with moderate or severe mobility-related disabilities (Goddard and Hall, 2025), or blind or deaf respondents (Landes, Swenor and Hall, 2024). Part of the explanation lies in the fact that the questions rely on respondents reporting "difficulty" with a task: if a respondent does not use stairs, they will likely not report any difficulty with this task. Another study also found that the tool might primarily count people with at least two disability statuses and is more likely to fail at accounting for people with only one (Landes, Swenor and Vaitsiakhovich, 2024).

Over the past years, there has been a significant evolution in the conceptualisation of disability within the humanitarian sector, with growing emphasis on interactional and intersectional approaches rather than static definitions. Global frameworks and donor commitments have strengthened the call for inclusive, disaggregated data to inform humanitarian programming. However, critical knowledge gaps persist—particularly regarding the reliability, comparability, and inclusiveness of existing data collection tools such as the Washington Group Short Set of Questions.[13] This tools, while widely adopted, may underrepresent certain disability types and fail to capture single-dimension impairments or context-specific barriers. Further research is needed to refine methodologies for disability data collection in humanitarian settings, assess the representativeness of functional tools across diverse populations, and better integrate mental health, chronic illness, and environmental factors into measurement frameworks.

[12] Research by HI, Leonard Cheshire, and the Washington Group provided valuable input for refining the Short Set of Questions. It highlighted that collecting disability data in acute crises is often not feasible, and that the Washington Group Questions are not suitable for all contexts. Organizations must be clear on their data collection objectives and aware of the tool's limitations. Used alone, the questions do not yield enough information for fully inclusive programming.

[13] Due to limited comparative literature on the various Washington Group tools, this review primarily focuses on the Short Set, which remains the most commonly used in humanitarian contexts. While tools like the Extended Set or the Child Functioning Module (CFM) may offer more detailed data, their use is often constrained by operational realities such as questionnaire length. The Short Set was initially promoted as a tested, non-discriminatory minimum standard, despite known limitations, and is often used partially in field settings. Existing research rarely reflects on these trade-offs or contextual challenges in humanitarian applications.

4. Prevalence and severity of needs among households with members with disabilities

To support inclusive humanitarian programming, the following analysis draws on data from the Washington Group (WG) question sets, within the MSNAs to estimate the prevalence and severity of needs among households with members with disability. The objective is to move beyond sectoral averages to identify how characteristics such as disability status intersect with other factors—like gender and age—to shape the severity and complexity of unmet needs. These prevalence metrics are not just descriptive but are critical for informing operational prioritisation and program design.

4.1. Multi-sectoral gaps

MSNI framework

To unpack household-level humanitarian needs, MSNA indicators are combined to form sectoral composite indicators called **Living Standard Gap (LSG)**. This analysis involves integrating indicator-level data into various dimensions within each sectoral framework. Some sectors, like Shelter & Non-Food Items (SNFI), have multiple dimensions, while others, such as Food Security and Education, only have one. For sectors with multiple dimensions, the highest severity score is taken from each dimension, and for those with only one dimension, the assigned severity directly feeds into the composite.

After indicators have been aggregated at the household level to form sectoral composite indicators, the results from each sector are aggregated into a multi-sectoral needs index (MSNI) by taking the maximum value of these sectoral composites. This represents the overall severity of needs across all sectors. It provides a broad overview of household needs but requires further analysis to understand the intensity and complexity of the crisis. Additional metrics like the proportion of households with a multi-sectoral gap (MSNI), acute multi-sectoral gap (MSNI) profiles are developed to provide deeper insights for effective response planning[14]. It is important to keep in mind that the prevalence of (multi)-sectoral gaps is a metric aiming at measuring deprivation and access to services at household level[15]. The sectoral LSG framework is limited by the range of sectors it covers, notably lacking protection-sector composites in cross-crisis analyses. This is largely due to difficulties in measuring outcomes related to protection risks in MSNA contexts. Additionally, the measurement of severity is constrained by the indicators available; the exclusion of certain indicators that could capture more severe outcomes likely results in an underestimation of sectoral deprivation.[16].

More prevalent, severe multi-sectoral gaps among households with member(s) with disability

In almost all considered MSNAs, surveyed households with at least one members with disability were found to be more likely to experience acute needs (MSNI ≥ 4), highlighting the disproportionate challenges they face in humanitarian settings. As shown in graph 11, the prevalence of humanitarian gaps (MSNI ≥ 4) is more than 10 percentage points higher for households

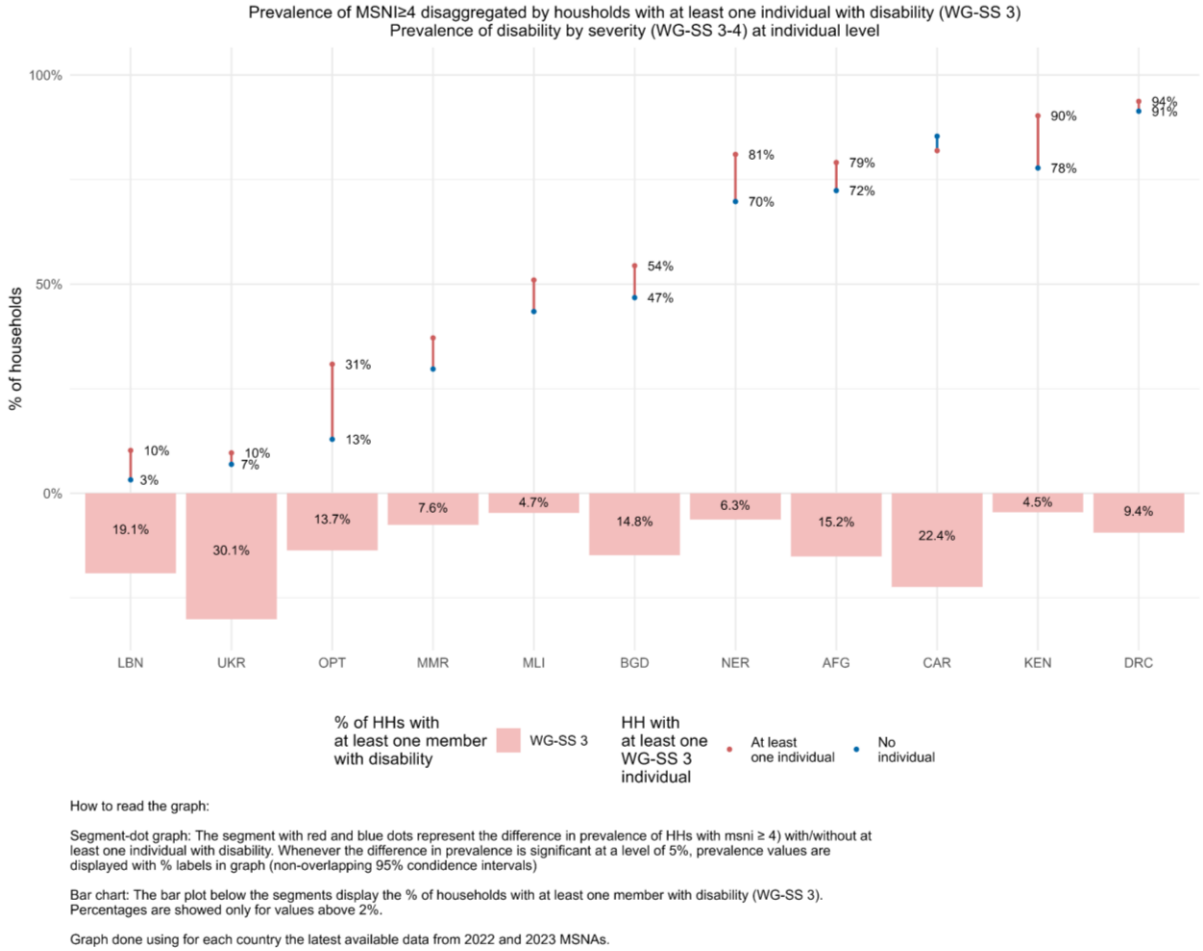
[14] For more information consult the MSNA cross crisis Composite methodological note (2023)

[15] Any effect identified at household level could potentially imply stronger relationship if the indicators were defined measured at individual level

[16] For example, the health LSG sectoral gap is a built on a single dimension pertaining to whether individual had unmet healthcare needs and barriers associated, is not designed to measure more severe outcomes.

with a member with disability than for other type of households, in Gaza, Lebanon, Kenya and Niger in 2022-2023.

Graph 11: Prevalence of severity of multi-sectoral gaps (MSNI ≥ 4) and disability



How to read the graph:

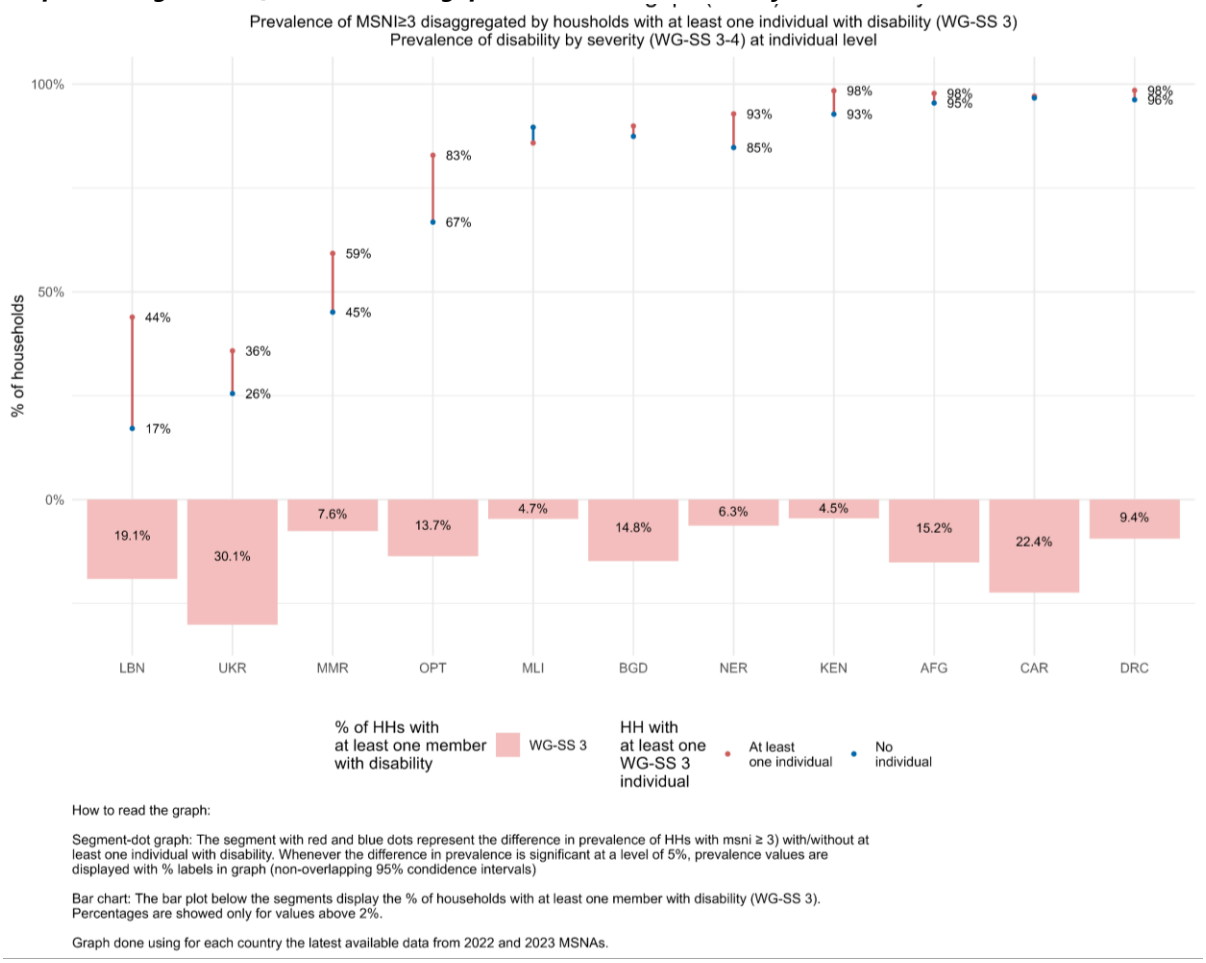
Segment-dot graph: The segment with red and blue dots represent the difference in prevalence of HHs with msni ≥ 4) with/without at least one individual with disability. Whenever the difference in prevalence is significant at a level of 5%, prevalence values are displayed with % labels in graph (non-overlapping 95% condidence intervals)

Bar chart: The bar plot below the segments display the % of households with at least one member with disability (WG-SS 3). Percentages are showed only for values above 2%.

Graph done using for each country the latest available data from 2022 and 2023 MSNAs.

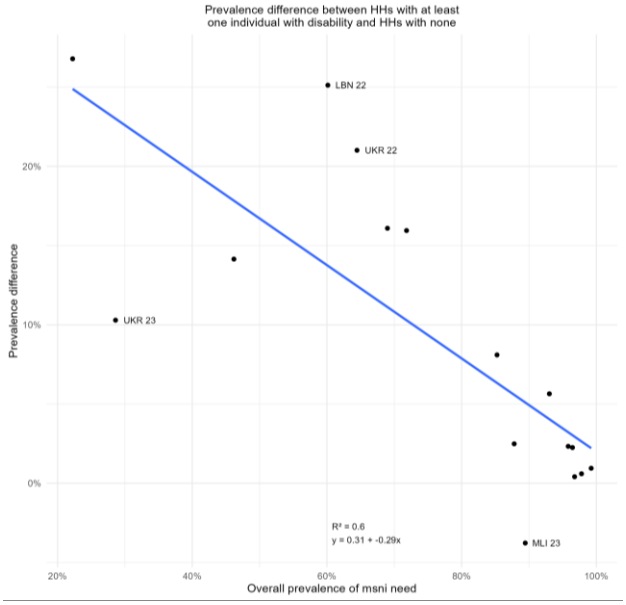
Across crises, households with members with disabilities were found to face more prevalent multi-sectoral gaps. As shown in graph 12, In Lebanon (2023), 17% of households without disabilities faced multisectoral gaps (MSNI ≥ 3), compared to nearly half (44%) of those with at least one member with a disability, highlighting significant disparities. In Ukraine, Gaza, Mali, and Myanmar, households with at least one member with a disability faced multi-sectoral gaps at rates at least 10 percentage points higher than other households.

Graph 12: Magnitude of multi-sectoral gaps (MSNI ≥ 3) and disability



In contexts where the overall prevalence of multi-sectoral gaps is lower, the relative increase in prevalence among households with at least one member with disabilities is much higher.

Graph 13: Country-level overall prevalence of MSNI ≥ 3 against MSNI prevalence difference between households with-without member(s) with disability



In 2023, Lebanon, Ukraine, Myanmar and Gaza (2022) constitute the set of countries where the overall prevalence of multi-sectoral gaps was among the lowest; even so, the prevalence of multisectoral gaps among households with member(s) with disabilities was still much higher than compared to other households. **This suggests that in situations where needs appear less severe compared to other crises, it is especially important to distinguish between households with and without member(s) with disabilities. This distinction helps ensure that the specific needs of individual(s) with disabilities and their households—who are significantly more**

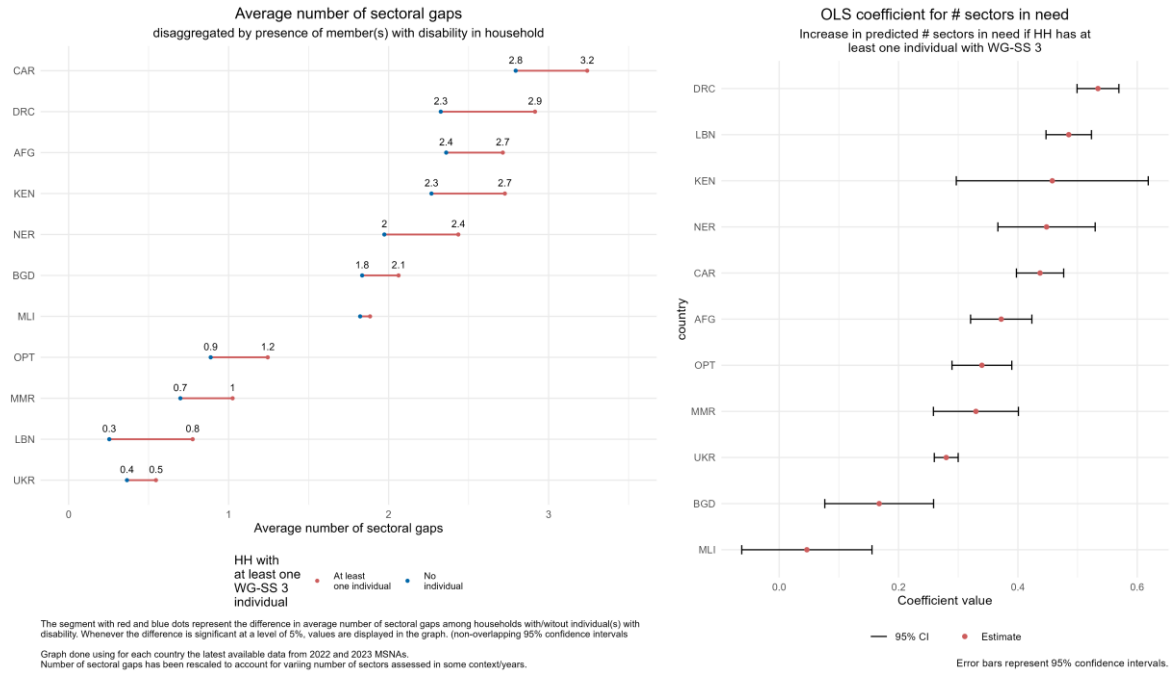
likely to face multi-sectoral gaps—are properly accounted for and systematically monitored in key locations.

When most households are already experiencing multi-sectoral gaps (with a prevalence closer to 100%), the difference between those with and without members with disabilities naturally becomes smaller. This happens because the metric is "saturated"—meaning there's little room for further distinction at that level. Therefore, instead of examining the overall magnitude of multi-sectoral gaps, it's crucial to focus on the prevalence of more severe gaps to better understand differences in impact on affected populations, as done above (see graph 11).

More complex needs for households with at least one member with disability

Moreover, **households with at least one member with a disability consistently face more complex situations, experiencing simultaneous gaps across more sectors[17] on average than other households**[18]. The average number of sectors with a sectoral gap (Living Standard Gaps ≥ 3) is consistently significantly higher among households with at least one member with WG-SS 3 compared to other households. For example, **in DRC in 2023, a household with at least one member with a disability experienced an average of 2.9 sectoral gaps compared to 2.3 for a household without any disability**. Furthermore, when trying to predict the number of sectoral gaps controlling for the age of the individual, population group, head of household gender, and year fixed effects, we see that the marginal impact of having one individual with a disability — keeping all other variables fixed — is always positive and significant. This means that households with at least one member with a disability are more likely to face a greater number of unmet needs across sectors, even after accounting for other factors.

Graph 14: Average number of sectoral gaps – disaggregated by presence of member(s) with disability in household / Increase in predicted number of sectoral gaps if household has at least one individual with disability.



[17] To enable cross-datasets comparison, the number of sectoral gaps per household has been rescaled to account for context and year during which livelihood sectoral gap was not calculated.

[18] This pattern has held across all countries and both years analysed, with a statistically significant difference at the 5% level—except in Mali.

The graph 14 above shows in more detail the extent to which the average number of sectoral gaps is higher among households with member(s) with disability. The first graph lays out the prevalence disaggregated by whether the household has at least one member with a disability, while the second graph illustrates how the average number of sectoral gaps (the number of sectors where a household experiences a gap) is predicted to increase in each country, for a typical household, if there is at least one member with a disability compared to a household with no members with a disability[19].

The impact of disability on the number of sectoral gaps, measured by the value of the OLS coefficient in the graph, is highest in the Democratic Republic of Congo, Lebanon, Kenya, Niger, and Central African Republic, with values above 0.4. This means that, on average, **households with at least one member with a disability in these countries experience 0.4 more sectoral gaps, even after accounting for other contextual factors**.

Beyond the magnitude and severity of these gaps, this highlights the need to examine how different sectoral deprivations intersect and reinforce one another. Understanding these overlaps is particularly critical for households with members with disabilities, who often experience compounded and interlinked needs across sectors such as health, protection, livelihoods, and WASH. **Addressing such complexity demands not only an intersectional lens but also integrated response strategies that move beyond siloed sectoral interventions.** One promising avenue in this regard is the use of multisectoral modalities such as Cash and Voucher Assistance (CVA), which—when appropriately designed—can offer flexible, person-centred support that aligns with the diverse and intersecting needs of crisis-affected households. Collaboration with Organisations of Persons with Disabilities (OPDs) can ensured that delivery mechanisms, such as mobile money, can be adapted to individuals with various type of impairments.

4.2. Unpacking sectoral gaps

Heightened prevalence of gaps in health, livelihood and food security

Among all sectors considered in the analysis[20], the most pronounced disparities in prevalence emerge in health, food security, and livelihoods. Households with members with disabilities report significantly lower access to healthcare services, higher levels of food insecurity, and poorer livelihood outcomes, compounding further their vulnerability. The prevalence of health needs is more than 15 percentage points higher for households with a member with a disability compared to other households in Lebanon, the Central African Republic, and the Democratic Republic of Congo for the years 2022-2023.

These challenges are not confined to specific crises but represent a persistent trend across diverse humanitarian contexts. Across all countries and years analysed, the link between disability and sectoral gaps in health, food security and livelihood remain one of the most consistent patterns

[19] In this analysis, the predicted number of sectoral gaps is based on a linear regression (OLS) predicting the average number of sectoral gaps with a set of predictors (control variables) including a binary that identifies whether a household has at least one member with a disability. The graph shows how this factor is associated with an increase in the number of unmet needs, or gaps, that the household may experience across various sectors, compared to households without any member with disability. The bigger the coefficient, the higher the predicted increase in the average number of sectoral gaps associated with the presence of a member with disability in the household.

[20] Six sectors were included for the cross-crisis analysis (Education, food security, health, wash, shelter/NFI and livelihood (only in 2022).

observed. Households with members who have disabilities are consistently more likely to experience gaps in these sectors, indicating that the presence of a member with disability in the household is strongly associated with reduced access to life-saving services for the whole household[21].

The cross-crisis analysis shows that households with members with disabilities are significantly more likely to experience acute and severe deprivations. Prioritising these households in humanitarian response efforts is essential for mitigating life-threatening needs and fostering a more equitable and effective approach that recognises and addresses the compounding challenges they face across crises.

To identify more precisely the relative predictive power[22] and marginal impact of disability on the predicted occurrence of (multi) sectoral gaps, we ran a series of regression models to try to predict the probability of experiencing a gap for each sector with the same set of predictors/control variables using all MSNA data from 2022 and 2023, to identify the marginal impact of presence of disability on the occurrence of a gap in any sector. The graph below shows the average marginal effect associated with having a member with a disability in a household on the predicted probability of experiencing a (multi) sectoral gap.

Our predictive analysis highlights three sectors where disability is most consistently linked to heightened predicted gaps: Health, Food, and Livelihoods. For instance, in Health, households with disability are **12.5 percentage points more likely to face a gap[23]** — after controlling for the effect of displacement, head of household age, year and country. This pattern holds across nearly all 11 countries studied[24], suggesting these are critical areas for targeted support. For all indicators we tried to predict we see a positive and significant estimated marginal effect on the probability of experiencing a gap. Similarly, the **probability that a household will experience a livelihood gap is 12 percentage points higher** if there is at least one member with a disability, while the **probability of experiencing a food gap is relatively 8 percentage points higher**. Education is the next most affected sector after health, livelihoods, and food security, **with households that include members with disabilities being 6 percentage points more likely to report an education-related gap**.

When disaggregating prevalence of education LSG gap by presence of member(s) with disability in household, we see that the difference is positive and significant in many contexts while being absent in others (see annex 9.2 for Education). However, to fully grasp the linkage between disability and education, it is important to consider how disability impacts access to schooling at individual level. Looking at 2023 MSNA from Ethiopia and Syria, we see that the percentage of school-aged children accessing formal schooling is significantly lower among individual with disability (WG-SS 3); **in Syria**

[21] This link has been identified first by looking at the prevalence of sectoral gaps disaggregated by household with or without members with disabilities for each dataset, then by running a predictive model (OLS and logit) to control for other variables that could also interact with the occurrence of sectoral gaps for all.

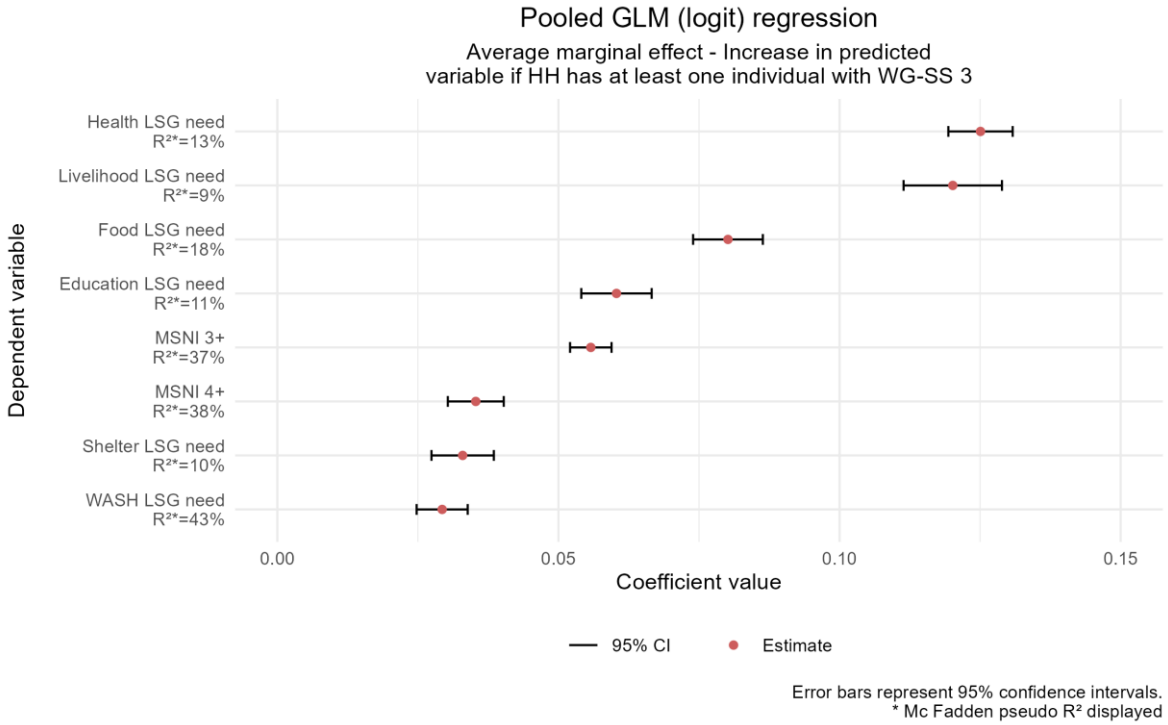
[22] General predictive power of each model can be measured with the pseudo-Mc-Fadden R squared, while the marginal of disability on each sectoral score is estimated with estimated average marginal effect in graph 15.

[23] On average, the estimated probability of a randomly selected household without disabilities to report unmet healthcare needs is 17%, while for a random household with at least one member with a disability, the estimated probability will be 29.5%, i.e. 12.5 percentage points higher.

[24] When running OLS regressions for health, food and livelihood sectoral gap indicators using the same predictors in each country, the country-specific estimated coefficients are positive and significantly different from zero at a level of 5%. For the three other sectors, the estimated coefficients are also positive and significantly different from zero for a vast majority of contexts. However, the magnitude of the effect is relatively lower.

77% of children without disability reportedly were reportedly accessing formal schooling compared to only 46% of children with disability, while **in Syria 67% of children without disability were accessing formal schooling compared to 46% with disability.**

Graph 15: Pooled logit regression of (multi) sectoral gap – increase in predicted probability of experiencing a gap if household has at least one individual with WG-SS 3



These results seemingly confirm those of the 2021 Humanitarian Needs Assessment Programme's Disability in Syria report[25]. The high sectoral gap in livelihood, as displayed by the MSNA data, notably echoes the statement that households with members with a disability, and more specifically households headed by a member with a disability, are more likely to resort to daily labour as their main source of income. Similarly, in the education sector, the Syria report found that children with disability were less likely to attend school than those without and that, at the household level, households with members with disabilities were less likely to prioritize education as one of their top three needs. Regarding shelter, the MSNA data indicates minimal impact, which is consistent with the Syria report's findings that there are fewer differences in shelter sector needs between households with and without disabilities.

Challenges and barriers encountered

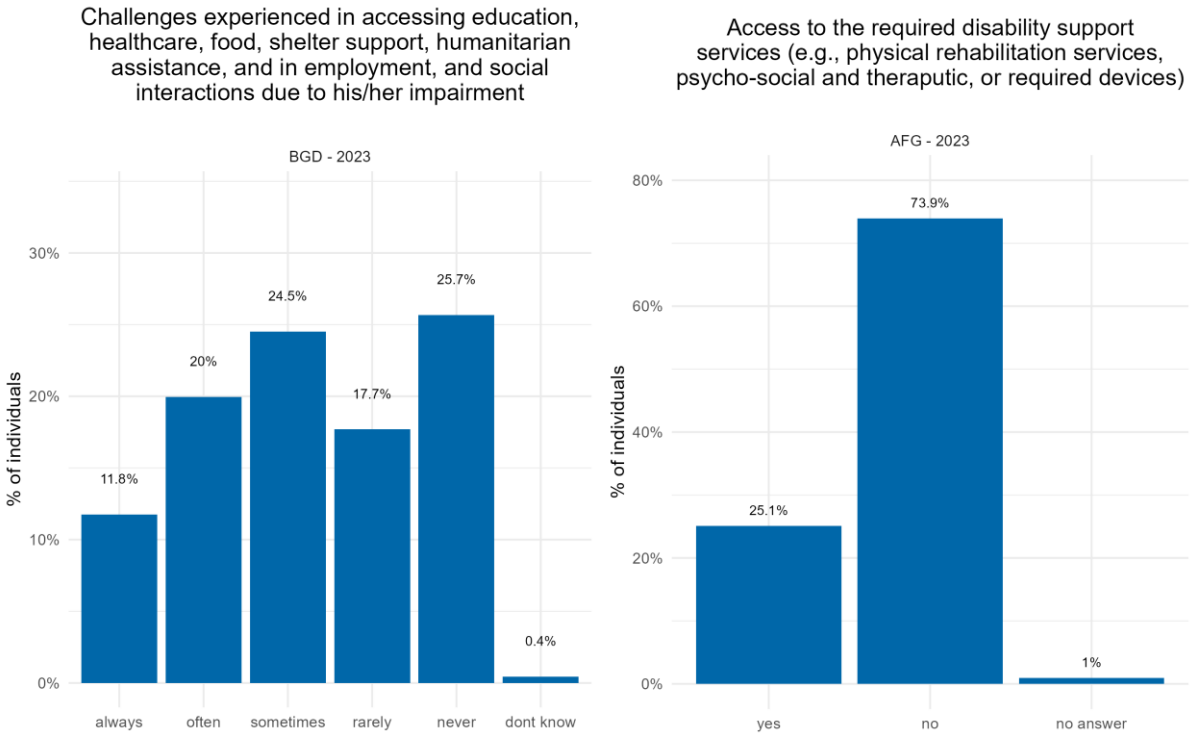
In three datasets, additional questions were asked at the individual level to gather further information on the **type of challenges encountered because of disability** or specific questions on the availability of specialized material:

- In the Bangladesh 2023 MSNA, a question was added on the frequency to which individuals with disabilities were experiencing challenges accessing basic services due to their impairment. It was observed that among the 697 individuals with WG-SS 3 severity, 31.8% reported either always or often experiencing challenges accessing basic services due to their impairment, with only 25.7% reporting never experiencing any challenge.

[25] Humanitarian Needs Assessment Programme (HNAP), *Disability in Syria* (2021). Available at: HHS 2021 Disability Report.indd

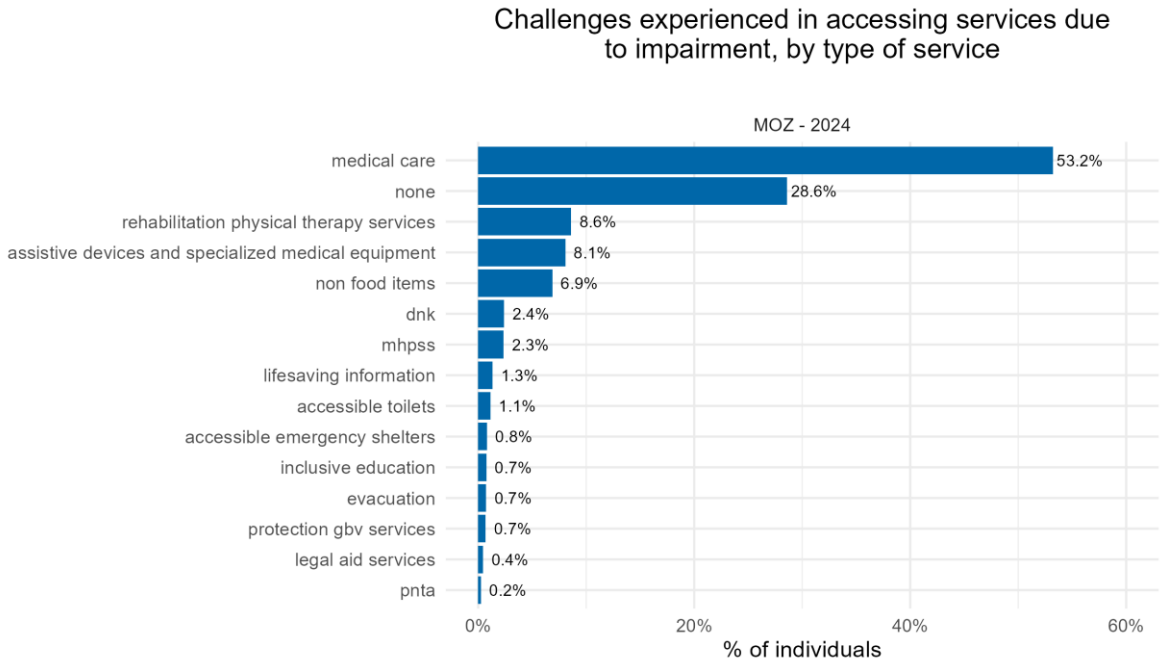
- In the Afghanistan 2023 MSNA, a question was asked at the household level about whether individuals with disabilities access to the required disability support services had whenever there was at least one individual with WG-SS 3. This aimed to determine if the individuals concerned received the necessary disability support services. Almost 3 out of 4 individuals with a disability (73.9%) reported not accessing the required disability support services.

Graph 16: Access to disability support (AFG 23) and challenges experienced due to impairment (BGD 23)



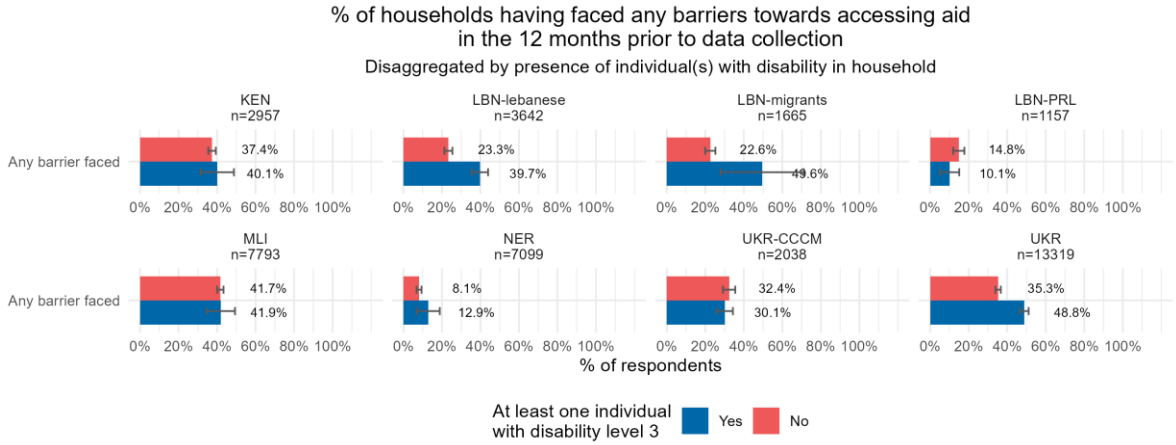
Finally, the Mozambique 2024 MSNA questionnaire had an additional individual-level multiple choice question asked to individuals with WG-SS 3 on challenges experienced in accessing services due to impairment by type of service. Only 28.6% reported no challenges in accessing services, with most respondents reporting experiencing challenges accessing medical care (53.2%), followed by rehabilitation/physical therapy services (8.6%), assistance devices and specialized medical equipment (8.1%) and non-food items (6.9%).

Graph 17: Type of challenges experienced due to impairment (MOZ 24)



Finally, the study examines household-level indicators regarding whether households have faced barriers to accessing aid, disaggregated by the presence of members with disabilities, for the 2023 MSNA where the indicator was available. Varying results were highlighting differences among host and migrant communities in Lebanon, out-of-camp areas in the Whole of Ukraine, and Niger, where the proportion of households reporting any barrier was significantly higher among households with at least one member with disability compared to others. The type of barriers that were more frequently cited by households with member(s) with disabilities in these countries mainly were lack of information on how to access humanitarian assistance and physical barriers.

Graph 18: Barriers towards accessing aid in the past 12 months, disaggregated by the presence of member(s) with disability in household – 2023 MSNA



Recommendations

These extra questions emphasise the need to explore the unique challenges encountered by individuals with disabilities. Including targeted questions about the specific barriers faced by individuals with disability - ranging from financial and physical to communication barriers- enhances response planning

by clarifying how access can be improved. Additional analysis exploring the correlation between types of disabilities and access challenges, while factoring in demographic variables such as age, gender, and displacement status, could help uncover underlying intersectional dynamics. This approach will aid in comprehensively understanding their needs and obstacles, ensuring that these concerns are addressed effectively in an inclusive program response.

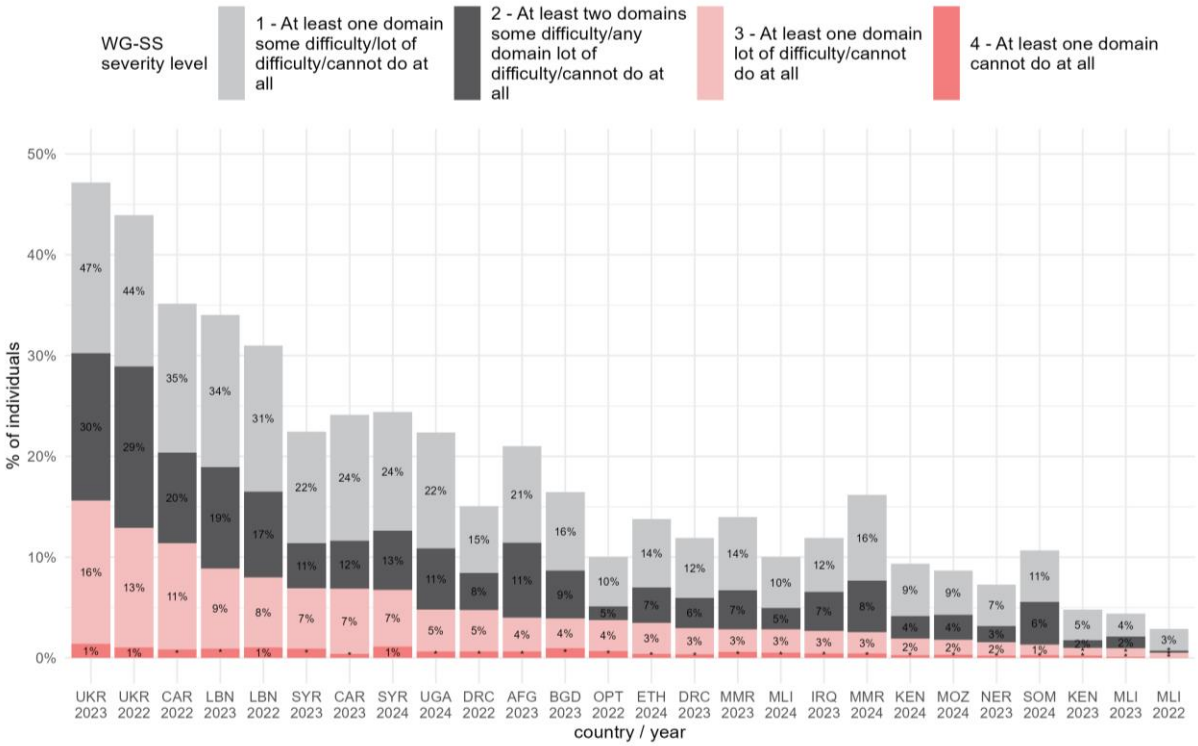
5. Unpacking disability: Key demographic insights

5.1. Prevalence of disability

Overall reported prevalence

The analysis of the MSNA Washington group's short set of questions yields lower reported prevalences compared to WHO global estimates of 16% at the country level. Through the MSNAs, differences were also observed across countries, with reported prevalence ranging from 15.6% for Ukraine in 2023 to 0.5% for Mali in 2022. The median[26]reported prevalence is 3.5%, and the 75th percentile[27] is 6.9% across MSNA.

Graph 1: Disability prevalence by WG-SS severity level – all countries & years



Prevalence shown in graph correspond to the % individual experiencing the corresponding WG-SS severity level
(i.e. for UKR in 2022, 29% of individuals experiencing a severity WG-SS 2 includes the 13% of individuals experiencing WG-SS 3)
* corresponds to prevalence below 1%

Overview of Washington Group Short Set on Functioning – Level 3 Severity Trends

As measured by the Washington Group Short Set on Functioning (WG-SS3), the prevalence of severe functional difficulties has shown varying trends across different countries, reflecting complex interactions between context, demographic composition, and data collection methodologies.

Looking at the reported prevalence rates of disability by severity threshold across all countries and years yields several key insights:

- **Reported prevalence rates were lower than the WHO's global estimate of 16%,** yet consistent with findings from other studies using the Washington Group Short Set (WG-SS),

[26] Median and percentiles mentioned here are calculated among all MSNAs nationwide weighted averages of WG-SS 3 difficulty at individual level.

[27] This means that only 25% of other MSNAs datasets had nationwide prevalence rates above 6.9%.

highlighting methodological challenges associated with applying WG questions in humanitarian settings.

- **Significant differences across countries**, highlighting the influence of national contexts and survey methodologies.
- **Very low reported prevalences of WG-SS severity 4** in all contexts (below or equal to 1%).

There is a consensus that the Washington Group Short Set tends to report lower disability reported prevalence compared to other assessment tools, such as the World Health Organization's Model Disability Survey.[28][29] This is **primarily because WG-SS focuses on six specific domains of functional limitations.** In contrast, other methodologies adopt a broader approach that does not specify types of health conditions, the nature of their impact, or the timeframe over which they affect individuals. Notably, the WG-SS does not include psychosocial domains[30], which may contribute to lower reported prevalence rates[31].

Desk review of WG-SS Disability Reported Prevalence Across non-MSNA studies

A review of third-party studies (see list below) that utilize the WG-SS indicates that the reported prevalence rates reported in the MSNA are generally consistent with those found in other studies—despite being significantly lower than the often-cited global estimate of 16% prevalence of disability reported by WHO. Significantly, just one study employing this tool revealed a disability reported prevalence of 28% in Syria, which contrasts with the 8% reported in the Syria MSNA 2023.

Table 2: Existing WG-SS Disability Reported prevalence Surveys Overview

Country	Name of the Survey	Year	Disability Prevalence (%)
Afghanistan	Living Conditions Survey	2016	3.2%
Ethiopia	Socioeconomic Survey	2015	3.1%
Tanzania	National Panel Survey	2020	3.9%
Uganda	National Panel Survey	2010	4.0%
Uganda	Demographic and Health Survey	2016	6.7%
USA	National Health Interview Survey (NHIS)	2010	9.5%
Japan	Comprehensive Survey of Living Conditions	2022	10.7%
Syria	Humanitarian Needs Assessment Programme	2020	28.0%
Australia	Supplementary Disability Survey	2016	6.7%
Maldives	Maldives Demographic and health survey	2009	9.6%

[28] Mitra, S., & Yap, J. Limitations of the Washington Group Short Set in Capturing Moderate and Severe Mobility Disabilities. Disability and Health Journal. Available at: https://pmc.ncbi.nlm.nih.gov/articles/PMC11823121/pdf/qxaf015.pdf.

[29] CARE**.** *Sex, Age, and More Still Matter: Final Report.* March 2023. Available at: https://www.care.org/wp-content/uploads/2023/03/Sex-age-and-more-still-matter_Final-report.pdf.

[30]The Washington Group Extended Set of Questions includes, for instance, questions on affect (anxiety and depression), pain and fatigue, while the Model Disability Survey (MDS) encompasses even more psychosocial dimensions into their disability framework: pain, sleep and energy, breathing, affect, interpersonal relationships, handling stress, communication, cognition, household tasks, community and citizenship participation, caring for others and work and schooling. *See the case study textbox on Afghanistan for more details on comparing WG-SS studies and the MDS.*

[31] For a case study on the impact of adding additional dimensions to the WG-SS framework on the measured prevalence, refer to section 6.4 exploring the case of Mali 2022 MSNA.

South Africa	Census - profile of persons with disability	2016	7.5%
Turkey	Population and Housing Survey	2011	6.9%
Zambia	Zambian Survey	2006	8.5%
Zambia	Zambia National Disability survey	2015	10.9%
Cameroon	Population-Based Survey	2015	6.1%
Guatemala	Population-Based Survey	2016	7.3%
India	Population-Based Survey	2016	9.8%
Nepal	Population-Based Survey	2016	4.1%
Vanuatu	Population-Based Survey	2016	3.2%

Graph 2: Reported prevalence in other WG-SS studies (Severity Threshold - 3)

Another critical factor is the **choice of severity threshold**. While recommendations from the Washington Group suggest using the threshold WG-SS 3[32] (*At least one domain that can be done with "a lot of difficulties"* or *cannot be done at all*) to estimate reported disability prevalence, MSNA data shows that WG-SS produces prevalences closer to other more comprehensive assessment tools by using a looser threshold (WG-SS 2 at least one domain with some or a lot of difficulties or cannot do at all) instead[33]This report consistently uses threshold 3 to define an individual as having a disability to facilitate a streamlined understanding of the findings across contexts and time.

Moreover, methodological limitations associated with the MSNA, including the use of proxy respondents and shortcuts like screening or skip questions that avoid the complete WG-SS module, result in an underestimation of the prevalence rate. For more details on these limitations, refer to sections 6.2 to 6.4.

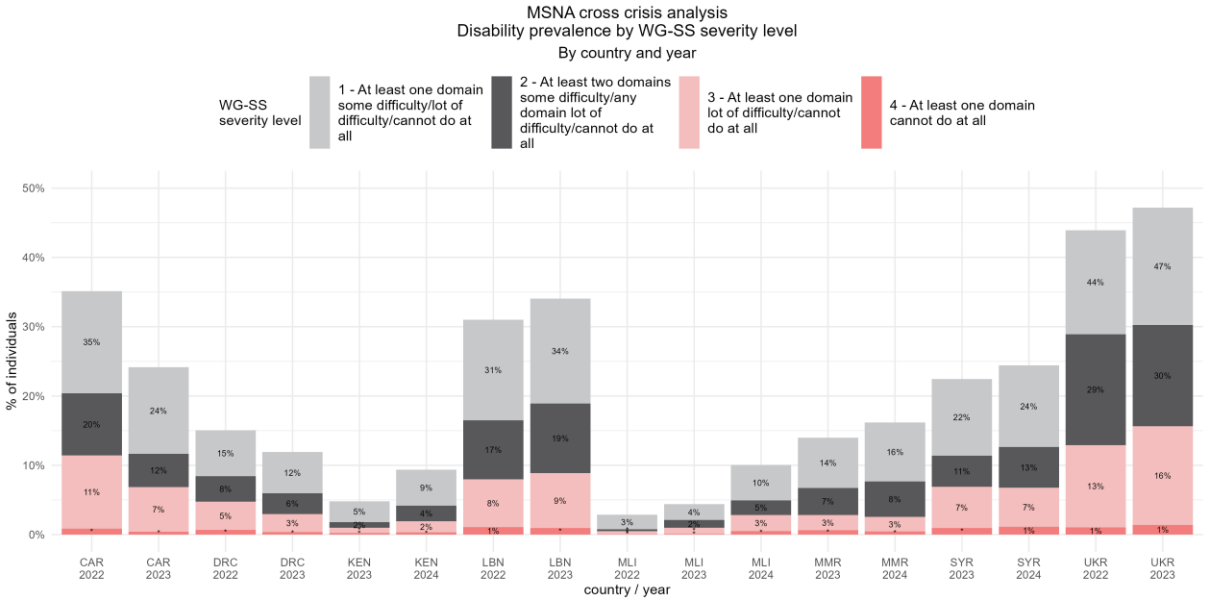
Trends analysis - in eight contexts from 2022 until 2024

To be able to identify trends through time, we can look at countries for which we have more than one MSNA with WG-SS questions, which leaves with a subset of 8 countries: Central African Republic, Democratic Republic of Congo, Kenya, Lebanon, Mali, Myanmar, Syria and Ukraine. It must be noted that changes in geographical coverage (varied access to geographical areas for security reasons) and targeted population group in sampling strategies might partially explain some of the incidents in some context, and even if statistical significance tests were run, **this trends analysis must therefore be read as indicative rather than a clear-cut identification of time variation of reported disability prevalence.**

Graph 3: Reported disability prevalence by WG-SS severity level – trend analysis

[32] Washington Group on Disability Statistics. *Creating Disability Severity Indicators Using the WG Short Set on Functioning (WG-SS) (CSPro)*. WG Document No. 5H. Available at: https://www.washingtongroup-disability.com/fileadmin/uploads/wg/WG_Document_5H_-_Analytic_Guidelines_for_the_WG-SS_Severity_Indicators_-_CSPro_.pdf

[33] Discussion with IMPACT country teams showed that when disseminating findings, some actors were pushing for the adoption of looser thresholds to produce prevalences fitting other data sources/prior expectations.



Overview of WG-SS3 Severity Trends

As measured by the Washington Group Short Set on Functioning (WG-SS3), the reported prevalence of severe functional difficulties has shown varying trends across different countries, reflecting complex interactions between context, demographic composition, and data collection methodologies. Below are the main identified changes in the reported prevalence of disability measured by the threshold *WG-SS 3*:

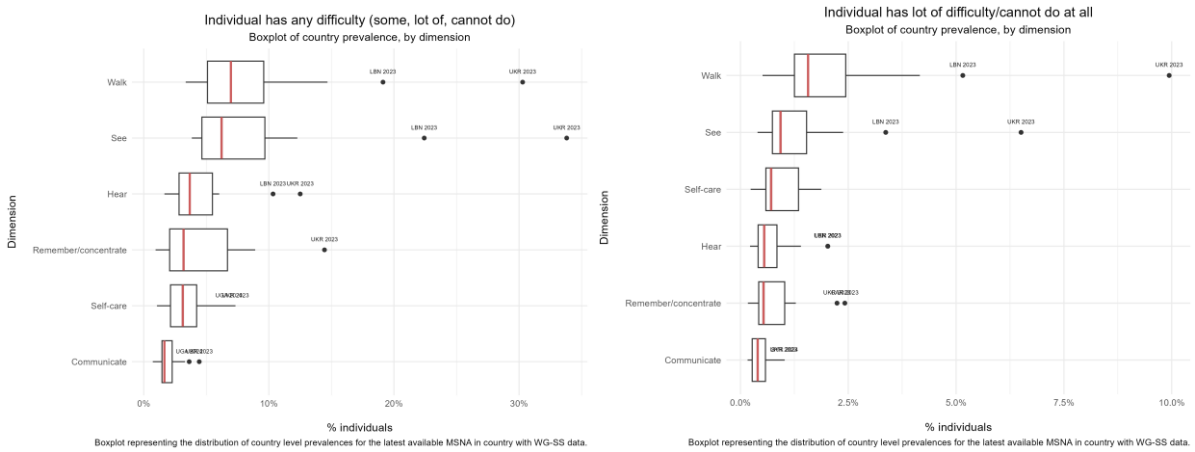
- **Ukraine:** There has been an increase of approximately 3 percentage points (pp), with a similar age and gender distribution over time. This increase could reflect the impact of the ongoing conflict on the population.
- **Central African Republic:** A decrease of 4.5 percentage points occurred, probably because children aged 5–17 were included in the WG-SS during the last MSNA, in contrast to the earlier years, as they typically show a lower reported prevalence of functional issues difficulties. Additionally, among individuals aged 17 years and older, reported prevalence has been decreasing since 2022.
- **Lebanon:** An overall increase in reported prevalence, fluctuating between 8% and 8.9%, potentially driven by an increase in the share of female respondents, who tend to report difficulties more frequently (see *section 4.4*).
- **Syria:** Consistent reported prevalence levels, ranging from 6.8% to 6.9%.

5.2. Unpacking disability by functional domains

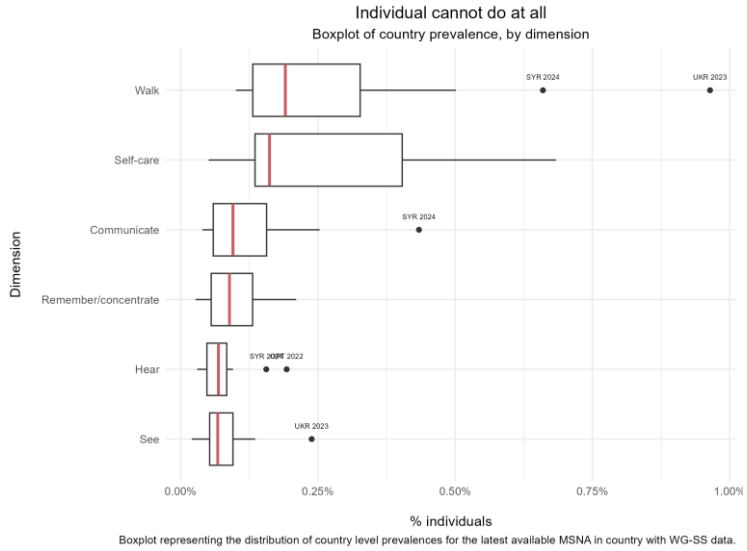
Moving beyond the overall WG-SS severity reported prevalence, it is also crucial to identify the dimensions that influence the different severity levels. To do this, the proportion of individuals experiencing challenges in various functional areas within the six dimensions of the WG-SS was analysed, classified by severity level: cannot do at all, a lot of difficulties, some difficulty, and no difficulty at all. See graph below for an illustration of the distribution of reported prevalences, by country and year. When we analyse for each country the proportion of individuals reporting any difficulty or significant difficulties (cannot do at all or a lot of difficulties), we observe that seeing and walking are the two most frequently reported difficulties, while communicating is the least reported dimension.

It is interesting to note that the dimension of communication is rarely reported, suggesting that the questionnaire might bypass difficulties related to language use—whether it be first, second, or third languages, as well as non-verbal communication. Alternatively, this may indicate that the tool struggles to accurately capture communication-related difficulties due to these factors, and that enumerators may also face challenges when engaging with this specific subset of respondents.

Graph 4: Boxplot of country reported prevalences by dimension - WG-SS Any difficulty / WG-SS 3 – lot of difficulty or cannot do



Graph 5: Boxplot of country reported prevalences by dimension - WG-SS 4 – cannot do at all

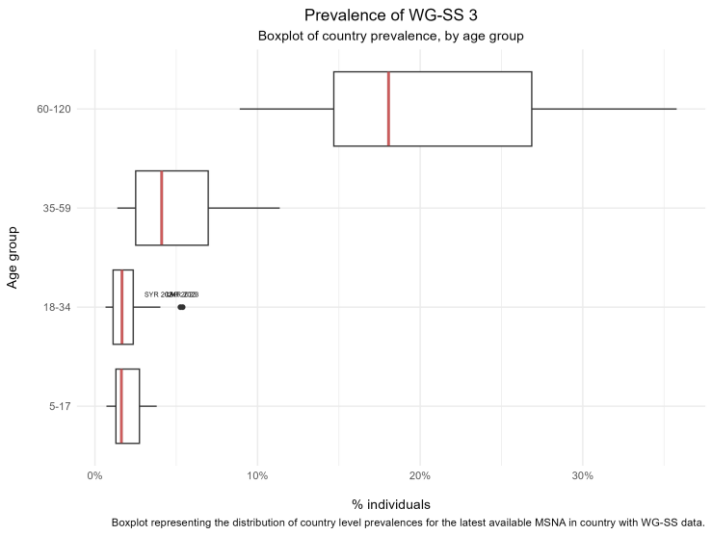


The order of the most frequently reported dimensions varies based on severity threshold kept, and we see a different ranking when looking at the percentage of people who report being unable to perform a task entirely. The two most reported dimensions are walking and self-care, however, the reported prevalence rates for these issues are notably low. **This highlights that identifying which dimensions drive disability is dependent on the severity threshold considered**.

5.3. Age disaggregation

The highest reported prevalence of disability is observed among individuals aged 60 and older across all countries, followed by those in the 35-64 age category. Countries with elevated reported prevalence rates tend to have a relatively older population, such as Lebanon (LBN) and Ukraine (UKR). Delving into the country-level findings, in all countries we see that the reported prevalence of disability (WG-SS 3) is significantly higher among individuals aged 60 and above compared to their younger counterparts. Overall, the second age group with the highest reported prevalence is those aged 35-64. **This logically suggests that in countries with an older overall population, the reported prevalence rate is likely higher than in younger populations**, assuming all other factors remain constant.

Graph 6: Boxplot of country reported prevalences by age

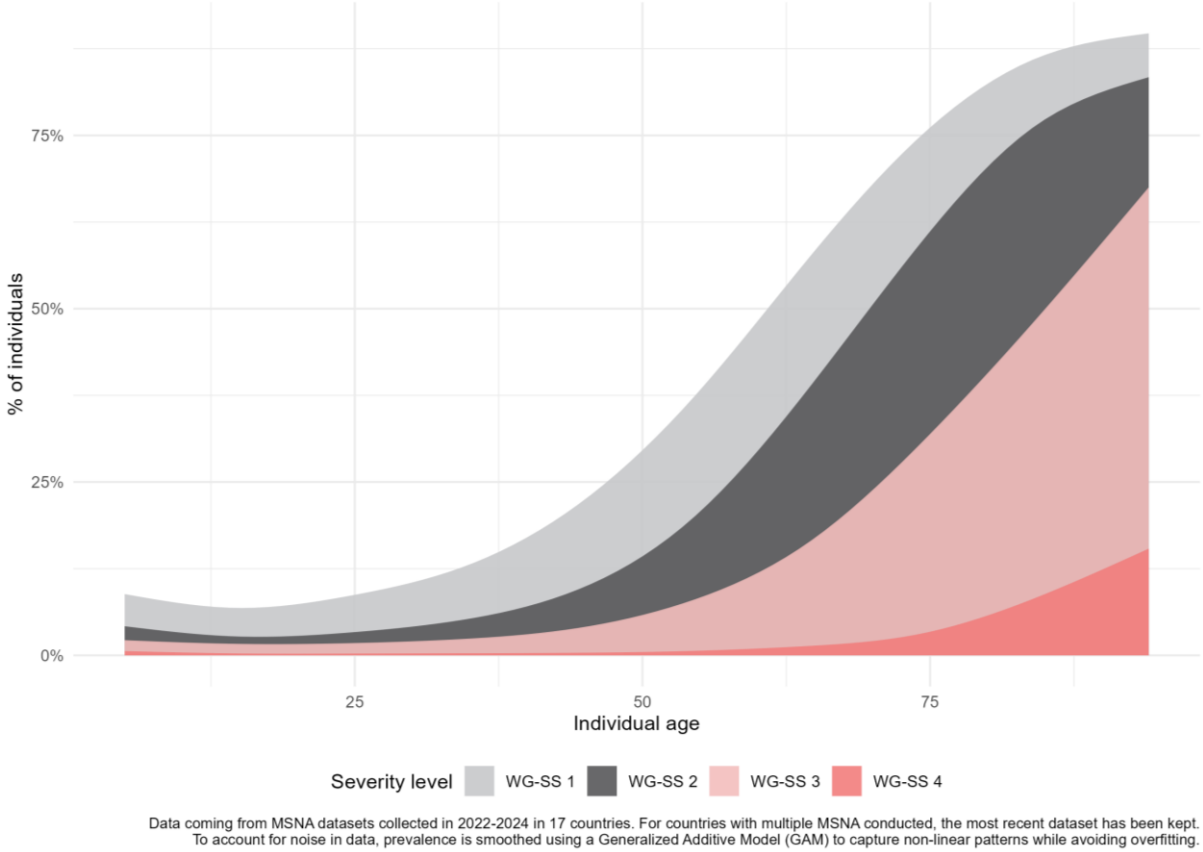


For the 60+ age group, the reported prevalence of WG-SS 3 is notably high in Syria (SYR) at 35%, followed by Ukraine (UKR) with rates of 29% and 36%, Central African Republic (CAR) at 32% and 31%, Lebanon (LBN) at 25% and 28%, and finally Uganda (UGA) at 27%. In the 35-59 age group, the highest reported prevalence rates were recorded in Ukraine, Central African Republic, and Syria, with more than 8% exhibiting severe disability (WG-SS 3) across all years considered.

We can examine in more details how reported prevalence of disability (at all severity levels) is associated with age of individuals in all MSNA in graph 7 below, representing the share of individuals reporting different levels of difficulty over the 6 domains depending on their age.

When looking more closely at how functional difficulties evolve with age, we observe in graph 8 that the reported prevalence increases most rapidly for mobility followed by vision, while difficulties in self-care become significantly more common for individuals over 75, in particular for severe limitations (cannot do). Globally, this link between the level of difficulty and age is verified across all countries and dimensions, making the case for relatively good consistency in the data collection process. Additionally, difficulty in communication is the least frequently reported, whereas difficulty in walking/taking steps and vision are the most cited. These difficulties also tend to appear more frequently at an earlier age compared to others.

Graph 7: Reported prevalence of disability by age and WG-SS severity level – all countries using latest available MSNA[34]



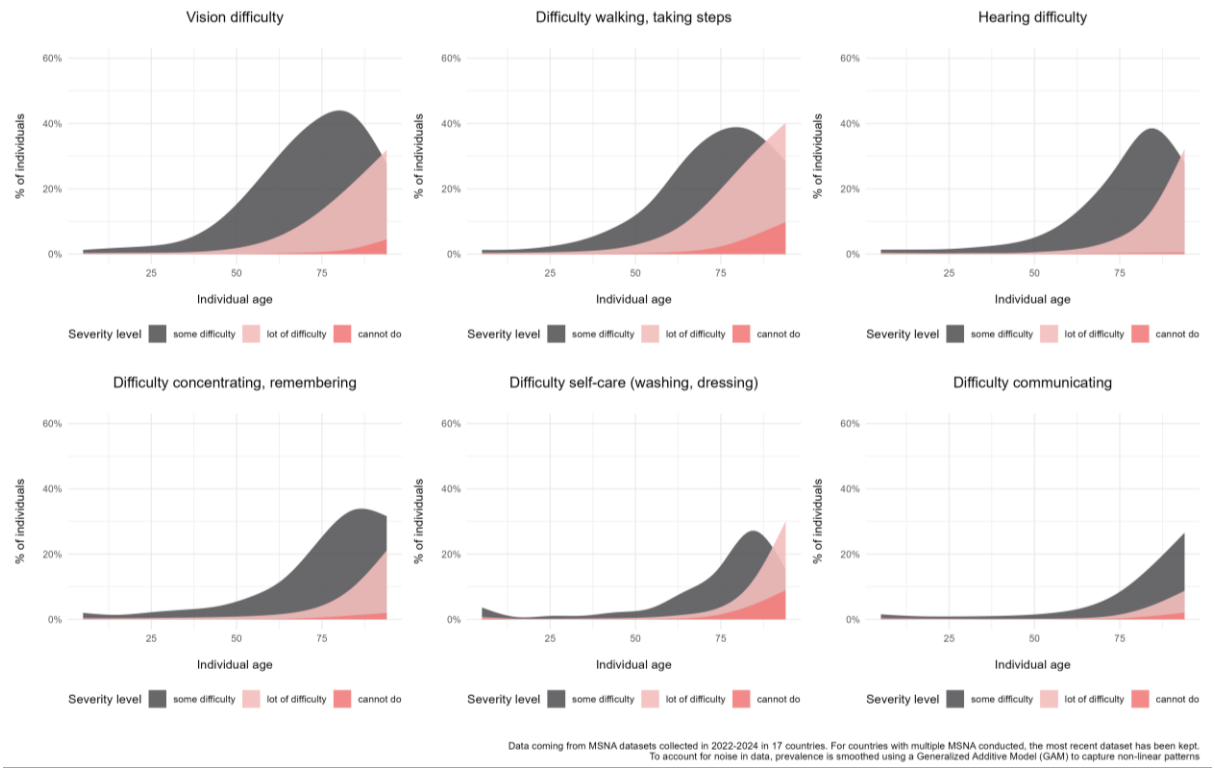
Measuring prevalence with younger individuals

It is important to carefully contextualize the meaning of difficulty for younger individuals (under 12 years old), in particular for self-care. When looking at the prevalence rate against age (see graph 7), we see a u-shaped curve which starts by slightly decreasing from 5 to 12 years, approximatively, before increasing again. When unpacking prevalence by dimension, one can see that the prevalence rate first decreases slightly for ages 5 to 12 years old and then increases from 12 years old and onwards, forming a "U-shaped" curve.

This U-shape is mostly visible for the self-care dimension (see graph 8). This is likely due to issues in the training of enumerators or translation of the tool in local languages, where respondents reported functional difficulties in self-care that are specific to all younger children rather than specific functional difficulties that the tool aims at detecting. While the Short Set of Questions has been used with younger individuals, it is not recommended for use with children, as the Child Functioning Module is better adapted to this population group. For more information on this, you can refer to section 7 of the report, unpacking specific contexts in which prevalence rose for younger ages and other contexts in which data was also collected for individuals below five, contributing to upward biased estimates of prevalence.

Graph 8: Reported prevalence of difficulties by domain and individual age

[34] To account and reduce noise in data (small subsamples for older age group), in the graph prevalence against age is smoothed using a Generalized additive model (GAM) that captures non-linear patterns.



5.4. Unpacking drivers of reported disability prevalence: A predictive model

To be able to effectively control for the concurring relationships between, age, gender, respondent profile, displacement status and contextual-specific effects, IMPACT ran a linear regression35 of disability severity level at the individual level using all available relevant predictors36 that were available in our dataset (individual age, gender, respondent gender, head of household gender, displacement status, year and country fixed effects37). This enables isolating to which extent each predictor can explain variation in observed disability severity measured at the individual level. In the rest of the report, any mention of probability of experiencing a gap will refer to predictive linear (or nonlinear) models which control for the variation in other drivers/predictors, as opposed to reported prevalences that unpack percentages of household experiencing a gap disaggregated by one dimension only.

We see overall that on average, **male individuals are associated with a lower predicted probability of reportedly experiencing a difficulty of severity 1 to 3**, while for severity level 4, the coefficient associated with male individuals is positive[38]. Moreover, **the older the individual, the more likely to**

[35] Linear regression (or OLS – Ordinary least squares) is a statistical method used to model the relationship between a dependent variable and one or more independent variables by identifying the best-fitting straight line that represents this relationship, allowing for the prediction of an outcome based on observed data.

[36] Predictors (or covariates) kept are the set of individual and context level variables that have been used to predict the occurrence of disability at individual level.

[37] Due to time constraints, it was not possible to align and include additional control variables.

[38] The predictive power of the model for severity 4 is, however, very low (R-squared of 1%); thus, this must be interpreted with caution.

experience disability, as shown previously, with a non-linear effect for age.[39] Finally, **female-headed households were more likely to report disability for all severity thresholds, and female respondents were found to be associated with an increased predicted probability of disability**[40]. This is particularly interesting and calls for particular attention to the need for more gender-balanced sampling and related measurement challenges[41]. For more findings on respondent gender on reported prevalence, please refer to the dedicated text box below. Interestingly, we observe that the predictive power of this model declines as the disability severity threshold increases. For instance, the model explains 21.6% of the variance in disability at severity level 1, but only 1.1% at severity level 4. **This means that while our current set of predictors** (such as demographics, socioeconomic factors, etc.) **help explain mild to moderate difficulties, they are not strong enough to explain the most severe cases,** those where individuals cannot perform a task at all. This likely reflects a limitation in the variables kept for the analysis and available in our survey design, which may not include the deeper or more complex factors (such as underlying health conditions, long-term support needs, or environmental barriers) that drive these rarer but more extreme outcomes.

Table 3: Pooled OLS regression table – Predicting probability of individual reporting WG-SS disability by severity level

Pooled OLS model for WG-SS severity

	Dependent variable:			
	WG-SS severity level (1)	WG-SS severity level (2)	WG-SS severity level (3)	WG-SS severity level (4)
ind_gendermale	-0.010*** (0.001)	-0.010*** (0.001)	-0.003*** (0.0004)	0.001*** (0.0002)
ind_age	-0.005*** (0.0001)	-0.007*** (0.0001)	-0.005*** (0.00004)	-0.001*** (0.00002)
ind_age_sqr	0.0002*** (0.00000)	0.0002*** (0.00000)	0.0001*** (0.00000)	0.00002*** (0.00000)
resp_gendermale respondent	-0.001 (0.001)	-0.0001 (0.001)	-0.001*** (0.001)	0.0002 (0.0002)
resp_age	0.0002*** (0.00003)	0.0002*** (0.00002)	-0.00004** (0.00002)	-0.0001*** (0.00001)
hoh_gendermale	-0.026*** (0.001)	-0.021*** (0.001)	-0.012*** (0.001)	-0.002*** (0.0002)
year	-0.007*** (0.001)	-0.013*** (0.001)	-0.010*** (0.001)	-0.002*** (0.0002)
countryBGD	-0.021*** (0.003)	-0.015*** (0.002)	-0.002 (0.002)	0.001 (0.001)
countryCAR	0.088*** (0.002)	0.046*** (0.002)	0.044*** (0.001)	-0.001 (0.0005)
countryDRC	-0.056*** (0.002)	-0.036*** (0.001)	-0.008*** (0.001)	-0.004*** (0.0004)
countryETH	-0.067*** (0.003)	-0.033*** (0.002)	-0.003 (0.002)	-0.002*** (0.001)
countryIRQ	-0.060*** (0.002)	-0.034*** (0.002)	-0.003** (0.001)	-0.0003 (0.001)
countryKEN	-0.108*** (0.002)	-0.062*** (0.002)	-0.019*** (0.001)	-0.005*** (0.001)
countryLBN	0.032*** (0.002)	-0.004** (0.002)	0.006*** (0.001)	-0.002*** (0.001)
countryMLI	-0.081*** (0.002)	-0.036*** (0.002)	0.001 (0.001)	0.0005 (0.001)
countryMMR	-0.073*** (0.002)	-0.051*** (0.002)	-0.016*** (0.001)	0.002*** (0.001)
countryMOZ	-0.100*** (0.002)	-0.050*** (0.002)	-0.014*** (0.001)	-0.003*** (0.0005)
countryOPT	-0.116*** (0.002)	-0.082*** (0.002)	-0.021*** (0.001)	-0.003*** (0.001)
countrySOM	-0.054*** (0.002)	-0.019*** (0.002)	-0.010*** (0.001)	-0.001 (0.001)
countrySYR	0.041*** (0.002)	0.019*** (0.002)	0.030*** (0.001)	0.003*** (0.001)
countryUGA	0.056*** (0.002)	0.025*** (0.002)	0.020*** (0.001)	-0.0004 (0.001)
countryUKR	0.075*** (0.002)	0.045*** (0.002)	0.025*** (0.001)	-0.005*** (0.001)
Constant	14.490*** (1.939)	25.836*** (1.500)	19.450*** (1.147)	3.535*** (0.458)
Observations	1,034,623	1,034,594	1,034,594	1,034,593
R^2	0.216	0.207	0.100	0.011
Adjusted R^2	0.216	0.207	0.100	0.011
Residual Std. Error	0.339 (df = 1034600)	0.262 (df = 1034571)	0.201 (df = 1034571)	0.080 (df = 1034570)
F Statistic	12,974.900*** (df = 22; 1034600)	12,290.130*** (df = 22; 1034571)	5,215.175*** (df = 22; 1034571)	538.904*** (df = 22; 1034570)
Note:				*p<0.1; **p<0.05; ***p<0.01

Pooled OLS model for WG-SS severity

Coefficient are average increase/decrease in predicted probability of being disabled with corresponding severity level

[39] Refer to table 3 to see the negative coefficient associated with age squared and the positive coefficient for age. This confirms the pattern observed in the prevalence by age across all MSNAs, where a bell-shaped curve appears, showing decreasing prevalence rates for younger ages, a stable prevalence rate until 35 years old, followed by a steady increase in prevalence rates.

[40] This could potentially be correlated with the gender of the enumerator. However, as this variable was not consistently tracked in all datasets, we could not control for it.

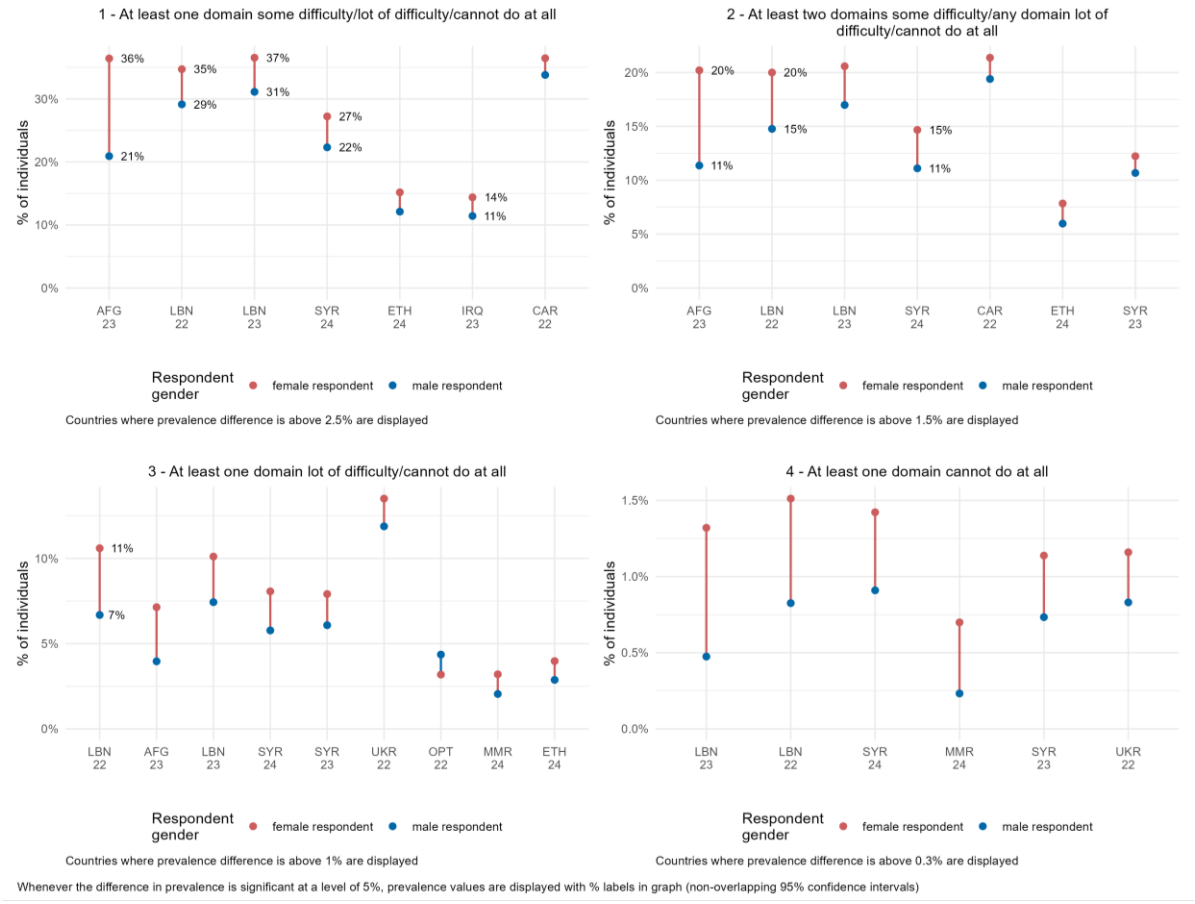
[41] La perception des besoins et le sentiment d'insécurité des populations des communes de Bandiagara et la ville de Ménaka leverage the dual voice approach, where both men and women in the household are asked the same question to identify gendered perception bias. For another example focusing on the same question, you can also consult the report Whole of Afghanistan Assessment (WoAA) 2023: Women Voices Situation Overview. September 2023 - Available upon request

Respondent's gender and reported prevalence

The gender of the respondent seems to impact reported disability prevalences in various ways across contexts. As shown in graph 9, the reported prevalence was higher among female respondents than male respondents in many contexts. According to KIs, this is likely since women in many contexts are primary caretakers of the household and, therefore, have better knowledge of any difficulties household members may encounter. It was reported that even when men are the respondent, it may be the case that women will specifically respond to the WG-SS questions. In the case of Syria, while respondents to the overall questionnaire were mostly men, women almost made up half of the respondents for the Health and WASH sections of the MSNA. For more information on MSNA sample gender composition, refer to annex 9.1.

Moreover, in the predictive model, we see that for severity 3 and 4, asking a female respondent is associated with a significantly higher predicted probability of reporting an individual with disability. In the case of Afghanistan, the MSNA dataset is composed either of male respondents or female-headed household reporting, and we observe that the prevalence among female-headed households was much higher than among other households (7.1% against 4%). This is confirmed by the OLS predictive model above, which identifies a higher predicted probability of disability among female-headed households.

Graph 9: Reported prevalence of disability by severity level, disaggregated by respondent gender



5.5. Comparing Reported Disability Prevalence: Insights from 2023 MSNA and other key studies in Afghanistan

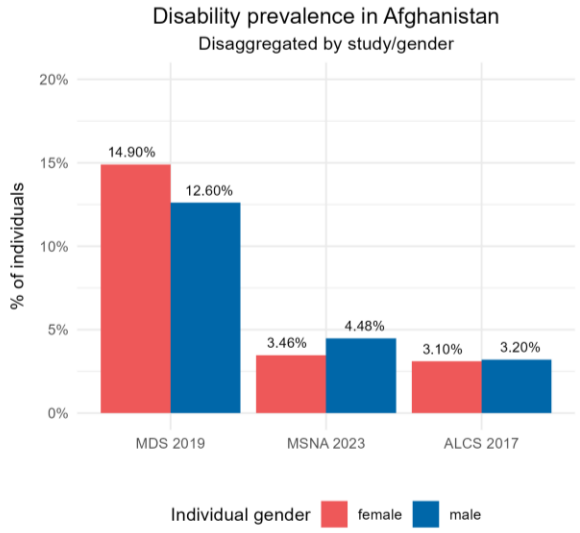
Comparing the 2023 MSNA data for Afghanistan with that of other assessments provides an interesting insight into potential explanations for the discrepancies in reported prevalence found across studies on disability. In Afghanistan, MSNA data was pitted against two other disability studies conducted over the past years: the 2019 Model Disability Survey (MDS with a sample size of 14'130 individuals) and the 2017 Afghanistan Living Conditions Survey (ALCS, with a sample size of 21'000 individuals). The former is based on an adaptation of the WHO and World Bank-endorsed Model Disability Survey, while the latter is also based on WG-SS. Overall, the MSNA and the ALCS, both WG-SS-based, yield relatively similar results, finding reported prevalences of 4% and 3.2%, respectively, and a similar repartition of dimension prevalences, with walking and vision ranking first. Looking at the age/gender pyramid additionally highlights how both studies find a clear relation between age and reported prevalence.

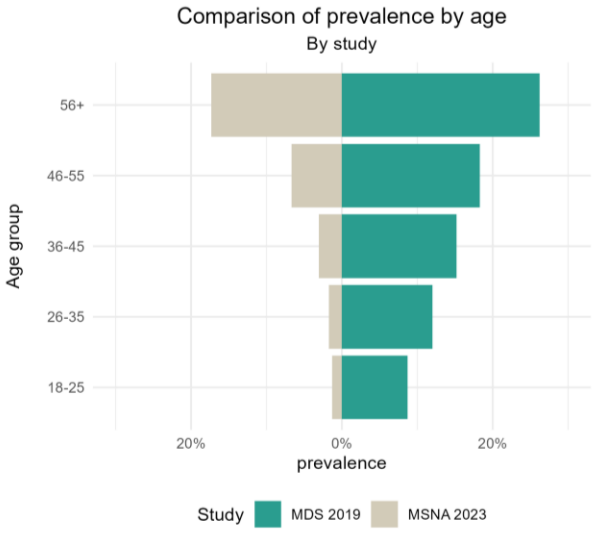
On the other hand, the MDS data displays a global prevalence of 13.9% for severe disability and 40.4% for moderate disability, but also finds, as opposed to the MSNA, that prevalence is higher amongst the female population. **From the comparison of these three surveys, it can be hypothesized that discrepancies in disability prevalence can at least partially be attributed to the use of different tools.** The WG-SS indeed adopts a narrower scope, with only 6 dimensions assessed. The full version of the MDS survey, on the other hand, entails 294 questions. Compared with other tools, at least one domain with "a lot of difficulty" also appears as a higher threshold for disability recognition. Ultimately, the WG-SS approach to disability slightly differs from that of the MDS. The WG-SS takes a more "functional" approach, based on the idea that the consequences, rather than the diagnosis, should be the basis for assessing disability[42]. While such an approach already challenges the medical mode with a more social approach to disability, the MDS goes one step beyond by taking a more comprehensive social lens in which disability ultimately is a socially constructed phenomenon[43].

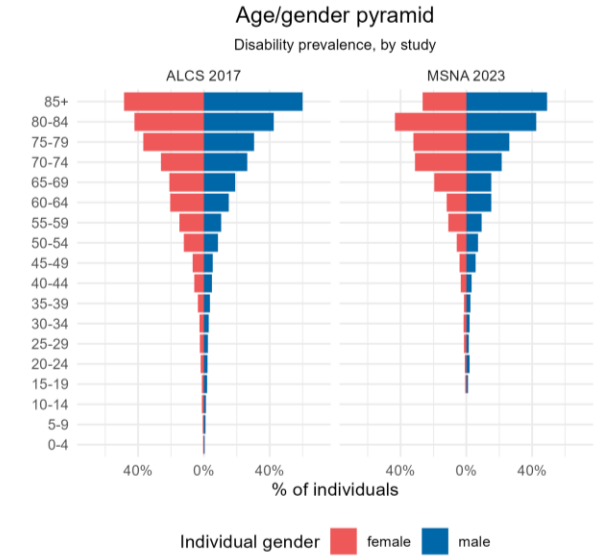
[42] Stein, Michael Ashley, Disability Human Rights. California Law Review, Vol. 95, 2007, Available at SSRN: https://ssrn.com/abstract=900014

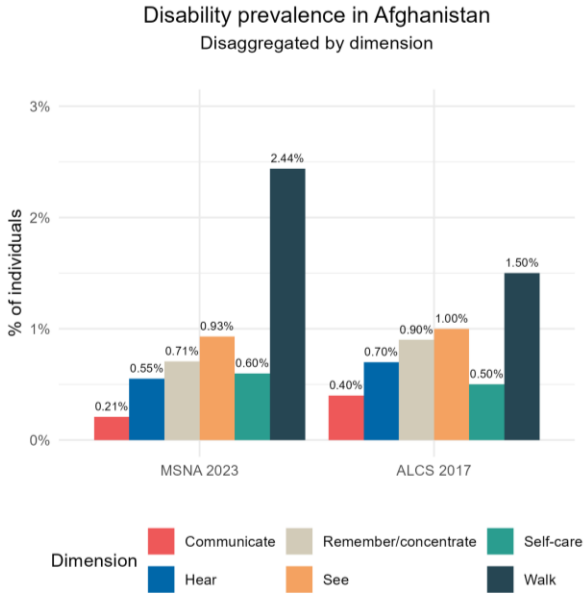
[43] According to the social model, disability is a "social situation, and particularly a form of social oppression imposed on people with impairments, which is caused by social and environmental barriers that exclude them from participating in society and which is entirely distinguished from their individual impairment." (Kazou, Katerina. (2017). Analysing the Definition of Disability in the UN Convention on the Rights of Persons with Disabilities: is it really based on a 'Social Model' approach? International Journal of Mental Health and Capacity Law. 2017. 25. 10.19164/ijmhcl.v2017i23.630.)

Graph 10: Triangulating disability prevalence in AFG with MDS 2019 and ALCS 2017









6. Lessons learned

Through the first section of the report, we have analyzed in detail the extent to which households with at least one member with a disability are significantly more likely to experience severe multisectoral deprivations. Beyond the overall severity of needs, the nature of deprivations faced by these households is also distinct, with more frequent sectoral gaps in health, livelihoods, and food security. While the core analysis highlighted these significant gaps linked to the profile of people with disabilities, the findings presented in this report confirm that although disability prevalence measured using the Washington Group Short Set (WG-SS) in MSNAs remains relatively low across contexts, it is generally consistent with prevalences observed in other studies using WG-SS.

Beyond limitations intrinsically linked to the WG-SS, consultations with country teams and in-depth analysis have been conducted to better understand some of the factors driving underreporting of the prevalence rate of reported disability. The following section provides an overview of lessons learned, compiled by the IMPACT team, aimed at improving the assessment of needs for people with disabilities and their households in humanitarian contexts.

6.1. Lessons learned from country consultations

Data collection and Enumerator training

Regarding the training of enumerators, standardized training materials were used in at least one case. Overall, no particular feedback arose from the training sessions. At the same time, training organised in collaboration with partners specialized in disability assessments, such as Humanity & Inclusion (HI) in CAR, was particularly well received by the enumerators, even those that were already familiar with the tool.

In general, country missions reported following IMPACT's WG-SS guidance as closely as possible, keeping in mind the need to obtain data comparable across contexts. **Concerns around the total duration of the survey,** however, resulted in demands for a more condensed tool that would allow for the relevant level of details to be collected while being less resource-consuming. It notably appears that **resorting to a proxy respondent to answer on behalf of all members of the household has commonly been resorted to in deploying the WG-SS questionnaire.** This was reported as a point of concern by some of the KIs, considering the sensitivity of evaluating someone else's level of difficulty in doing a task, which may result in under-reporting[44]. This question echoes that of the frequency at which disability prevalence should be assessed: adapting the use of the tool to the level of information needed could also be structured around reflections pertaining to how often this data needs to be gathered and for which purpose, as less frequent assessments could justify the tool's length. This issue is further explored through a case-study of Mali's data in section 6.3 below. In addition to understanding the prevalence of disability in crisis-affected households, these assessments should prioritise comprehending how disability affects the needs of households with individuals with disabilities.

Another key concern that arose during data collection was that of tool translation and the balance between further contextualisation of the tool vs. standardisation. While it is recommend that the WG-SS should not be changed, it is an issue which echoes Humanity & Inclusion's own experience in

[44] For a more detailed overview of the impact of type of WG respondent on reported prevalences, refer to section 6.2. Self-respondents versus proxy respondents.

using the tool[45]. In terms of language inclusivity as well, only considering the official national language indeed has resulted in having to rely on the enumerator's ability to operate live translation of the WG-SS whilst collecting the data. Leveraging national staff's knowledge of the different local languages at the tool design stage by ensuring that significant time is dedicated to working on tool translation seems to be a good practice that teams felt should be further encouraged.

Partnership at the data collection stage also presented challenges, especially in communicating transparently on the standards to be used. In the two cases where this occurred, there was limited control over the training of enumerators and adherence to data collection guidelines at IMPACT's level.

To measure the prevalence of reported disabilities, it is important to recognize that, beyond the inherent limitations of the Washington Group Short Set of Questions (WG-SSQ), additional challenges faced by enumerators during data collection may also contribute to underreporting. However, as noted in the section on disability prevalence, these limitations are not specific to the MSNA approach but are common across data collection efforts in humanitarian crises related to the needs of people with disabilities. Therefore, collective efforts should continue through the consistent application of existing guidance and training to improve the quality of assessments involving people with disabilities and their households.

Analysis

The data collected were used for two purposes: estimating disability prevalence among the population and further disaggregating the population's needs. Beyond reporting disability prevalence rates at individual levels for different severity levels, IMPACT country teams interviewed reported systematically including household level disaggregation of main (multi) sectoral indicators by the following variables: At least one individual in the household with a disability (WG-SS 3), Head of household with disability. The second was done less frequently across countries. In one case, further analysis was motivated by the partner's explicit demand to conduct such an analysis[46] as part of a standard sex, age and disability disaggregated data requirement (SADD). In some delegations, example of in-depth use of Washington group questions for further disaggregation was seen (cross disaggregation single women/men headed household with presence of member(s) with disability, households with at least two members with disability for the analysis of Ukraine 2023 age, gender & disability brief)

Whilst all teams expressed interest in running deeper analyses, time and resource constraints were mentioned as a barrier to proceeding further, along with a lack of representativity of the data at a smaller geographic level. Demand for further guidance on the analyses to run was expressed; more specifically, it was reported that providing standardized analysis tools (R scripts), along with clear guidance for the disability cutoff, would facilitate the analysis process.

Dissemination

In two cases, **dissemination of the results was rendered difficult at the coordination level:** in one case, the departure of the lead of the in-country technical group, and in the other, the pushback against the data by one of the partners, prevented further steps in the dissemination at the strategic level. In the two cases where information was available, it appears that the **lower prevalence rates were the**

[45] , Humanity and Inclusion and Leonard Cheshire, *Disability Data Collection: A summary review of the use of the Washington Group Questions by development and humanitarian actors* (2018). Available at: 2018-10-summary-review-wgq-development-humanitarian-actors.pdf

[46] The incentive to systematically include disability disaggregation in analysis came from it sometimes being included in the data analysis plan as part of the requirement for data disaggregated by sex, age, and disability (SAAD), or as a result of IMPACT Initiatives' guidelines on data disaggregation.

main point of discussion at the strategic level. In one case, strategic stakeholder pushed back against the use of the data, arguing against the data's validity, whilst in the other, justification was sufficient for the stakeholders not to further question the prevalence rate. In another case, severity level 2 was used as the threshold for identifying individuals with disabilities in response to advocacy dynamics at coordination level[47]. Reportedly, no other aspects of the data triggered reactions. While the prevalence of reported disability is an important topic to discuss with partners, country teams have also emphasized that the MSNA—through the use of the WGQ-SS—is not primarily a tool for calculating prevalence rates. Rather, it serves as a tool for disaggregation of data in order to better understand the needs of households with a member with a disability. As outlined in the guidance on disability inclusion in HNOs/HRPs (OCHA, 2025), the WGQ-SS should be considered the recommended tool for collecting information on the needs and barriers faced by people with disabilities.

6.2. Self-respondents versus proxy respondents

In the MSNA, data on whether difficulties were reported by a proxy respondent[48], or the concerned individual was not systematically collected in 2022 and 2023 and dropped in 2024. The table below shows which country added these questions in 2023, whether an additional question was included to record whether the individual is the head of household and whether the original skip logic between the two questions was respected.

Table 4: Review of 2023 survey questionnaire on respondent information

MSNA 2023	UKR	LBN	CAR	SYR	AFG	BGD	MMR	DRC	IRQ	NER	KEN	MLI
Indicator on proxy respondent	yes	no	yes	no	no	yes	no	yes	no	yes	no	yes
Indicator on caregiver respondent	yes	no	yes	no	no	yes	no	yes	no	yes	no	yes
Skip logic respected	no		yes			no		yes		yes		yes
Information on head of household	no	no	yes	no	no	no	no	no	no	no	no	no

KI Interview with REACH former focal point for the WG-SS approach, suggests that the use of proxy respondents was likely to generate underreporting of the prevalence of disability, as respondents will have difficulties reporting with fidelity the lived experience of a household member. Usually, countries follow the approach of using the caregiver as a proxy respondent for individuals under 18 years old. Typically, the questions to identify the type of respondent reporting the difficulty levels were asked in this way:

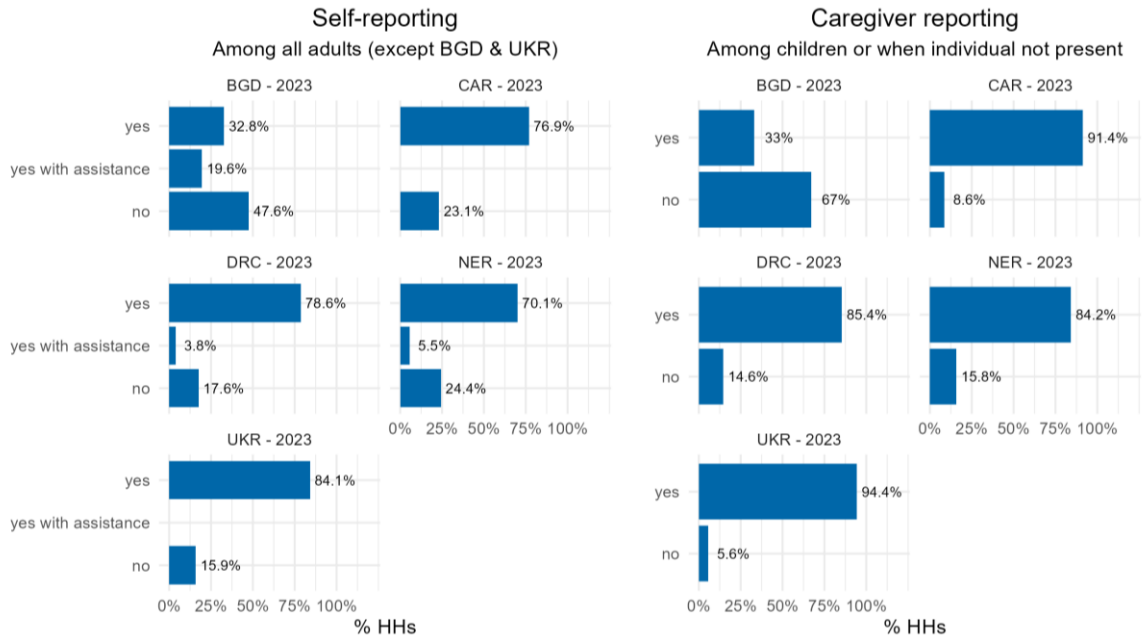
- Is the individual available now to answer a few questions about their difficulties doing certain activities? *[asked if the individual is above 17 years old]*
- Is the person who usually cares for her / him available to answer a few questions about their difficulties doing certain activities? *[asked if the individual not available OR if below 18 years old – in case of interview with children, the Child Functioning Module is recommended]*

Breaking down the responses to these two questions separately, we can see that in Ukraine, CAR, DRC and Niger, the individual was present and able to report his/her difficulties, while in Bangladesh, 41% of individuals aged 5 and above were not present to report on their difficulties.

Graph 19: WG-SS Respondents' profile, by the presence of individual to report on him/herself – presence of caregiver to report on the individual

[47] This decision aimed to align more closely with existing prevalence figures—particularly the 15% reference often cited by the Disability Inclusion Working Group—and to strengthen the perceived relevance and credibility of IMPACT-collected data within inter-agency discussions.

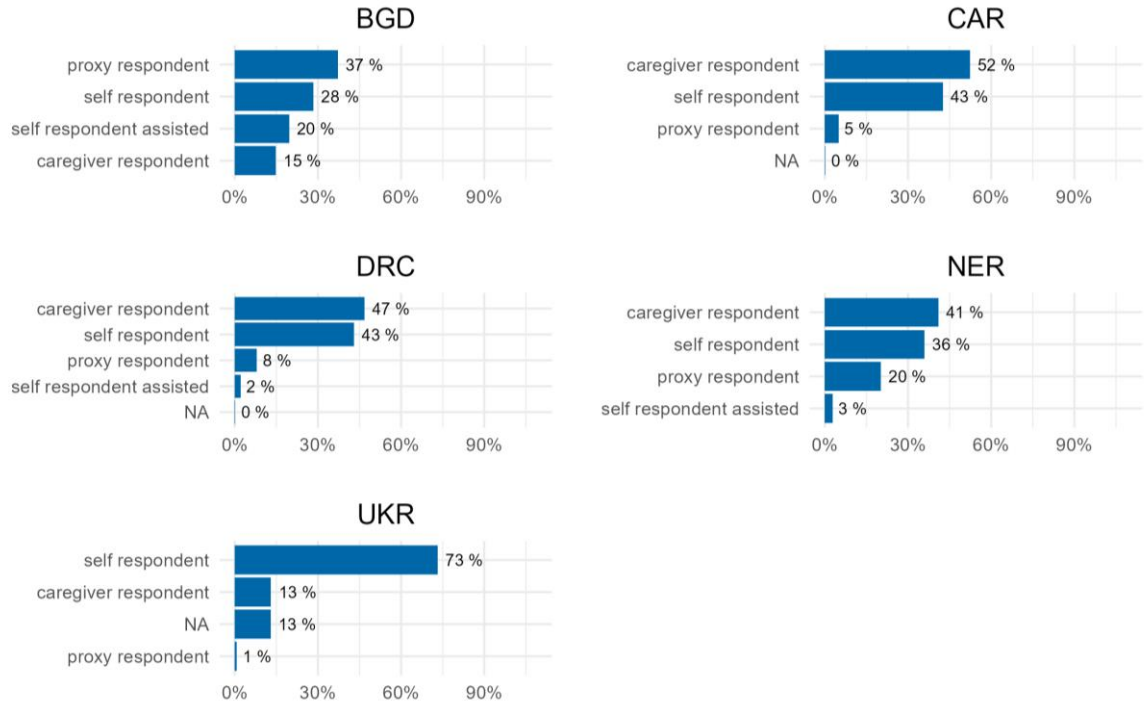
[48] By proxy respondent, we mean any individual that would report on behalf of someone else on his/her experienced difficulties.



Note: Questions pertaining to respondent profile have been only asked to the following countries in 2023 MSNAs. Data has been filtered to keep only individuals aged 5 and above for which Washington group questions has been asked. In the case of BGD and UKR, self-reporting question was mistakenly asked to all individual aged 5 and above. No percentages are shown for the choice 'yes with assistance' for countries where the response choice was not available

Combining both questions, we can observe the overall % of self-respondents and caregivers against other proxy respondents to the Washington group's short set of questions. The analysis of 2023 MSNAs shows varied proportions of self/proxy/caregiver respondents, but overall, the proportion of proxy respondent remains important and sometimes accounts for almost half of the recorded entries, with the exception of Ukraine, where a clear majority of entries is reported by individuals themselves followed by CAR were there is a very small proportion of proxy respondents.

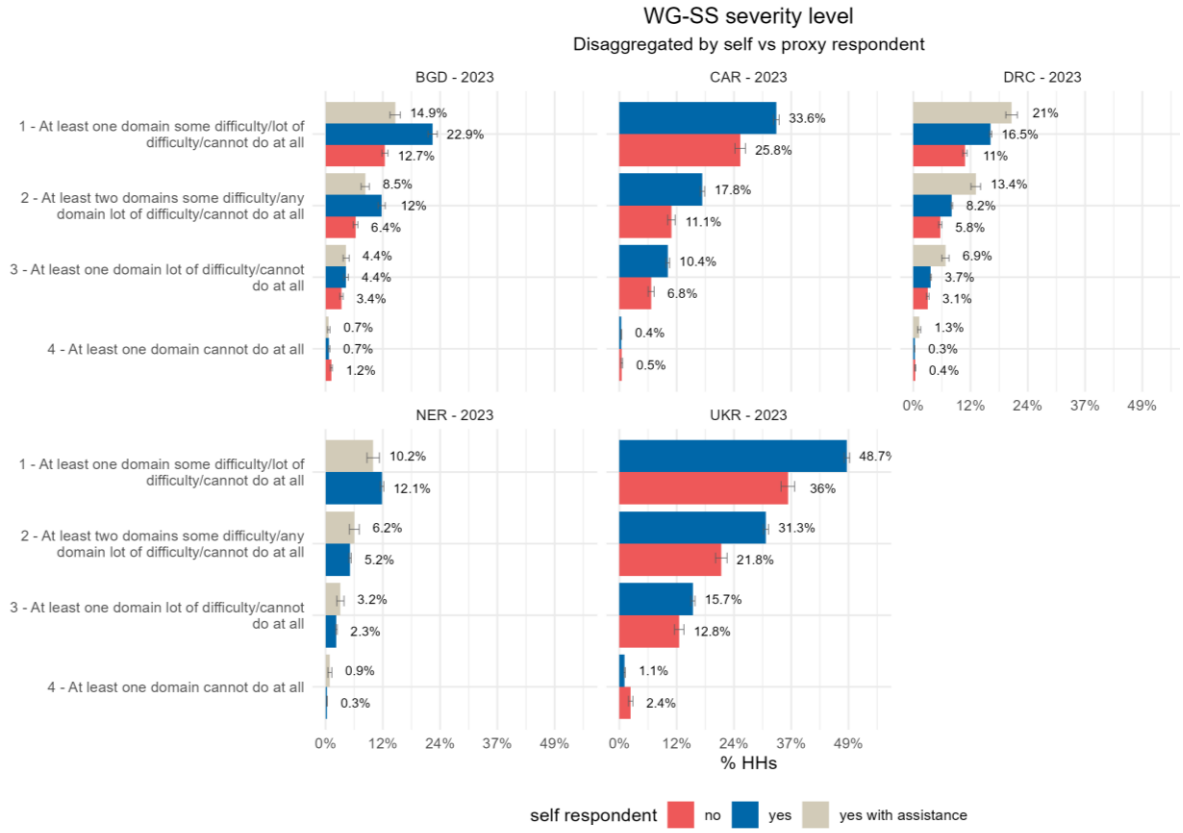
Graph 20: WG-SS Respondents' profile, by combined type [proxy, self-respondent and caregiver respondent]



Note: Questions pertaining to respondent profile have been only asked to the following countries in 2023 MSNAs. Data has been filtered to keep only individuals aged 5 and above for which Washington group questions has been asked. When the respondent profile is reported as NA, it is due to entries dropped during data cleaning.

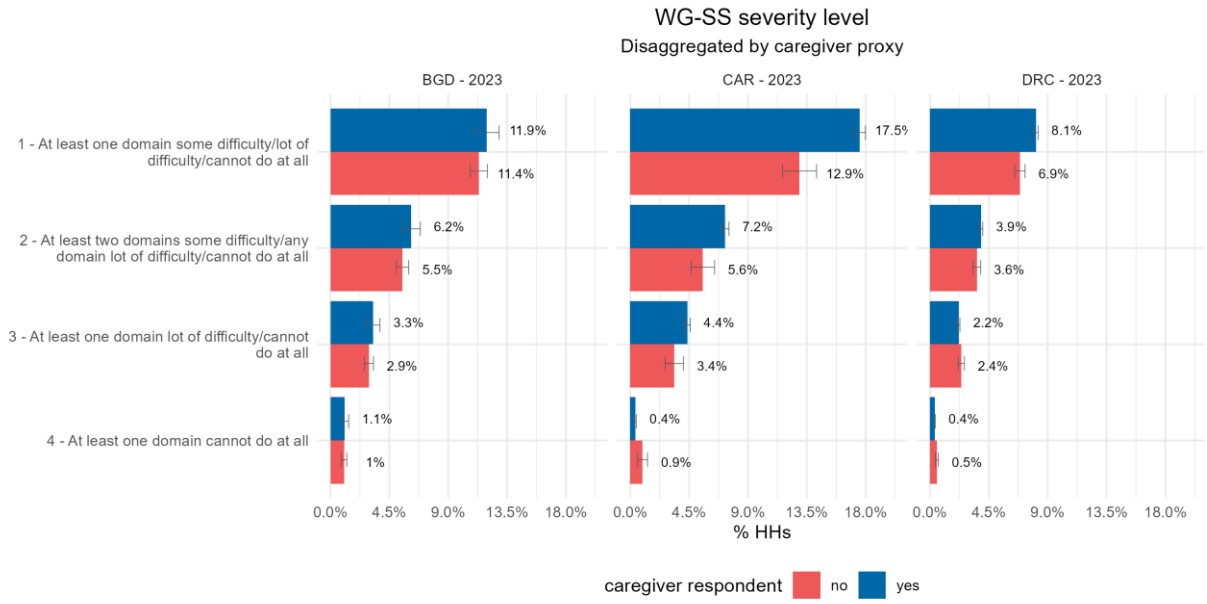
Disability prevalences for different severity levels was analysed disaggregated by the type of respondent for 2023 MSNAs, using the first question on self vs proxy respondent. In all contexts, we observe that the **prevalence of disability is higher among self-respondents compared to proxy respondents, confirming the standard data collection guidelines** that advise focusing on asking the concerned individuals rather than using a proxy respondent who speaks on behalf of the individual.
In particular, we see that in CAR, the prevalence of WG-SS 3 is 10.4% according to self-respondents and 6.8% according to proxy-respondents. In DRC, self-respondents assisted with someone who reported difficulties more frequently. However, this could be a selection effect where assistance to report would be more frequently given to individuals requiring more help to navigate already encountered difficulties.

Graph 21: Disability prevalence by severity level, disaggregated by self vs proxy respondent



In the case of Mali, Niger and Ukraine, the set of questions was only asked if the caregiver was present, whereas in Bangladesh, Central African Republic and DRC, non-caregiver proxy respondents could answer on behalf of children. In this case, we also observe slightly higher prevalences in the Central African Republic and Bangladesh when caregivers respond compared to other proxy respondents. However, the difference does not appear to be as significant as that between self-respondents and proxy respondents for adults.

Graph 22: Disability prevalence by severity level, disaggregated by caregiver versus other proxy respondent



Acknowledging the context of data collection within an MSNA, we need to **keep in mind that our reported prevalences will likely underestimate the actual figure if we had interviewed all concerned individuals**.

6.3. Tool design: "Survey short-cuts" cut reported prevalence

The standard approach to measuring functional difficulties in the WG-SS is to ask everyone the full set of questions on difficulty experienced with the list of difficulty levels each time. Much of the feedback from IMPACT country teams mentioned that this data collection modality was quite time-consuming, and they were keen on finding adaptations that could lighten the length of the survey.

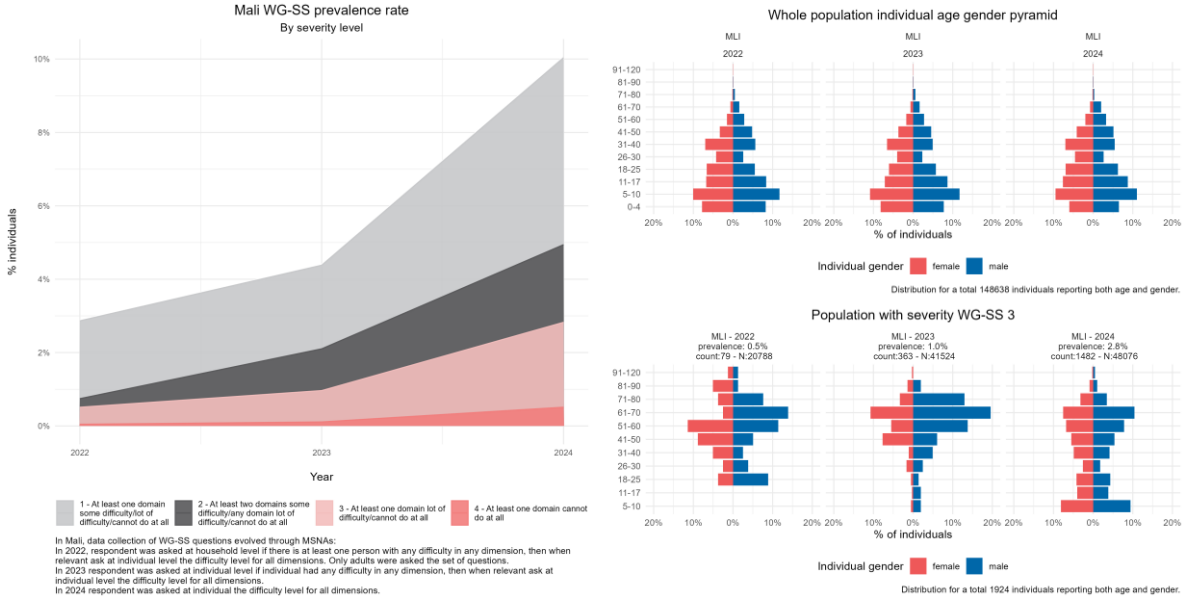
Mali presents an interesting example of how changes in data collection methods can influence the recorded prevalence, demonstrating the impact of not applying standard practices. In the past three years, the questions on disability were asked in three different ways:

- 2022: The question "Has anyone in household any difficulty in one of the six following domains?" as a select multiple question. If one domain was selected, then the full set of questions was asked to all individuals in the household. However, we noted that the set of questions was asked only to adults[49].
- 2023: For each household member, the question "Does individual have any difficulty" was asked, and the set of question with difficulty level for the selected domains was asked accordingly to previous answer.
- 2024: For each household member, ask the set of 6 questions to report on experienced difficulty for each dimension.

When we look at the reported prevalence of disability at the individual level, we see an increase from 2022 to 2024. For instance, the prevalence of individuals with severity 3 (WG-SS 3) increased from 0.5% in 2022 and 1% in 2023 to 3% in 2024, while the population age/gender pyramid remained comparable throughout time.

[49] This should in theory lead to overestimation of overall prevalence, by excluding younger population that tendentially report less difficulty overall. The fact that prevalence remains low despite this deviation underlines the potential detrimental effect of taking short cut in survey design on reported prevalences.

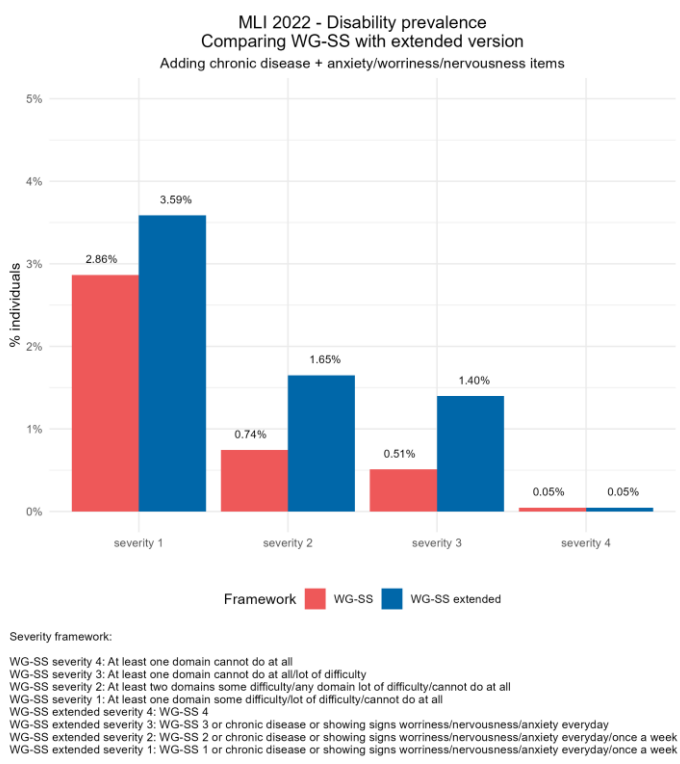
Graph 23: Prevalence of disability, by WG-SS threshold for MALI in 2022, 2023 and 2024 / Whole sample age-gender pyramid / Population with severity WG-SS 3 age-gender pyramid



This stability in the sample composition through time and relative stability in data collection methodology and coverage through time suggest that the change in tool design might have caused this change in reported prevalence. By proposing a shortcut to bypass the full set of questions, likely, either respondent could not properly take the time to think about all household members, try to find them or their caregiver or think through all dimensions and properly report on their experience. Additionally, the possibility of bypassing the set of questions leaves the possibility for an enumerator to reduce survey length time by reporting the answer that will enable bypassing the full set of questions at the individual level.

This suggests that deviations in the tool design that involve screening questions or "shortcuts," i.e., asking one single question pertaining to all household members (or all dimensions at once), have a detrimental effect on the quality of the data collected.

6.4. Impact of additional dimensions in WG-SS framework



Graph 24: Disability prevalence by type of framework used - Mali

There is quite a wide literature establishing that the six dimensions outlined in the WG-SS framework do not adequately capture certain types of disability. While other sets of questions has been developed to cover a broader spectrum of disability[50], it is not as commonly used in humanitarian settings.

We assume that incorporating additional dimensions or questions in the WG-SS framework could help mitigate the underestimation caused by the framework's narrow focus. In 2022, two questions, tested and included in other WG's sets of questions, were introduced addressing anxiety/nervousness and chronic disease.

To test what would be the impact of adding these two questions in the disability framework to estimated prevalences, we computed an alternative disability severity scale by including these two dimensions in this way:[51]

- Severity 4 was given similarly to the initial framework (any domain cannot do at all)
- Severity level 3 was given to individuals with WG-SS 3 or had a chronic disease/showed daily signs of worriedness/nervousness/anxiety
- Severity level 2 was given to any individual with WG-SS 2 or with chronic disease or weekly signs of worriedness/nervousness/anxiety
- Severity level 1 was given to any individual with WG-SS 1 or chronic disease or weekly signs of worriedness/nervousness/anxiety.

When adding these two additional indicators into the severity framework, we simulated what the reported prevalence would be. We observed an increase in reported prevalence for severity 1-2-3, suggesting that there is a non-overlapping set of individuals that don't necessarily report functional difficulties but yet shows signs of emotional distress/anxiety that are captured in the Washington group extended set of functional questions, or report suffering from chronic disease that could potentially

[50] The Washington Group has developed several question sets to measure functioning: the Short Set on Functioning (six questions across six domains), the Short Set on Functioning – Enhanced (12 questions across eight domains), and the Extended Set on Functioning (34 questions across 10 domains). Additional modules on child functioning, inclusive education, and labor force participation have been developed in collaboration with other partners. For more information, see the Washington Group website - https://www.washingtongroup-disability.com/question-sets/

[51] Due to data collection constraints, implementing the extended version of the WG set of questions was not considered, and integrating two additional questions was viewed as a short-term solution to include a new dimension of disability.

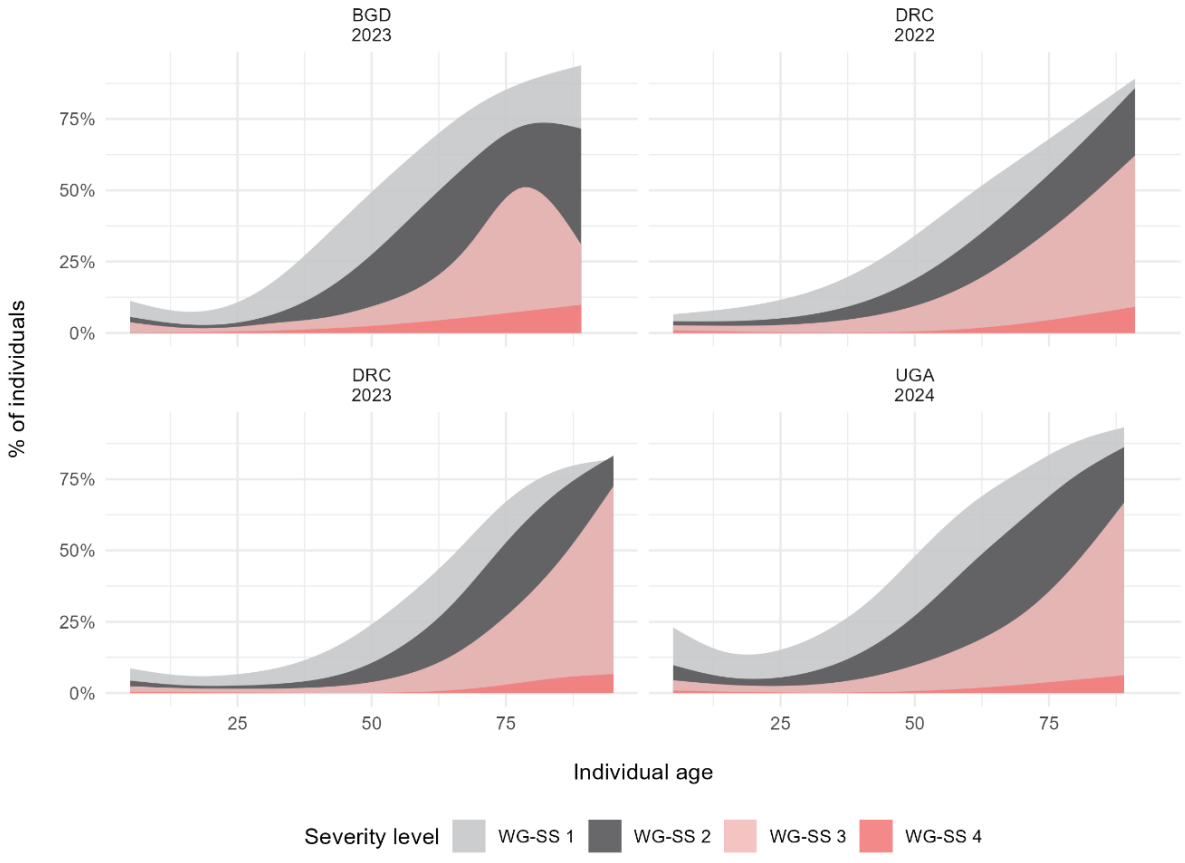
work as a proxy associated with other functional difficulties. **This suggests that by its reduced set of dimensions, WG-SS will likely yield lower prevalence than any other functional framework that would integrate additional dimensions.**

7. Measuring functional difficulties for children with WG-SS

7.1. Inclusion of children below 5 years old

The WG-SS is not specifically designed for collecting data on disability on children thus if time and resources allow, a tool designed for disability data collection with children should be prioritized (WG-SS child functioning module). However, due to its length and operational constraints, the Child Functioning Module is difficult to use in humanitarian contexts. In the case of MSNA, guidelines specify that WG-SS **should only be used with individuals of age 5 and above**. We see in some context that prevalences rate are relatively higher for younger individuals and then decrease with age to increase later. This pattern was clearly identifiable in Bangladesh in 2023, Democratic Republic of Congo in 2023 and Uganda in 2024, where we see a U-shaped curve of prevalence against age for all severity levels.

Graph 25: Prevalence of disability in Bangladesh, Democratic Republic of Congo and Uganda, by age and WG-SS severity

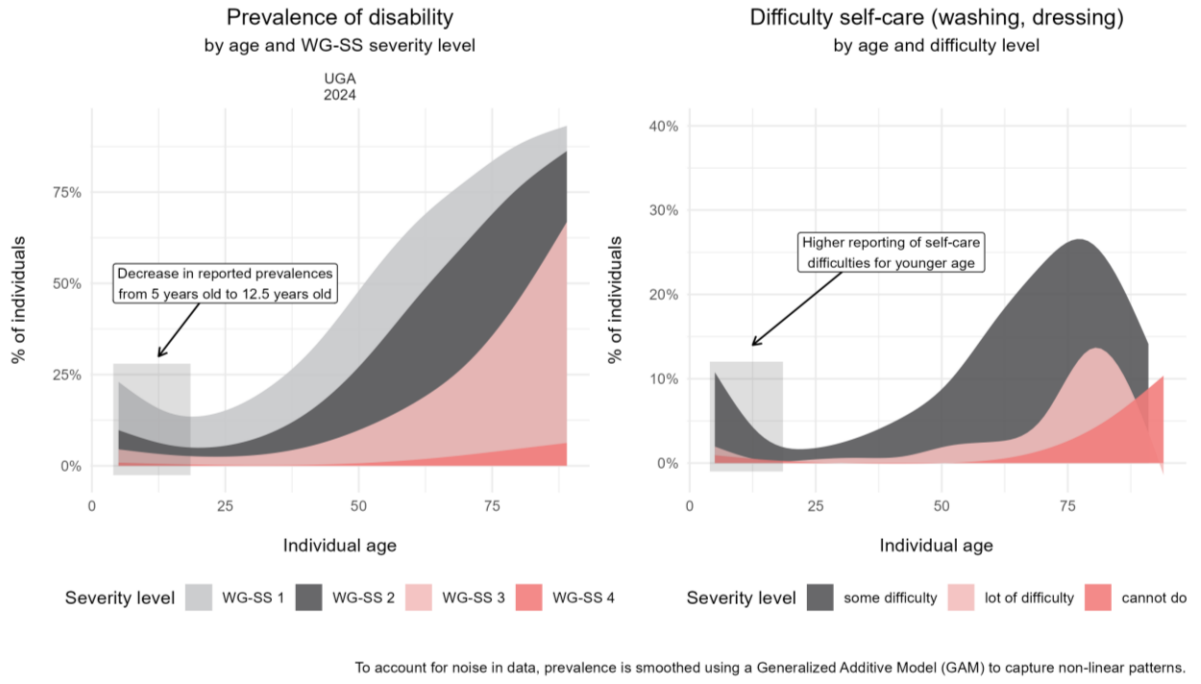


Data coming from MSNA datasets collected in 2022-2024 in 17 countries.
For countries with multiple MSNA conducted, the most recent dataset has been kept.
To account for noise in data, prevalence is smoothed using a Generalized Additive Model (GAM) to capture non-linear patterns while avoiding overfitting.

When unpacking the behaviour of reported difficulties against each dimension for Uganda in 2024 (where the pattern was the most pronounced), we see that the higher prevalences of disability are

mostly driven by the domain "difficulty with self-care (washing, dressing)", which suggest that there was an issue in the training of enumerators that led to mixing functional difficulties that the WG-SS is designed to capture with normal issues that a young child will experience to perform self-care tasks by him/her-self in a young age.

Graph 26: Difficulty U-shaped curve, the case of Uganda MSNA

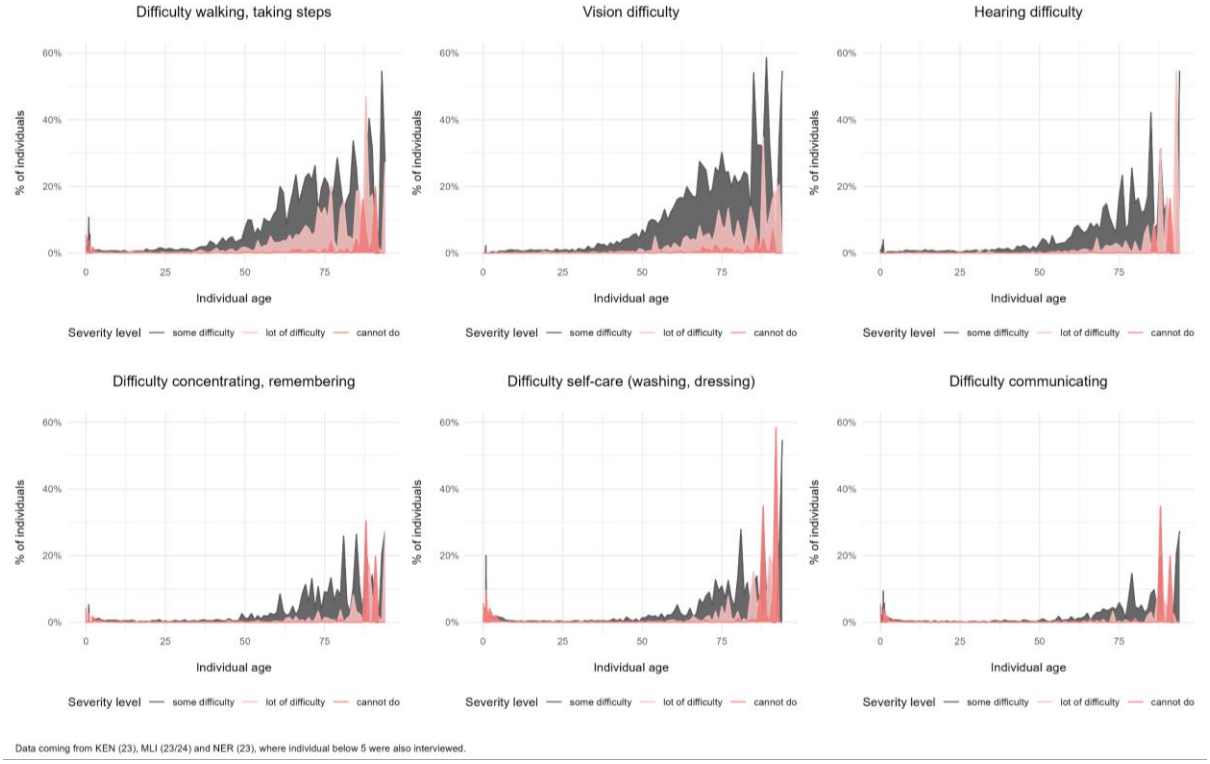


To dive deeper into this potential bias in reported prevalences for younger children, **we analysed the prevalence rates against age for a subset of countries that deviated from the standard data collection rule specifying that WG-SS should be asked only to individuals aged five and above**.

In these datasets (Kenya 2023, Mali 23/24 and Niger 23), we can see that the reported difficulties are even greater among individuals below 5 years old, and the phenomenon of a bell-shaped curve is amplified accordingly. These increased reported difficulties are observable in all dimensions for those below 5 years old, except for hearing and seeing. However, the most frequently cited dimensions reported remain self-care, confirming the issue identified earlier.

This example of deviation from the standard data collection rule suggests that enumerators' training should emphasize explaining and contextualising the meaning of functional difficulties according to age to avoid identifying difficulties that are due to normal child development. Moreover, it is essential to strictly follow the age constraint and not collect data for children below five years old to avoid potential misreporting of difficulties. For this analysis, individuals below five years old have been filtered out apart from the present case study to avoid biasing upwards the recorded prevalences.

Graph 27: Prevalence of difficulty by age (including below five years old), dimension and severity level - Kenya 2023, Mali 2023/2024 and Niger 2023

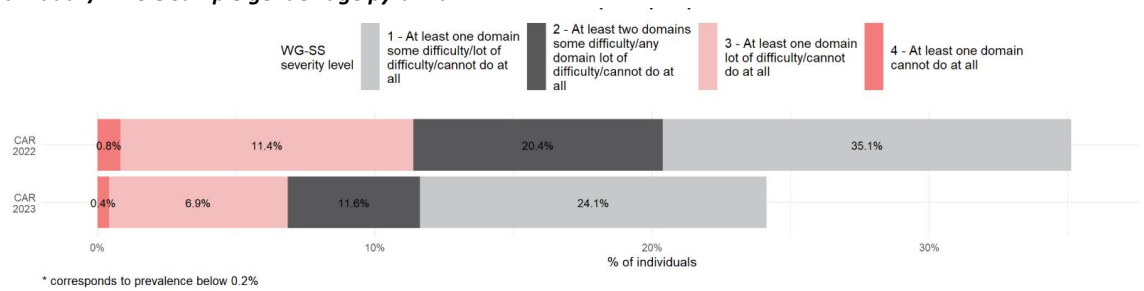


Data coming from KEN (23), MLI (23/24) and NER (23), where individual below 5 were also interviewed.

7.2. Exclusion of children between 5 and 17 years old

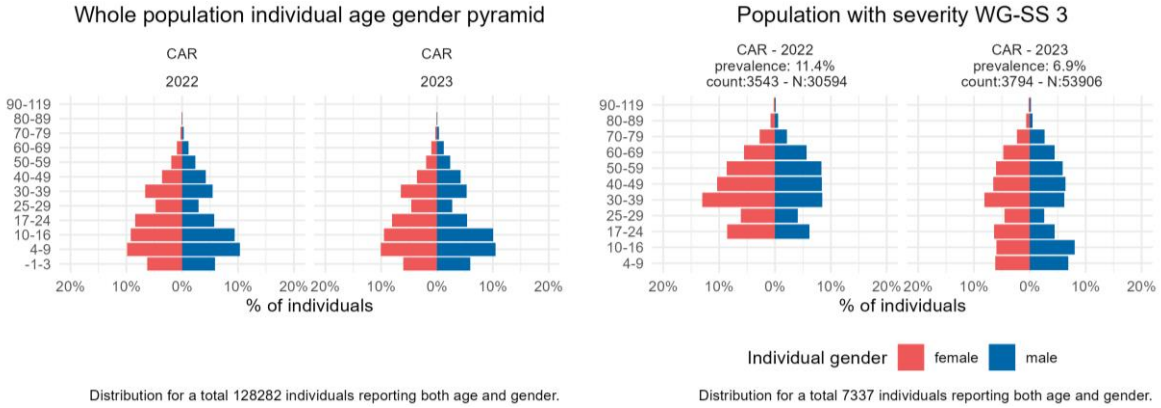
In the year 2022, data collection efforts in the Central African Republic (CAR) were exclusively focused on the adult population, which limited the scope of the findings to this demographic. In 2023, data collection process was broadened to encompass individuals aged between 5 and 17 years old, thereby allowing for a more comprehensive understanding of the prevalence of the issue across a wider age range. As a result of these changes in the data collection methodology, it was observed that the prevalence rate experienced a notable decrease, dropping from 11.4% in 2022 to 6.9% in 2023. As mentioned in the previous section, the use of the WG-SS with respondents under 17 years old indicates key limitations in analysing the prevalence of disability.

Graph 28: prevalence of disability, by WG-SS threshold in 2022 and 2023 / Individual age-gender pyramid of WG-SS 3 individual / whole sample gender-age pyramid



* corresponds to prevalence below 0.2%

Graph 29: Central African Republic - Age and gender pyramid for whole population and individuals with disability



Decrease may be due to the inclusion of younger individuals, who make up a large fraction of the population and generally have a lower prevalence compared to older individuals. Indeed, **when computing the prevalence of WG-SS in CAR for 2023 only keeping individuals aged 18 years and over, we see an overall prevalence of 9.5%, which looks much closer to the 11.4% figure of 2022**. This confirms the need to **stick to the standard approach, including a minimum of 5, to limit biased prevalence estimates**.

8. Conclusion

The intersection between disability and humanitarian needs reveals stark disparities that require some attention. **Households with at least one member with a disability are significantly more likely to experience severe multisectoral deprivations**. The prevalence of acute multi-sectoral gaps (MSNI ≥ 4) is consistently over 10 percentage points higher for these households across multiple crises, including in Gaza, Kenya, and Niger. Notably, in contexts where overall multi-sectoral gaps appear lower—such as Lebanon, Ukraine, Myanmar, and Gaza (2022)—households with disabilities remain at a far greater risk of being left behind. This underscores the need for tailored interventions that specifically address their vulnerabilities.

Beyond the overall severity of needs, the nature of deprivations experienced by these households is also distinct. Households with members with disabilities, especially female-headed households, consistently report more frequent **sectoral gaps in health, livelihoods, and food security**. On average, households with members with disabilities are 12.5 percentage points more likely to experience a health gap, 12 points more likely to experience a livelihood gap, and 8 points more likely to experience a food gap—compared to similar households without disabilities, even after adjusting for displacement, age, country, and year. In Lebanon, the Central African Republic, and the Democratic Republic of Congo, unmet healthcare needs among these households are at least 15 percentage points higher than for others. Education gaps are also more prevalent, with households with disabilities 6 percentage points more likely to report one—confirmed by individual-level data from Syria and Ethiopia in 2023, where only 46% of children with disabilities in Ethiopia were reportedly attending formal schooling, compared to 67% of children without disabilities.

Furthermore, households with at least one member with a disability consistently **face more complex situations, experiencing simultaneous gaps across more sectors on average than other households**; in the Democratic Republic of Congo in 2023, households with disabilities experience an average of 2.9 sectoral gaps compared to 2.3 for other households. In all contexts except Mali, the **marginal impact of having one individual with a disability on the predicted average number of sectoral gaps is always positive and significant**.

Additionally, individuals with disabilities frequently face barriers in accessing both basic and disability-specific services. In Afghanistan (2023), nearly 74% of respondents with disabilities indicated they lacked access to necessary support services. These disparities are further compounded by significant obstacles to aid access. Data from Lebanon and Ukraine highlight distinct challenges, including physical barriers, limited access to information, and difficulties navigating assistance mechanisms. Where additional individual-level indicators were collected, such as in Mozambique, respondents overwhelmingly reported difficulties accessing medical care, rehabilitation services, and assistive devices—further reinforcing the gap between availability and accessibility of aid. **Without targeted measures to address these barriers, individuals with disabilities risk being excluded from accessing humanitarian services or other key services.**

Addressing these challenges requires not only programmatic adjustments but also improvements in data collection methodologies. The analysis presented in this report confirms that while disability prevalence measured using the Washington Group Short Set (WG-SS) in MSNAs remains relatively low across contexts, the findings are generally consistent with prevalences observed in other studies using WG-SS. Prevalence consistently increases with age of the individual, with walking and seeing being the most reported functional difficulties. **Older populations—particularly in Ukraine and Lebanon—exhibit the highest prevalence rates.**

To ensure accurate measurement of disability prevalence, surveys must include all household member.,

For assessments with children between 5 and 17 years old, the child functioning module should be used in priority, as a more accurate tool to assess disability and its impact on the prevalence of needs among children. However, as data collection teams often face constraints in humanitarian contexts, the large-scale implementation of the Child Functioning Module may be limited in such situations. Therefore, if children aged 5-17 are included in the WG-SS tool, we should avoid misclassification of age-appropriate self-care difficulties in young children as functional limitations.

Enumerators must be properly trained to contextualize self-care difficulties for younger children, and whenever possible, self-response should be prioritized over proxy reporting to reduce the risk of underreporting. Screening questions should be avoided, as they can prematurely filter out individuals with functional difficulties, leading to underestimation. Additionally, careful attention must be given to the translation of the WG-SS tool, as real-time translation by enumerators can introduce inconsistencies. Lastly, ensuring gender-balanced sampling and employing female enumerators is critical, particularly given the trend of higher reported disability prevalence among women, who are often primary caregivers.

Ultimately, this study underscores the urgent need for a more inclusive and intersectional humanitarian response. The disproportionately high levels of deprivation faced by households with persons with disabilities call not only for immediate prioritization in aid distribution but also for long-term strategies to ensure meaningful access to essential and life-saving services—while addressing ongoing challenges in data collection within humanitarian contexts. Tackling these disparities is not just a matter of equity; it is essential for fostering a more effective, inclusive, and dignified humanitarian response across crises.

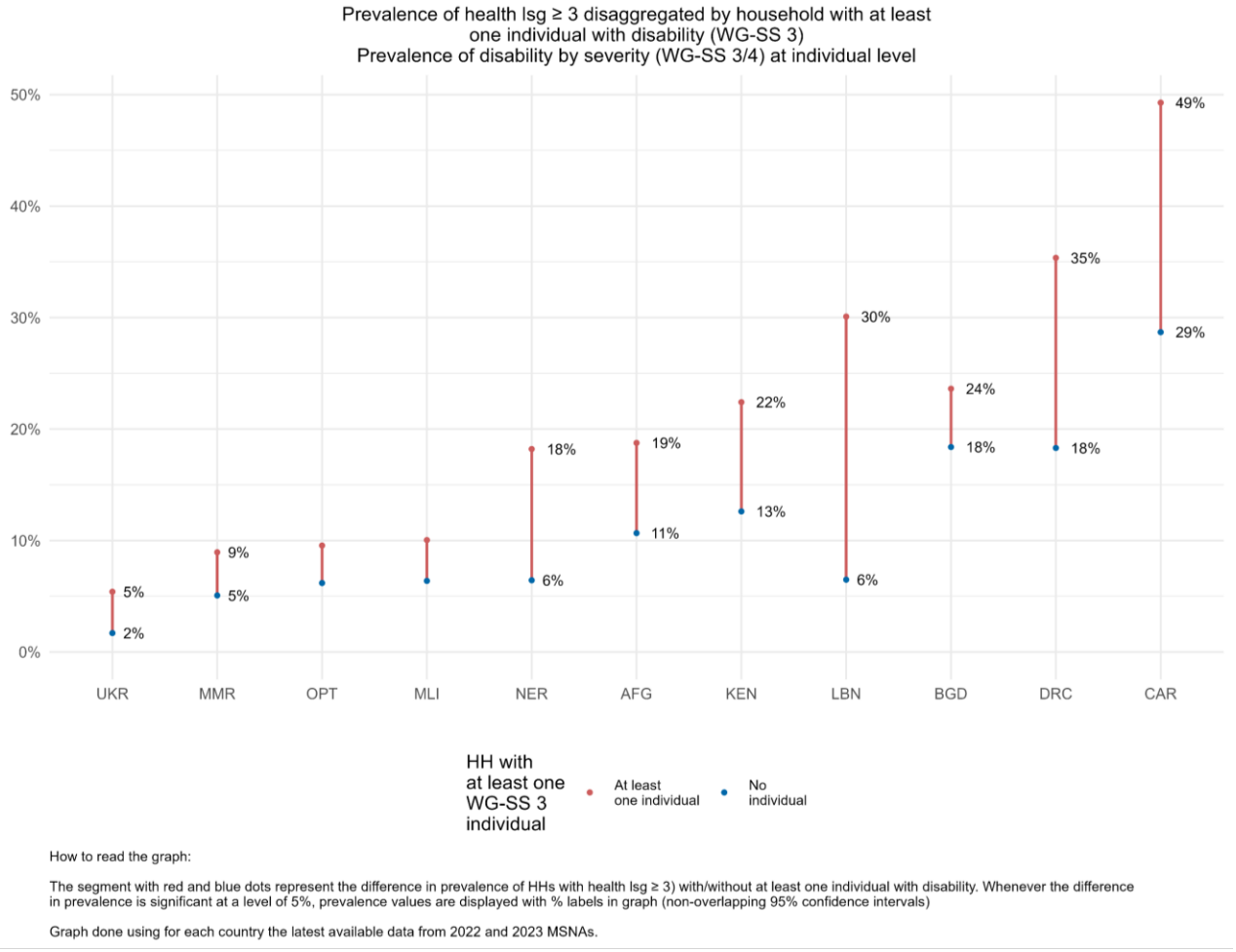
9. Annex

9.1. Unpacking the link between disability and sectoral gaps

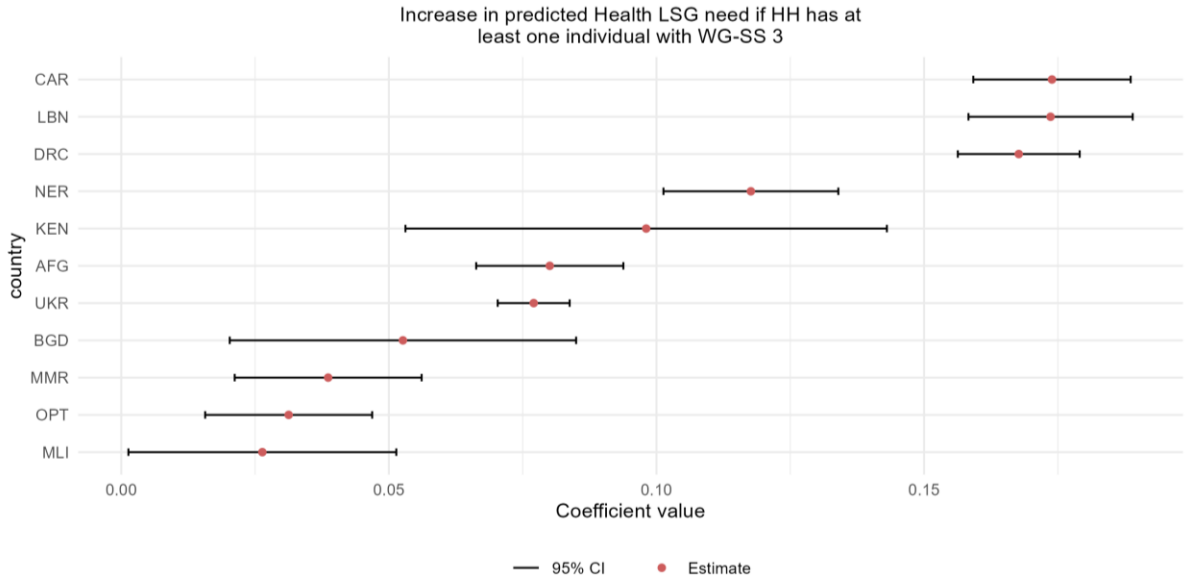
Health

The health LSG sectoral composite score measures if in the household there is at least one individual with unmet health care needs. Any household with at least one individual with unmet healthcare needs will be reported as having a health sectoral gap. We must thus keep in mind that this doesn't enable measuring more severe outcomes and is rather a proxy of access to health services. However, it provides an interesting view on actual encountered barriers and access to health services for households with members with disability. Looking at the prevalence of health sectoral gaps disaggregated by household with at least one member with disability, we see a significant and positive difference in prevalence of health sectoral gap compared to other households. In Lebanon, the difference is striking, **with 30% of households with at least one member with disability reporting unmet healthcare needs compared to 6% of other households.** In Central African Republic, **one out of two households with at least one member with disability report unmet healthcare needs compared to 29% of other households.**

Graph 34: Prevalence of Health LSG gap disaggregated by household with(out) member(s) with disability



Graph 35: Health LSG gap - OLS coefficient associated with presence of member(s) with disability

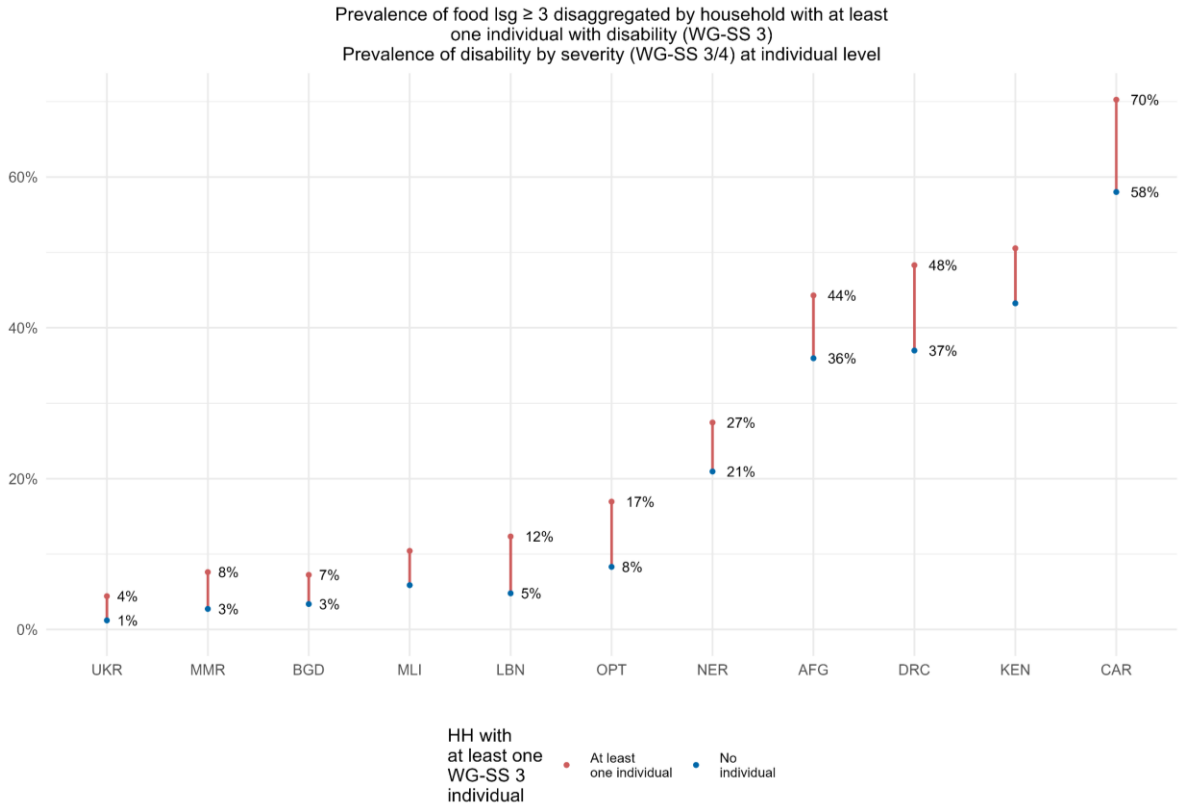


Error bars represent 95% confidence intervals.

Food security

The food security living standard gap (LSG) composite was calculated using FEWSNET matrix with FCS, rCSI and household hunger scale (HHS) indicators. We can see that for all countries, the difference in prevalence is positive and significant for almost all countries.

Graph 36: Prevalence of food LSG gap disaggregated by household with(out) member(s) with disability



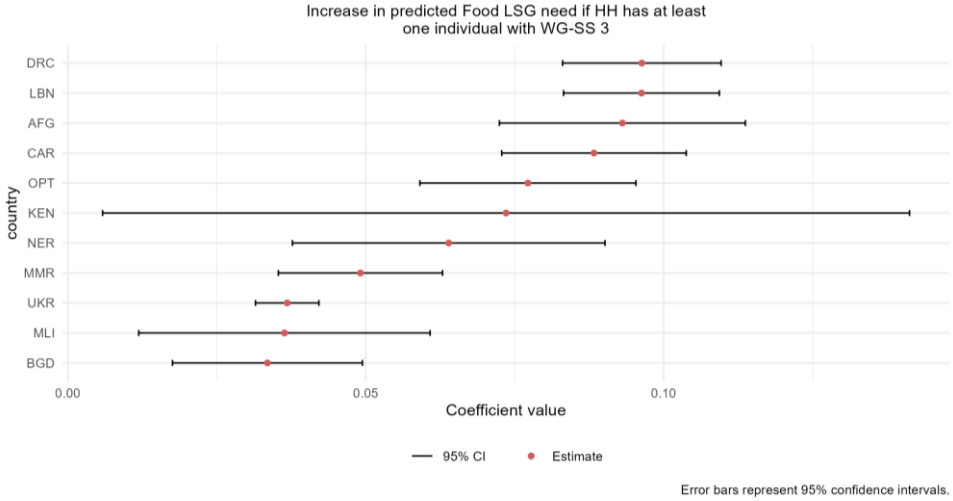
How to read the graph:

The segment with red and blue dots represent the difference in prevalence of HHs with food lsg ≥ 3) with/without at least one individual with disability. Whenever the difference in prevalence is significant at a level of 5%, prevalence values are displayed with % labels in graph (non-overlapping 95% confidence intervals)

Graph done using for each country the latest available data from 2022 and 2023 MSNAs.

Furthermore, when trying to run a linear regression of the food security LSG in each context to identify the marginal impact of a member with disability to the predicted occurrence of food security gaps, we see that **in Kenya, Niger, Democratic Republic of Congo and Myanmar, we see that the marginal impact of the presence of a member with disability in a household on the predicted probability of experiencing a food sectoral gap is the highest and above 10 percentage points**.

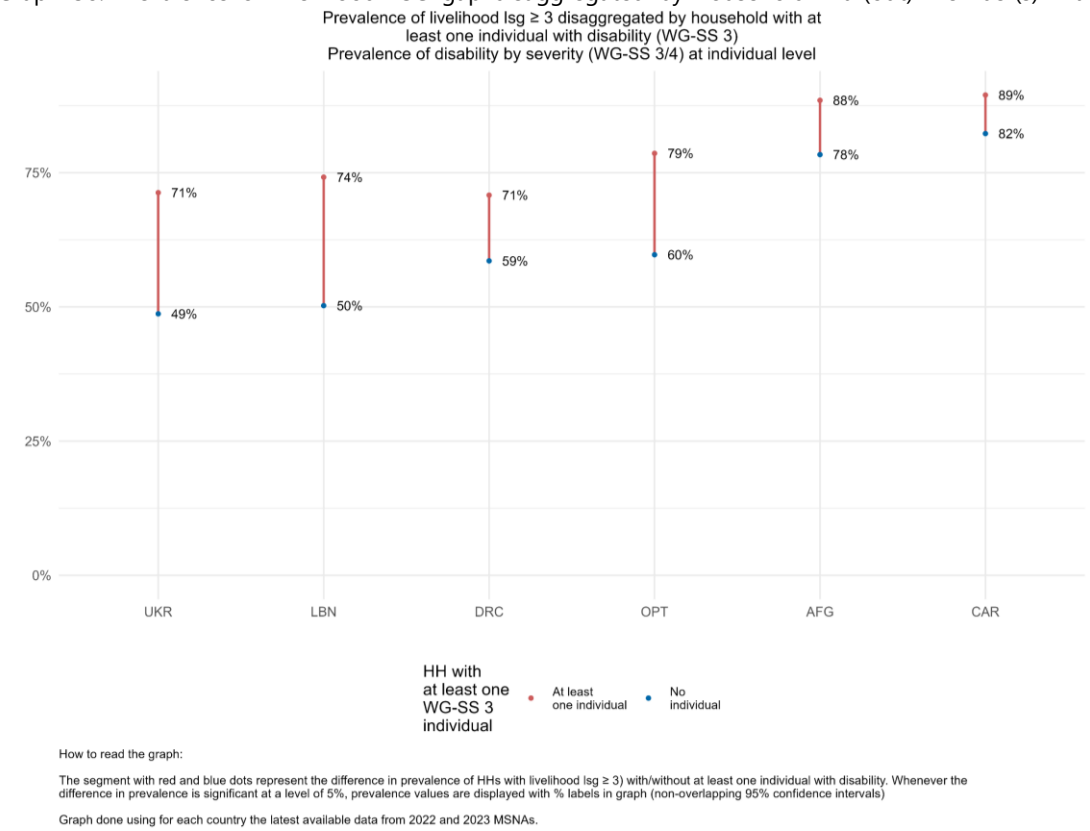
Graph 37: Food LSG gap - OLS coefficient associated with presence of member(s) with disability



Livelihood

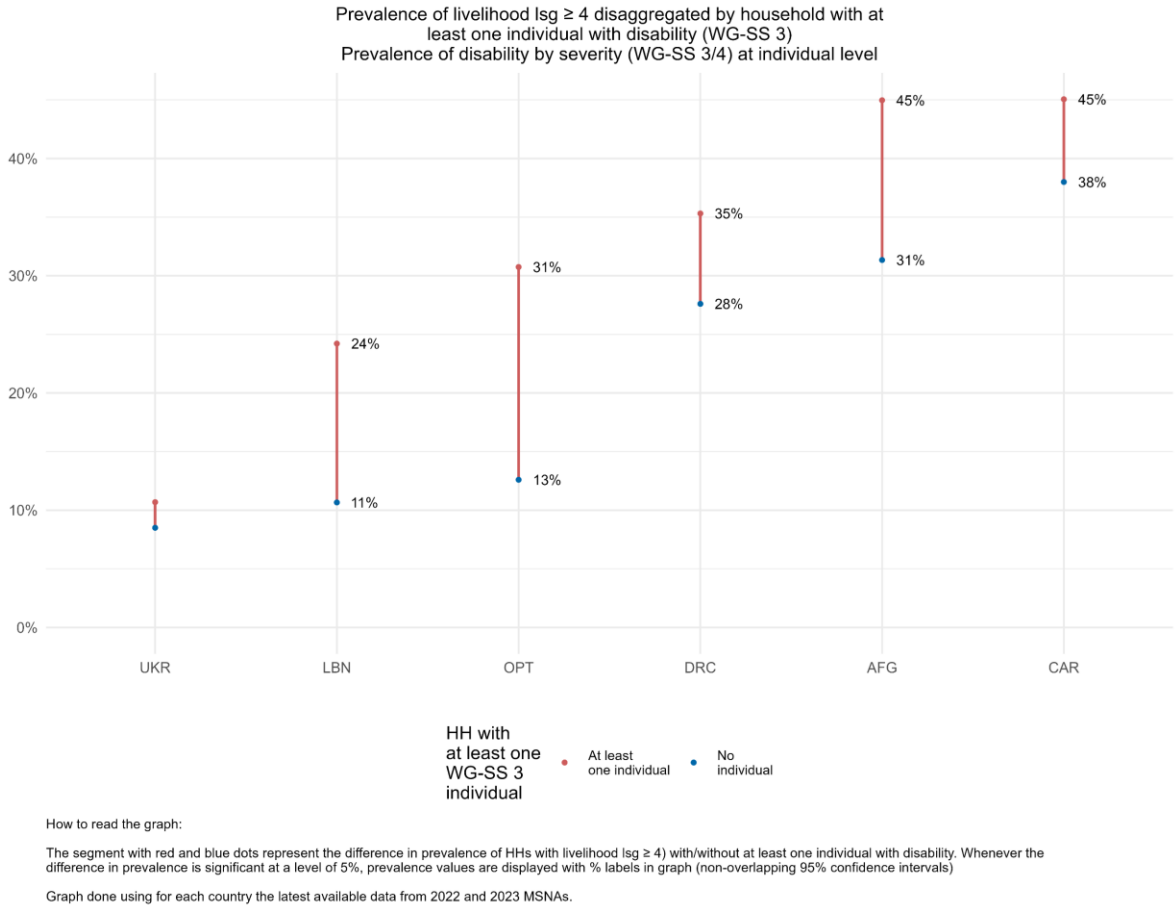
Livelihood LSG indicator was only computed in 2022 (not part of the LSG framework in 2023) and is computed by looking at source of income and living coping strategy index. A household will have a gap if only one unstable source of income or no/only emergency source of income / or at least one crisis or emergency LCSI.

Graph 38: Prevalence of livelihood LSG gap disaggregated by household with(out) member(s) with disability



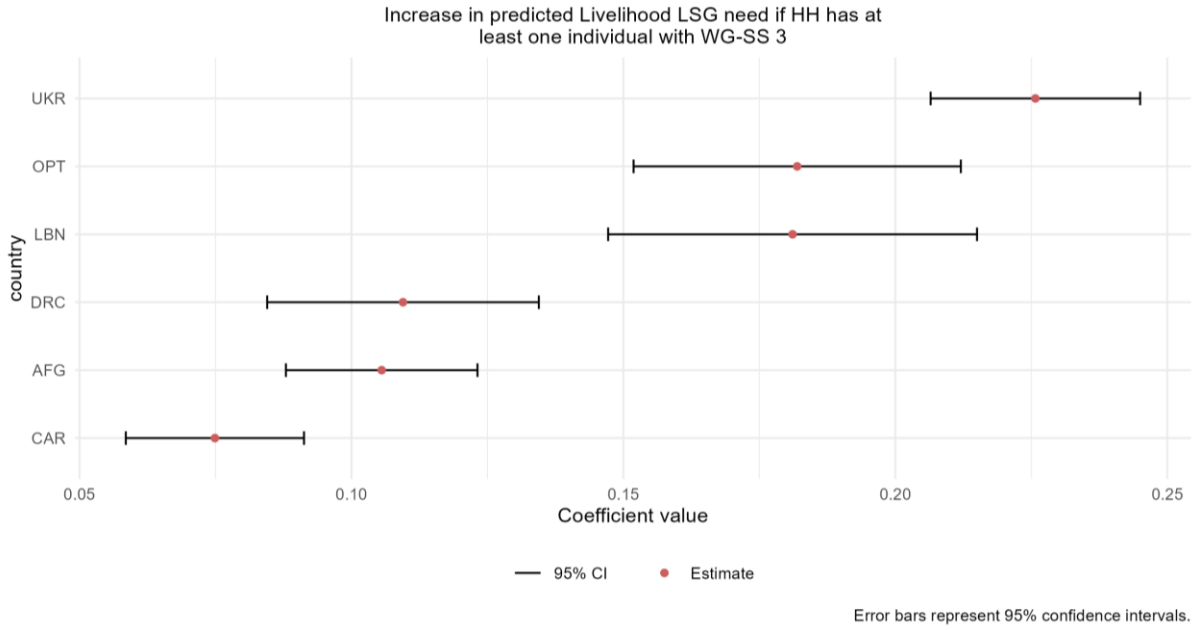
The difference in prevalence remains visible when looking at more severe thresholds, as shown in the graph below. The proportion of households with livelihood LSG >= 4 is still significantly higher among households with at least one member with disability compared to other households in all considered countries in 2022 except for Ukraine, where the overall prevalence of these more severe livelihood gaps was much smaller overall.

Graph 39: Prevalence of severe livelihood LSG gap disaggregated by household with(out) member(s) with disability



The marginal impact in the predicted probability of experiencing a gap in livelihood was the highest in Ukraine, Gaza and Lebanon, with an **increase in predicted probability above 17 percentage points** for households with at least one individual with disability**.**

Graph 40: Livelihood LSG gap - OLS coefficient associated with presence of member(s) with disability

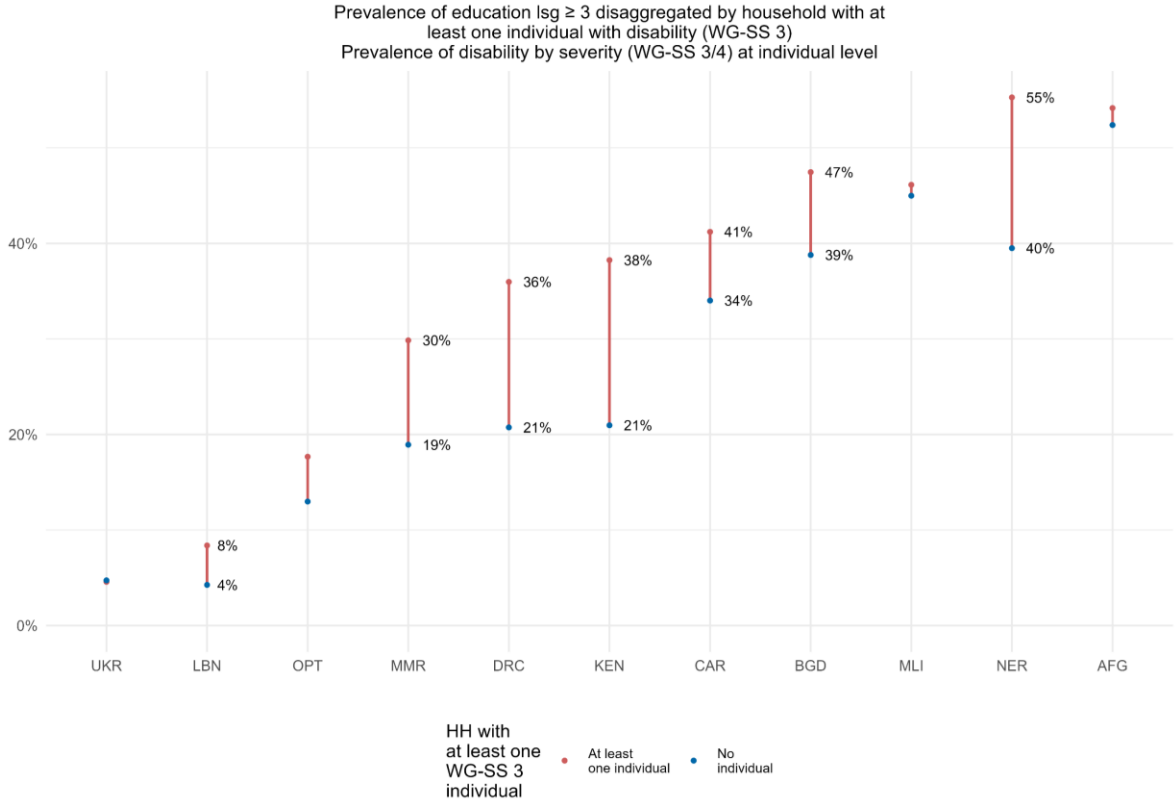


Education

It is important to note that the education sectoral gap indicator is computed at the household level and measures only the household level gap in education regardless of the presence of school-aged children. A household with no school-age children will therefore be considered with no potential gap in education for household members, while a gap will be associated with the presence of at least one aged school child not attending regularly formal education. Similarly to health indicators designed to measure outcomes at the individual level, the association between disability and education outcomes is expected to be stronger at the individual level. Hence the positive and significant difference in prevalence between households with/without member(s) with disability in many contexts (Lebanon, Myanmar, Democratic Republic of Congo, Kenya, Central African Republic, Bangladesh and Niger) would most likely be even stronger if calculated at individual level[52].

[52] This would require filtering out household without school-aged children, logically exacerbating the difference in prevalence.

Graph 41: Prevalence of Education LSG gap disaggregated by household with(out) member(s) with disability



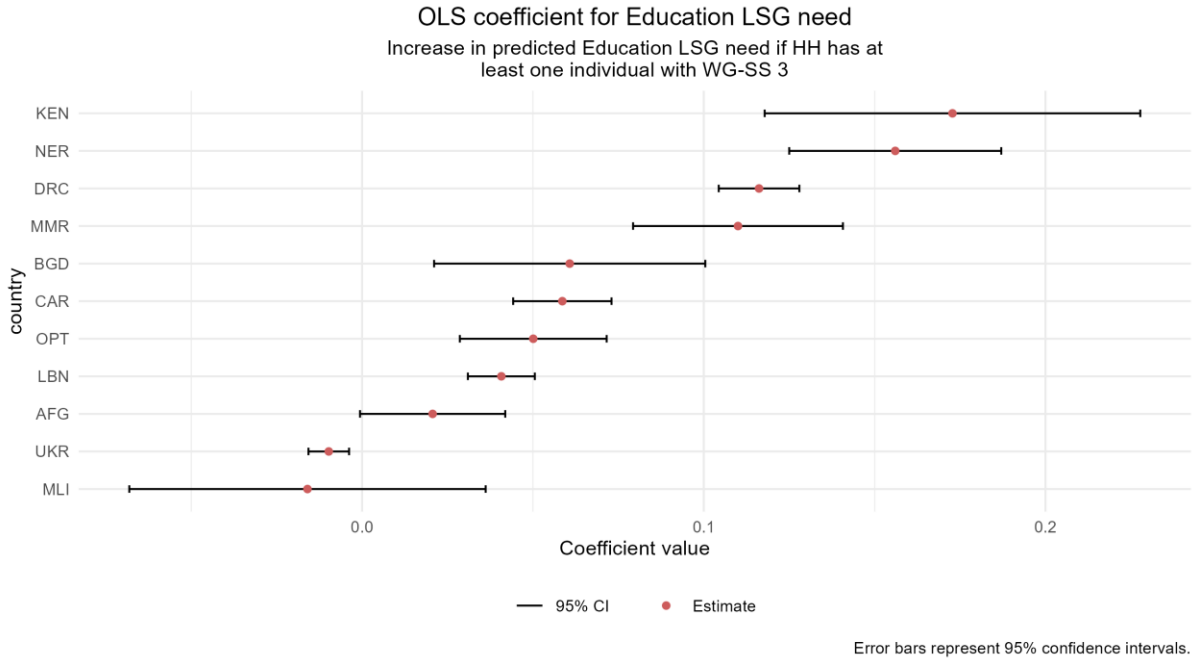
How to read the graph:

The segment with red and blue dots represent the difference in prevalence of HHs with education lsg ≥ 3) with/without at least one individual with disability. Whenever the difference in prevalence is significant at a level of 5%, prevalence values are displayed with % labels in graph (non-overlapping 95% confidence intervals)

Graph done using for each country the latest available data from 2022 and 2023 MSNAs.

The increase in the predicted probability of experiencing an education gap is higher in Kenya, Niger, Democratic Republic of Congo and Myanmar, with **an estimated increase above 10 percentage points of experiencing a gap in education for households with at least one member with disability compared to other households.**

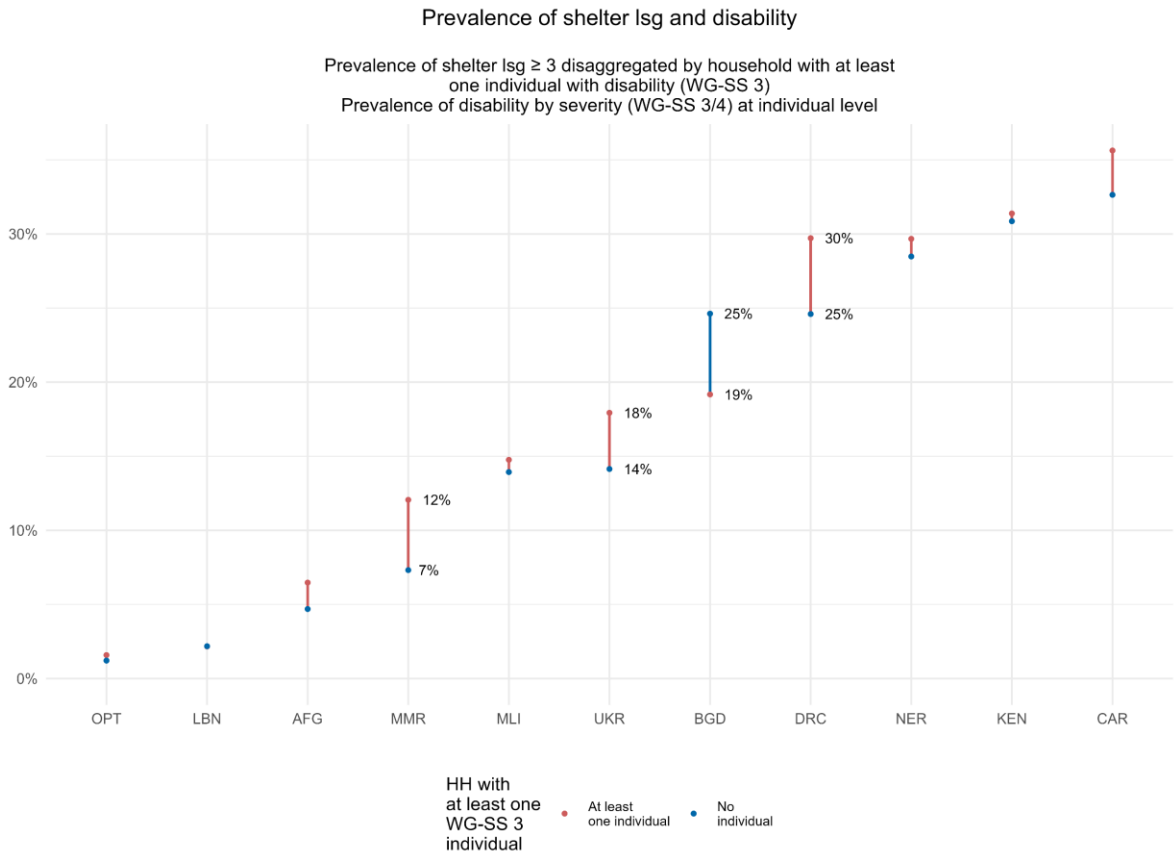
Graph 42: Education LSG gap - OLS coefficient associated with presence of member(s) with disability



Shelter & NFIS

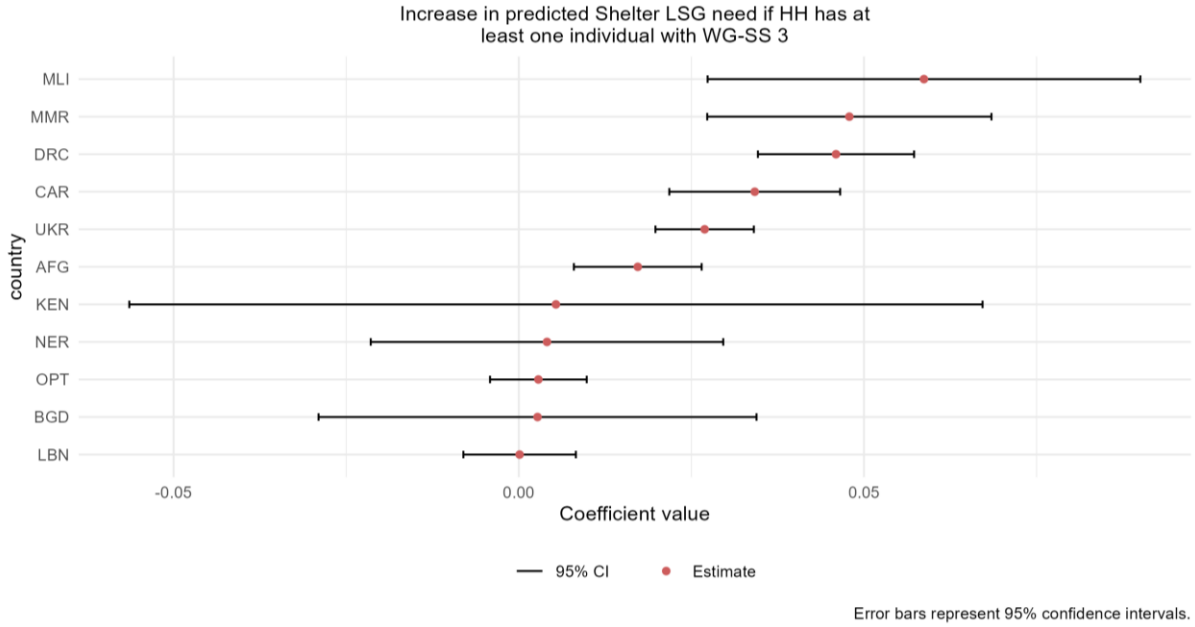
The Shelter Living Standard Gap (LSG) framework categorizes shelter severity (4+ to 1) by assessing a household's situation across key indicators. These include the type of shelter they occupy (e.g., no shelter, adequate), any enclosure issues present (damage to roof, walls), their occupancy arrangement (security of tenure), and the functionality of their space concerning core domestic tasks. For example, a household is classified as Severity 3 if they reside in an inadequate shelter and experience either enclosure or living space issues, or if they cannot perform any of the four core domestic tasks within their shelter. Each severity level is determined by a distinct combination of these indicator states, reflecting a gradient of shelter adequacy and living conditions. Severity 4+, the most critical level, is driven by the condition of having no shelter at all (sleeping in the open) OR occupying a shelter that has collapsed or is so unsafe for living in (due to major roof damage or risk of collapse) that it's uninhabitable, even if the household is still present.

Graph 43: Prevalence of Shelter NFIs LSG gap disaggregated by household with(out) member(s) with disability



We see that apart from Myanmar, Ukraine and Democratic republic of Congo, there is no significant difference in the prevalence of shelter LSG gap between household with member(s) with disability and other households, although suggesting a positive different in many other contexts. In Bangladesh interestingly, the data shows an opposite trend, with a significantly higher prevalence among household without members with disability.

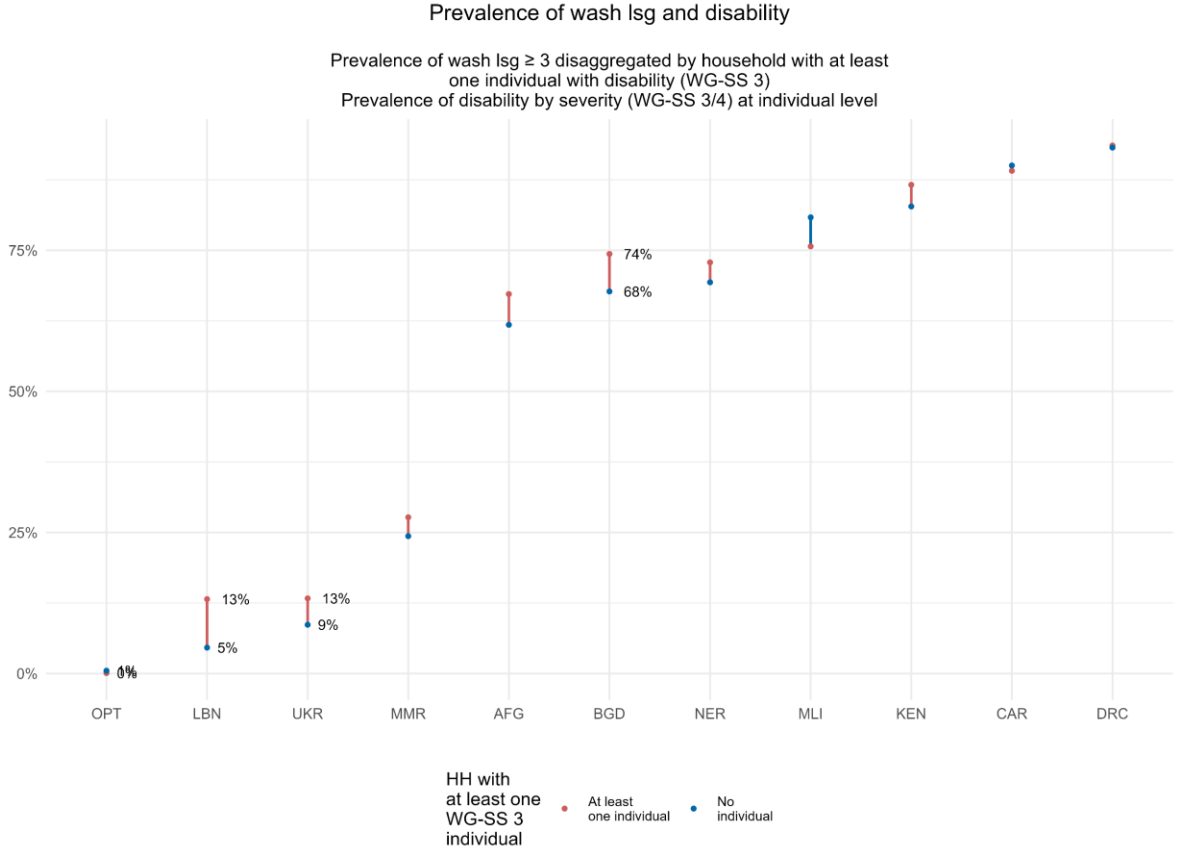
Graph 44: Shelter NFIs LSG gap - OLS coefficient associated with presence of member(s) with disability



WASH

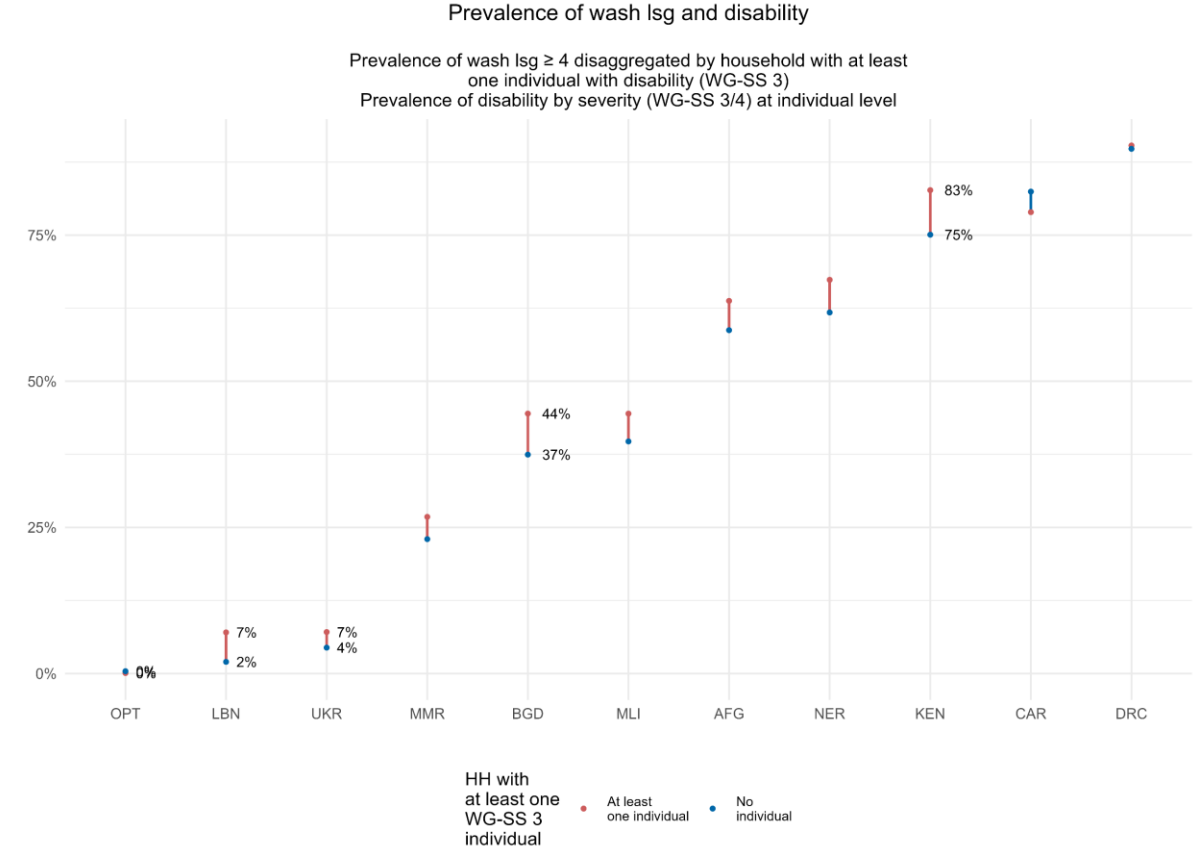
The WASH LSG framework categorizes severity levels based on water source, sanitation facility, and handwashing facility alongside an indicator on sufficiency of drinking water in the past 4 weeks (for 2023 only). Severity 4+ is characterized by reliance on surface water or open defecation or always lacking sufficient drinking water recently (for 2023 only). Severity 4 is driven by using an unimproved water source or an unimproved sanitation facility or an improved facility shared with over 50 people or experiencing a lack of drinking water often. Severity 3 is marked by using an improved water source at a distance of over 30 minutes return time and an improved sanitation facility shared with more than 20 people, with a lack of drinking water occurring sometimes. Other severity levels are defined by varying degrees of access to improved facilities, sharing arrangements, handwashing provisions, and the frequency of water scarcity, however not relevant for the analysis of prevalence of LSG equal to 3 and above.

Graph 45: Prevalence of Wash LSG gap disaggregated by household with(out) member(s) with disability



We can see that apart for Lebanon, Ukraine and Bangladesh, there is no significant difference in the prevalence of Wash LSG gap between households with member(s) with disability and others. This could be due to the fact that deprivation in these dimensions is not well measured by infrastructure-related indicators that pertain to the whole household, bypassing individual barriers that might specifically affect the individuals with disability in the household in their actual experienced access to these services.

Graph 46: Prevalence of severe Wash LSG gap disaggregated by household with(out) member(s) with disability



Graph 47: Wash LSG gap - OLS coefficient associated with presence of member(s) with disability