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for every child

Children with Disabilities in Europe and Central Asia:

A statistical overview of their well-being

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Foreword

Europe and Central Asia is home to an estimated 10.8 million children with disabilities.

Almost every country in the region has ratified both the Convention on the Rights of the Child and the Convention on the Rights of Persons with Disabilities, and the inclusion of children with disabilities is now a priority in all of their national strategies and action plans. Nevertheless, these children still lag behind their peers in accessing education, health and social services and are often without vitally needed support. Moreover, they continue to face stigma and discrimination. In a region where disability has historically been defined and approached as a medical problem, high levels of institutionalization, segregation and exclusion of children with disabilities persist. Children with disabilities in Europe and Central Asia are significantly more likely to be institutionalized than children without disabilities, and typically they are segregated into special schools.

High-quality, comparable data on children with disabilities are key to increasing their visibility and inclusion in policymaking and programming. The integration of the Child Functioning Module in household surveys, including in UNICEF-supported Multiple Indicator Cluster Surveys, has been instrumental in this regard. The use of the Child Functioning Module has encouraged countries to move away from a medical definition of disability towards an understanding of functional difficulties that occur as a result of the interaction between individual impairments and environmental factors. This evolution in definition and data collection approaches is part of a broader paradigm shift: The focus today is on addressing barriers to inclusion – institutional, attitudinal and physical – and investing in high-quality, inclusive services and individualized support. At the same time, it is recognized that an enabling policy environment is the most effective pathway to ensuring the full realization of the rights of children with disabilities.

This regional report provides critical evidence for decision-makers across countries to use in both policy and programming. In the context of the Global Disability Inclusion Strategy and Policy, UNICEF in Europe and Central Asia will use this valuable resource to embark on the next level of engagement to give all children with disabilities the opportunity to realize their rights on an equal basis with their peers.

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Introduction

Nearly 11 million children with disabilities live in Europe and Central Asia. Each of them – like every child in the world – has the right to be nurtured and supported through responsive care and education, to receive adequate nutrition and social protection, and to enjoy play and leisure time. Too often, however, such rights are denied. The reasons vary: They include stigma, lack of accessible services, institutionalization and physical barriers. But the consequences are sadly consistent. When marginalized from society, these children's chances to survive and thrive are diminished, along with their prospects for a bright future.

In 2015, the adoption of the 2030 Agenda for Sustainable Development was framed around the pledge of leaving no one behind. It calls for a commitment to ensure that all 17 Sustainable Development Goals (SDGs), comprising 169 targets, are achieved for the benefit of all members of society. It emphasizes reaching those furthest behind first, which inevitably includes children with disabilities and their families.

Monitoring the inclusion of children with disabilities in development efforts has long been held back by the lack of reliable and comprehensive data. Recent years, however, have seen renewed efforts to fill these data gaps. The development of new data collection tools has resulted in a substantial increase in the availability and quality of data on children with disabilities, fostering new analyses and contributing to increased knowledge generation. This report is a testament to these efforts. It includes internationally comparable data from nine countries in Europe and Central Asia and covers more than 30 indicators of child well-being – from education to protection from violence and discrimination. It also presents global and regional estimates of children with disabilities drawn from more than 1,000 data sources, including 228 from countries in Europe and Central Asia.

The report's objective is to promote the use of these data to make children with disabilities in the region more visible, bringing about a fuller understanding of their life experiences. It offers evidence crucial to decision-making to fulfil obligations, both moral and legal, to give every child an equal chance in life.

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Understanding disability in children

Children with disabilities are a highly diverse population group. They include children who were born with a genetic condition that affects their physical, mental or social development; who sustained a serious injury, nutritional deficiency or infection that contributed to long-term functional difficulties; or who were exposed to environmental toxins that resulted in developmental delays. Children with disabilities also include those who developed anxiety or depression as a result of stressful life events.

Disability is a complex and evolving concept, involving aspects of body function and structure (impairments), capacity (measured by the ability to carry out basic activities without the benefit of assistance in any form), and performance (measured by the individual's ability to carry out these same basic activities using available assistive technologies and assistance). As stated in the Convention on the Rights of Persons with Disabilities, disability stems from the interaction between certain conditions or impairments and an unaccommodating environment that hinders an individual's full and effective participation in society on an equal basis with others. The framework of the International Classification of Functioning, Disability and Health (ICF) relies on a three-level model to describe the concept of disability. According to the ICF, disability can occur as:

- An impairment in body function or structure (for example, a cataract or opacity of the natural lens of the eye, which prevents the passage of rays of light and impairs or destroys sight)
- A limitation in activity (for example, low vision or inability to see, read or engage in other activities)
- A restriction in participation (for example, exclusion from school or participation in other social, recreational or other events or roles).

The ICF framework defines disability within a biopsychosocial model, integrating factors pertaining to both the individual and his or her environment. In contrast, the medical model defines disability as a problem resulting from a medical condition. Awareness of the important role of the social context in defining disability led to the development of the social model of disability, which defines disability not merely as a medical condition or diagnosis but rather as a failure of the policy, cultural and physical environments to accommodate differences in function. For instance, children with myopia who do not have access to diagnostic services and glasses will have difficulty seeing, whereas those who have such access will not. Furthermore, children with similar functional difficulties may participate in society to varying degrees because of physical, communication and cultural barriers. Access to assistive devices, technology and services, as well as exposure to nurturing relationships and positive social norms and beliefs, are crucial to promoting the inclusion of all children, regardless of their impairments.

Counting children with disabilities

The availability of data on children with disabilities has been a longstanding challenge due to limitations related to the use of narrow definitions and the lack of a standardized data collection methodology. While most countries have produced estimates of the number of persons with disabilities, the use of different measurement tools limits the validity and comparability of data. The definition of disability that is used in any given data collection instrument determines who is identified as having a disability and included in the appraisal of evidence. Different conceptualizations and differences in operationalizing the concept of disability will directly impact the quality and utility of the gathered data. Historically, measures of disability have focused on domains related to physical and sensory functioning, while other domains, notably those related to psychosocial functioning, were largely overlooked. Language that was stigmatizing or judgemental was also commonly found in some of the questionnaires used to determine disability status.

An additional limitation to the production of high-quality data on children with disabilities relates to the protocols used to collect them. Non-inclusive data collection methods and analyses can lead to the generation of inaccurate, incomplete, irrelevant or misleading evidence.[1] The absence of inclusiveness may result in severe underestimations and misidentification of persons with disabilities, aggravating exclusion and preventing the implementation of efforts where they are most needed. Further to the considerations on measuring disability in general, identifying children with disabilities presents additional challenges. The domains of functioning that may indicate that a young child has a disability are different from those in older children and adults. For example, asking about difficulties related to self-care is relevant among older children

and adults but not young children. In addition, measuring functional difficulties is complex since children, especially at younger ages, develop at different rates. Therefore, the identification of functional difficulties in children needs to account for what is a typical variation in development versus a developmental delay or a consequence of a specific impairment. Measuring disability among children requires instruments that are specifically designed to reflect the breadth of functional domains that are relevant for children. During childhood, this implies accounting for all the domains of physical, psychosocial, sensory and cognitive functioning. Furthermore, a comprehensive measure of disability must include all sorts of individual and environmental factors that may prevent children from developing skills and building trustworthy relationships and that inhibit their full and effective participation in society on an equal basis with others.

A new way to identify children with disabilities in data collection efforts

To address the paucity of data on the situation of children with disabilities globally, UNICEF and the Washington Group on Disability Statistics developed the Child Functioning Module for use in censuses and surveys. The module is intended to provide a population-level estimate of the number and proportion of children with functional difficulties. The module covers children between 2 and 17 years of age and assesses difficulties in various domains of functioning.[2] It conforms to the biopsychosocial model of disability, focusing on the presence and extent of functional difficulties rather than on body structure or conditions. For example, a mobility limitation can be the result of cerebral palsy, loss of limbs, paralysis, muscular dystrophy or spinal cord injuries. Behavioural issues may result from autism, attention deficit hyperactivity disorder or a mental health condition. Basing disability statistics on questions that ask about diagnosable conditions is problematic. Many caregivers may not know their child's diagnosis, particularly if this involves mental and psychosocial conditions; and knowledge about diagnoses is often correlated with education, socioeconomic status and access to health services, all of which may bias collected data. Questions that focus on basic actions, such as those in the Child Functioning Module, serve as a better basis for identifying children with disabilities. For the purposes of social participation and equalizing opportunities, functional status – and how that impacts someone's life – is of greater interest than the cause (medical or otherwise), since children with the same conditions or impairments may have very different degrees of difficulties. For example, one child with cerebral palsy might have a slight speech impairment but can easily be understood while another child with the same condition might not be able to speak at all, making communication challenging. Some of these difficulties are traditionally seen as a 'disability' while others are not. The Child Functioning Module is comprised of two questionnaires, one with 16 questions for children aged 2 to 4 years and another with 24 questions for children aged 5 to 17 years. The questions are to be administered to the mother or primary caregiver of the child in question. They are designed to identify difficulties according to a range of severity. To better reflect the degree of functional difficulty, each area is assessed against a rating scale. In addition to collecting data on domains related to physical, sensory and cognitive functioning, the Child Functioning Module includes questions on difficulties in psychosocial functioning. These questions identify children having difficulties expressing and managing emotions, accepting changes, controlling behaviour and making friends. While all children may sometimes manifest worry, sadness or anxiety, these emotions may be significant and frequent enough to place certain children at higher risk of dropping out of school, withdrawing from family or community life, or harming themselves. The reporting of anxiety or depression should be interpreted as an indication of those conditions, rather than as a clinical diagnosis. Results should not be used to assess the epidemiological characteristics of any disease or impairment; rather, they provide an indication of the prevalence of moderate to severe functional difficulties that, in interaction with various barriers, can place children at increased risk for non-participation and exclusion.

While the Child Functioning Module was originally developed and tested for use on surveys and censuses, work is ongoing to test the use of the module in other data sources, including administrative records. These efforts include testing the questions in Education and Health Management Information Systems.

The Child Functioning Module was developed in consultation with organizations of persons with disabilities, among other stakeholder groups. These organizations were instrumental in the design of the module, including through their engagement during its validation in the field.[3] The module also

underwent extensive review by other experts and was tested in several countries to determine the quality of questions and how well they are understood by people in diverse cultures.[4] In March 2017, a joint statement issued by multiple UN agencies and Member States, organizations of persons with disabilities and other stakeholders recommended the module as the appropriate tool for SDG data disaggregation for children.[5]

The development of the Child Functioning Module and its roll-out as part of the Multiple Indicator Cluster Survey (MICS) programme has led to the release, for the first time, of cross-nationally comparable data on children with disabilities. In addition, many countries have also included the module as part of their nationally representative surveys.

The availability of data on children with disabilities in Europe and Central Asia

The limitations affecting the availability, quality and comparability of data on children with disabilities worldwide are also found in Europe and Central Asia.

Almost all countries in this region have collected some data on children with disabilities, and most have more than one data source, indicating that data have been collected at repeated intervals. At least 228 sources generate population-level data on children with disabilities (58 censuses and 170 surveys). The oldest source of data is from 1878 and the most recent from 2019. Of these 228 data sources, nine were based on the Child Functioning Module, and of these nine, eight used the Child Functioning Module as part of a MICS conducted between 2018 and 2020. Forty-three sources collected data on children using the Washington Group Short Set on Functioning, despite the fact that this six-question module was designed to produce internationally comparable data on adults with disabilities.[6] It therefore underestimates the proportion of children with disabilities (see technical annex) and is not recommended for collecting data on this population group. Twenty countries also had sources that collected data on children using the Global Activity Limitation Indicator (GALI). GALI is implemented in the European Health Interview surveys and European Union Statistics on Income and Living Conditions surveys and is designed to collect data on limitations that individuals may have in participating in and performing everyday activities.[7] While it is internationally comparable, GALI was designed primarily for producing internationally comparable data on adults with activity limitations. Thus, as with the Washington Group Short Set, it is not recommended for collecting data on children. The remaining sources (156) generated data using a variety of instruments, which relied on diverse definitions, had different numbers of questions and used different wording for those questions (Table 1). The use of non-standard tools is problematic since different methodologies and approaches can produce significantly different estimates of children with disabilities, even within the same country, and result in data of varying quality and scope.

Indeed, the proportions of children with disabilities identified through these different data sources across countries in Europe and Central Asia varied widely, with estimates ranging from 0.2 per cent among children aged 0 to 14 years in Hungary (Census 1930) to 29.5 per cent among children aged 2 to 9 years in Georgia (MICS 2005).[8]

That said, it is worth noting that most of the population-level data collection in this region over the last decade has relied on tools such as the Child Functioning Module, the Washington Group Short Set on Functioning and GALI, which produce internationally comparable data. This trend is a positive step towards strengthening the availability and quality of data on children with disabilities in the region. As data collection efforts continue and expand across Europe and Central Asia, countries should continue to prioritize the collection of data on children with disabilities using the Child Functioning Module. In doing so, they can help ensure that the right of all children to be seen, counted and included is fulfilled.

TABLE 1 Number of data sources on children with disabilities in Europe and Central Asia, by tool used to identify such children

	Number of data sources
Child Functioning Module	9
Washington Group Short Set	43
GALI	20
Other tool	156

BOX 1

Collecting data on children with disabilities through Multiple Indicator Cluster Surveys

The MICS programme is designed to assist countries in collecting and analysing data on the situation of women and children. Since its inception in the mid-1990s, the MICS has enabled nearly 120 countries to collect nationally representative and internationally comparable data on more than 100 key indicators in areas such as nutrition, child health, mortality, education, water and sanitation, child protection, and HIV and AIDS.[9]

The MICS tools, including core questionnaires and modules on specific topics, are developed by UNICEF in consultation with relevant experts from various UN organizations and interagency monitoring groups. The surveys are designed by country teams and implemented by local agencies, typically national statistical offices. The core questionnaires are a household questionnaire, a questionnaire for individual girls and women between the ages of 15 and 49, a questionnaire for individual boys and men between the ages of 15 and 49, a questionnaire on children under age 5 (administered to mothers or primary caregivers), and a questionnaire on children aged 5 to 17 years (also administered to mothers or primary caregivers). The questionnaires are all modular in nature and can be adapted or customized to the needs of the country. In countries as diverse as Argentina, Bangladesh, Côte d'Ivoire, Fiji, Qatar, Thailand and Turkmenistan, trained fieldwork teams conduct interviews with household members on a variety of topics – focusing mainly on those issues that directly affect the lives of children and women. The MICS is an integral part of the policies and plans of many governments around the world and a major data source for more than 30 SDG indicators.

Starting in 2016, the Child Functioning Module and the Washington Group Short Set on Functioning[10] became part of the MICS and are used to collect data on children aged 2 to 17 years and on adult women and men aged 18 to 49 years, respectively. With the inclusion of these two tools, the MICS programme has become the largest source of internationally comparable data on children and adults with disabilities. When analysed in conjunction with other MICS indicators, the data can be used to document the inequities experienced by persons with disabilities at the global level.

BOX 2

Monitoring the situation of children through a regional partnership

For three decades, national statistical offices in Europe and Central Asia have engaged in a regional partnership to monitor children's rights and the inequities they face. The initiative, Transformative Monitoring for Enhanced Equity, or TransMonEE, is strengthening the coverage, quality, disaggregation, accessibility and use of data on children across areas relevant to their rights and well-being. The main purpose of TransMonEE is to serve as a platform for guiding discussions between national statistical offices (as the main data producers) and policymakers (as the main data users) on how to improve the availability and use of data on children. Of particular concern are vulnerable children, including those with disabilities, who are often not reflected in official statistics and therefore ignored in evidence-based policymaking.

The TransMonEE website and regional database are useful tools for capturing and disseminating a vast range of data on issues affecting children. Administrative data on children with disabilities – from the health, education and social protection sectors – are updated annually in collaboration with national statistical offices. Moreover, through this partnership, additional efforts are made by these offices to disaggregate other TransMonEE indicators, such as the number of children in alternative care, by a child's disability status. More information about this initiative can be found at www.transmonee.org.

Every child has the right to be counted

Data provide the foundation for understanding who children with disabilities are and the scope and depth of the deprivation they face. When put to use through advocacy and in forging transformative policies and programmes, data have the power to change lives.

Indicators and data sources used in this chapter

This report aims to generate evidence on children with disabilities aligned, to the greatest extent possible, with the Convention on the Rights of Persons with Disabilities and the biopsychosocial model of disability. This intent guided the production of the global and regional estimates and is reflected in country-level data collected by the Child Functioning Module. In line with this approach, the expression 'children with disabilities' used in charts and tables throughout the report refers to 'children with functional difficulties'.

The regional and global estimates presented here rely on information about functional difficulties or limitations among children gathered through more than 100 data sources with some degree of international comparability. The selection of data sources involved an extensive process of data compilation and consultations with country-level experts to overcome limitations on data availability and comparability, and to ensure their views were reflected in the data selection, harmonization and estimation process. In the case of countries in Europe and Central Asia, the estimates are based on data from 31 countries that used the Child Functioning Module (9 countries), the Washington Group Short Set (1 country), GALI (20 countries), and another tool (1 country). The 31 countries are home to 50 per cent of the population of children in this region. In order to use data obtained through the use of different instruments, the estimation process was based on meta-analyses of proportions that were considered suitable to account for the variability of the data. Detailed technical information on the estimation work and data sources is provided in the technical annex at the end of the report.

The country data presented in this chapter are drawn from MICS conducted in Belarus, Georgia, Kosovo,[11] Kyrgyzstan, Montenegro, North Macedonia, Serbia, Turkmenistan and Uzbekistan between 2018 and 2022.

Children with one or more functional difficulties include the following:

Children aged 2 to 4 years who reportedly kick, bite or hit other children or adults a lot more than other children of the same age and/or who have 'a lot of difficulty' or 'cannot do at all' certain functions. These include:

- Seeing, even if using glasses
- Hearing, even if using a hearing aid
- Walking, even if using equipment or assistance
- Understanding or being understood when speaking
- Picking up small objects with their hands
- Learning things
- Playing.

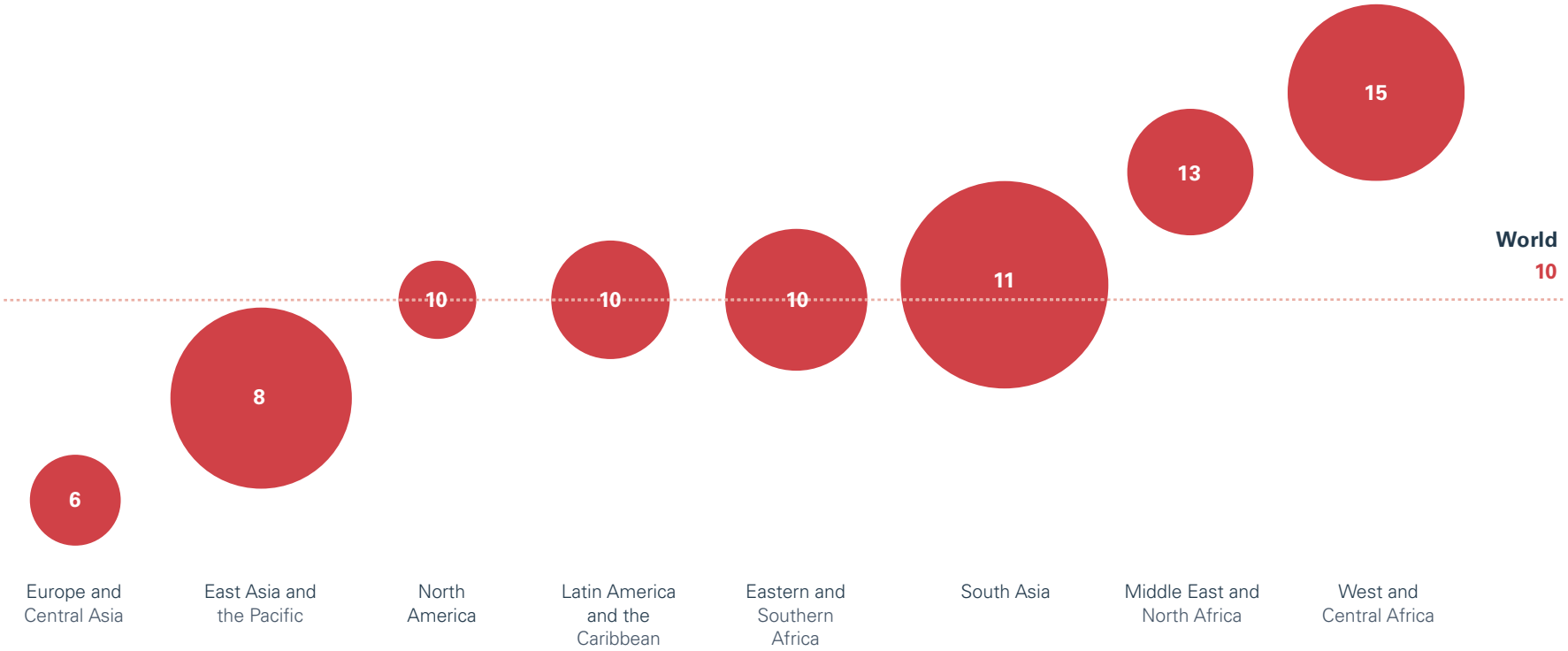
Children aged 5 to 17 years who reportedly seem very anxious, nervous or worried and/or very sad or depressed on a daily basis and/or who have 'a lot of difficulty' or 'cannot do at all' certain functions. These include:

- Seeing, even if using glasses or contact lenses
- Hearing, even if using a hearing aid
- Walking on level ground, even if using equipment or assistance
- Performing self-care activities, such as feeding or dressing themselves
- Being understood when speaking to people inside or outside their household
- Learning things
- Remembering things
- Concentrating on an activity they enjoy
- Accepting changes in their routine
- Controlling their behaviour
- Making friends.

Children with more than one functional difficulty include all children who have difficulties functioning in more than one of the domains listed above.

Six per cent of children in Europe and Central Asia have disabilities

FIGURE 1 Percentage of children aged 0 to 17 years with disabilities



Note: The size of the circles reflects the number of children with disabilities in the respective regions.

Of the 240 million children globally with disabilities, nearly 11 million live in Europe and Central Asia

FIGURE 2 Number of children aged 0 to 17 years with disabilities

Notes: The global estimate is based on a subset of 103 countries covering 84 per cent of the global population of children aged 0 to 17 years. Regional estimates represent data covering at least 50 per cent of the regional population of children.

In all countries, the proportion of children with disabilities increases as children age, but overall proportions among countries remain varied

FIGURE 3 Percentage of children aged 2 to 17 years with one or more functional difficulties

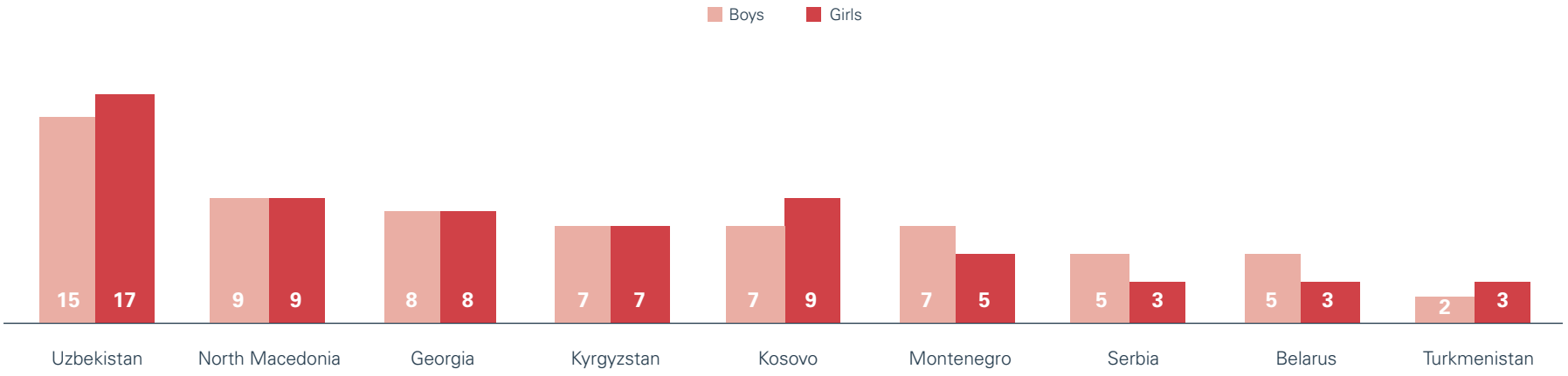
Note: All references to Kosovo in this publication should be understood to be in the context of United Nations Security Council resolution 1244 (1999).

FIGURE 4 Percentage of children aged 2 to 4 years with one or more functional difficulties

FIGURE 5 Percentage of children aged 5 to 17 years with one or more functional difficulties

In most countries, no statistically significant differences are found in the proportion of boys and girls with functional difficulties

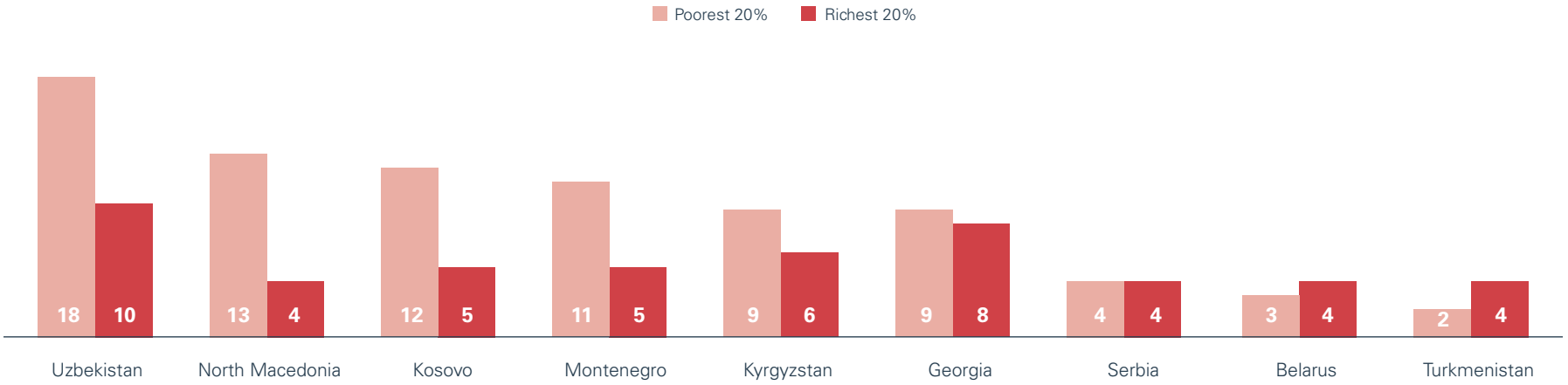
FIGURE 6 Percentage of children aged 2 to 17 years with one or more functional difficulties



Note: Differences for Georgia, Kosovo, Kyrgyzstan, Montenegro, North Macedonia, Serbia, Turkmenistan and Uzbekistan are not statistically significant.

In most countries, no statistically significant differences are found between the proportion of children with functional difficulties who live in the richest and poorest households

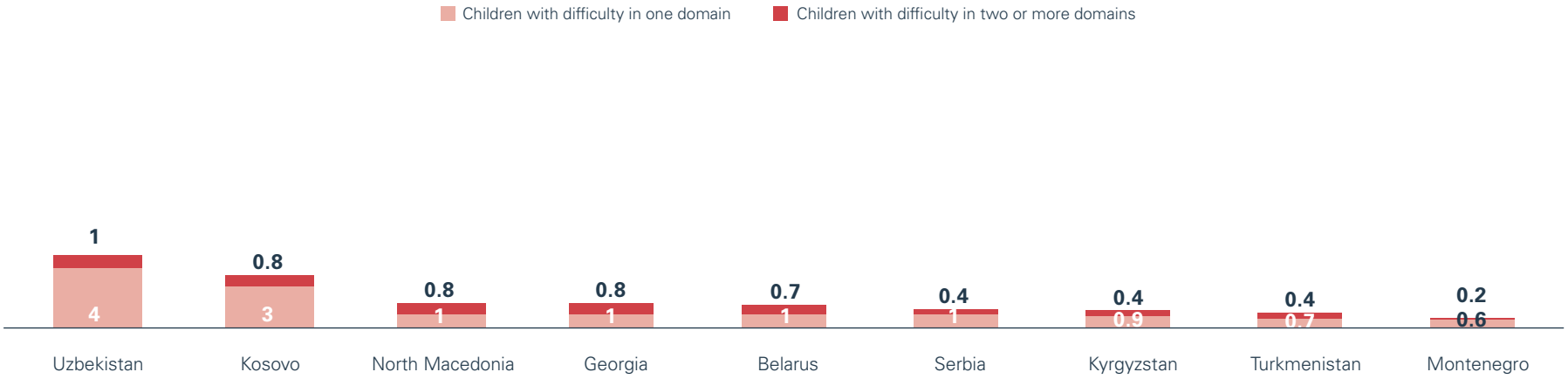
FIGURE 7 Percentage of children aged 2 to 17 years with one or more functional difficulties



Note: Differences for Belarus, Georgia, Kyrgyzstan, Montenegro, North Macedonia, Serbia and Turkmenistan are not statistically significant.

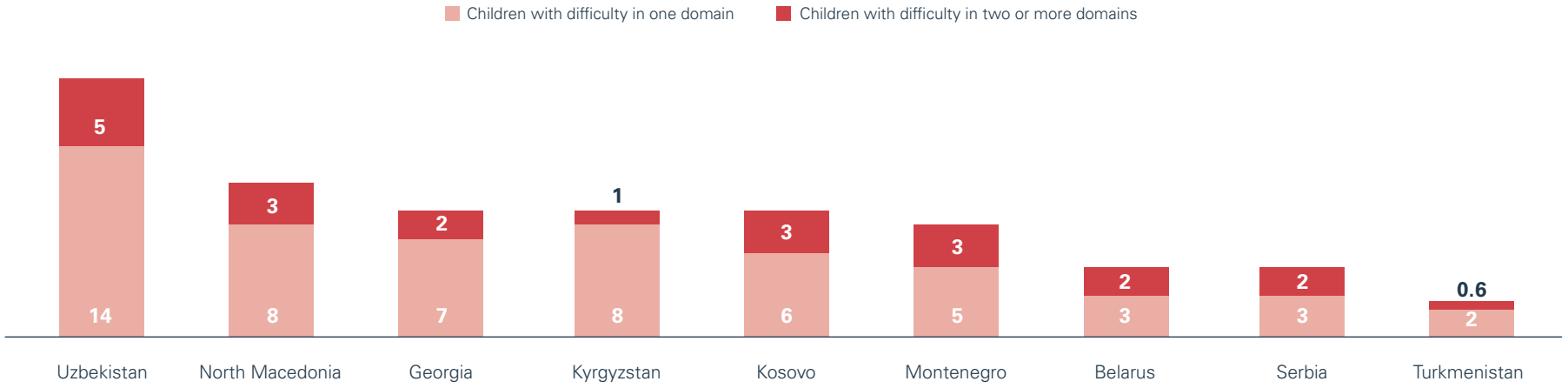
Most children with disabilities have functional difficulties in only one domain

FIGURE 8 Percentage of children aged 2 to 4 years with one or more functional difficulties



Note: Some of the values presented in this chart do not match those in Figure 4 due to rounding.

FIGURE 9 Percentage of children aged 5 to 17 years with one or more functional difficulties



Note: Some of the values presented in this chart do not match those in Figure 5 due to rounding.

The proportion of children with functional difficulties varies significantly by domain; however, psychosocial difficulties predominate across all countries

TABLE 2 Percentage of children with one or more functional difficulties

		Belarus	Georgia	Kosovo	Kyrgyzstan	Montenegro	North Macedonia	Serbia	Turkmenistan	Uzbekistan
2 to 17 years	Seeing	0.4	0.5	0.3	0.2	0.1	0.6	0.1	0.0	0.2
	Hearing	0.2	0.4	0.0	0.1	0.0	0.0	0.0	0.2	0.1
	Walking	0.3	1	0.8	1	0.3	0.3	0.6	1	2
	Communicating	0.8	0.8	0.8	0.4	0.5	0.5	0.6	0.3	0.8
	Learning	1	1	0.5	0.4	1	1	1	0.4	0.9
	Controlling behaviour	0.8	0.8	0.7	0.5	0.6	0.5	0.4	0.2	2
2 to 4 years	Fine motor skills	0.2	0.1	0.4	0.0	0.0	0.3	0.1	0.4	0.4
	Playing	0.3	0.1	0.5	0.1	0.1	0.4	0.3	0.2	0.7
5 to 17 years	Self-care	0.6	0.4	0.5	0.2	0.5	0.2	0.4	0.2	0.4
	Remembering	0.7	0.8	0.5	0.3	0.7	0.3	0.8	0.3	0.5
	Concentrating	0.9	0.8	0.3	0.2	0.5	0.2	0.3	0.2	0.5
	Accepting change	0.8	0.9	1	0.6	0.5	0.4	1	0.3	3
	Making friends	1	0.6	0.9	0.6	0.6	0.5	1	0.5	1
	Signs of anxiety	1	4	5	5	6	9	2	0.5	13
	Signs of depression	0.5	2	2	2	2	2	0.8	0.4	4

Children living in Roma settlements are significantly more likely to have a disability

TABLE 3 Percentage of children aged 2 to 17 years with one or more functional difficulties

	Kosovo	Montenegro	North Macedonia	Serbia
National samples	8	6	9	4
Roma settlements	14	21	19	11

Notes: Data on Roma settlements are only available for these four countries. National samples include children in Roma settlements, and therefore differences between children in Roma settlements and children in non-Roma settlements are expected to be larger than what this chart shows. All differences are statistically significant.

Every child has the right to a nurturing family environment, free from violence

All children have the right to grow up in a family environment that provides them with the love, nutrition, protection, opportunities for early learning and responsive care they require to survive, grow and thrive.

Indicators and data sources used in this chapter

The country data presented in this chapter are drawn from MICS conducted in Belarus, Georgia, Kosovo, Kyrgyzstan, Montenegro, North Macedonia, Serbia, Turkmenistan and Uzbekistan between 2018 and 2022.

Early stimulation and responsive care: Percentage of children aged 24 to 59 months who engaged in four or more activities to provide early stimulation and responsive care in the last three days with any adult household member (mother, father, other). Activities include reading books or looking at picture books with the child; telling stories; singing songs to or with the child; taking the child outside the home; playing with the child; naming, counting or drawing things for or with the child.

Availability of children's books: Percentage of children aged 24 to 59 months who have three or more children's books.

Availability of playthings: Percentage of children aged 24 to 59 months who play with two or more types of playthings. Playthings include homemade toys, such as dolls, cars or other toys made at home; toys from a shop or manufactured toys; household objects, such as bowls or pots; or objects found outside, such as sticks, rocks, animal shells or leaves.

Psychological aggression: Percentage of children aged 2 to 14 years who experienced any psychological aggression by caregivers in the past month.

Severe physical punishment: Percentage of children aged 2 to 14 years who experienced severe physical punishment by caregivers in the past month.

Only non-violent discipline: Percentage of children aged 2 to 14 years who experienced only non-violent discipline by caregivers in the past month.

Attitudes towards physical punishment: Percentage of mothers of children aged 2 to 14 years who believe that physical punishment is needed to bring up, raise or educate a child properly.

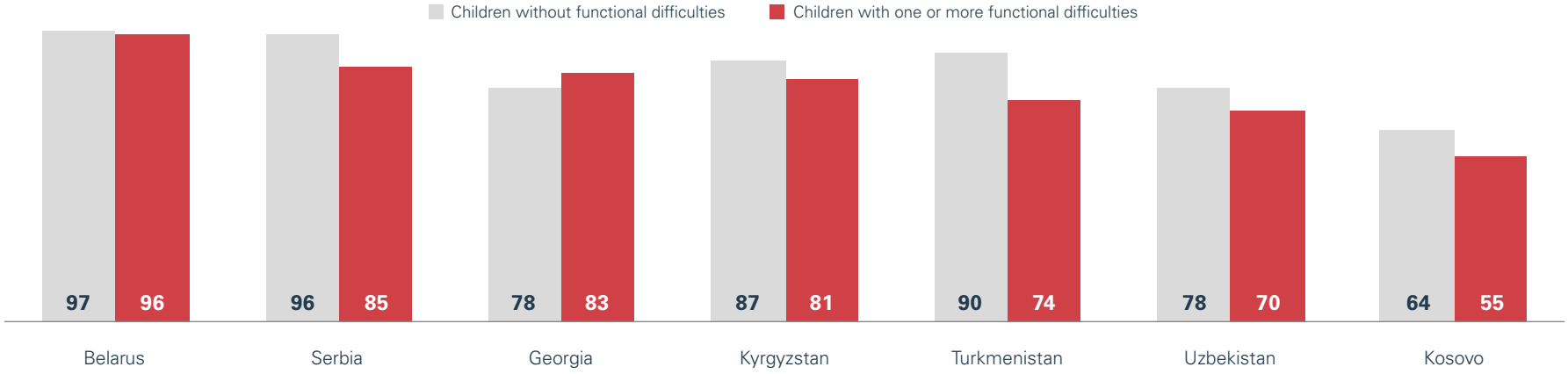
Definitions and data interpretation issues

An overarching limitation that runs through several of the indicators regards the age of children measured. Early childhood development indicators that address the availability of children's books and playthings all measure responses for children under the age of 5 years. However, since the Child Functioning Module only covers children who are at least 2 years old, children under age 2 are not represented in the data. The findings, therefore, do not reflect outcomes among younger children, for whom a lack of responsive care or playthings is crucial.

Findings regarding violent methods of discipline should be interpreted with caution since, for a significant percentage of children with functional difficulties, no disciplinary method was reported. For children with difficulties in some domains of functioning, the finding of 'no discipline method reported' is more than five times greater than it is for children without disabilities, suggesting issues within this indicator that may have numerous explanations. Data for this indicator are collected by the interviewer asking whether a child is subjected to different disciplinary methods – both positive and negative. It is therefore possible that the methods used on children with disabilities vary significantly from those used on children without disabilities. However, as these are not mentioned in the survey, they have gone unrecorded. Alternatively, it could be indicative of parents not engaging with their children with disabilities and putting time and energy into disciplining them, either positively or negatively.

In Turkmenistan and Serbia, children with disabilities are significantly less likely to receive early stimulation and responsive care than children without disabilities

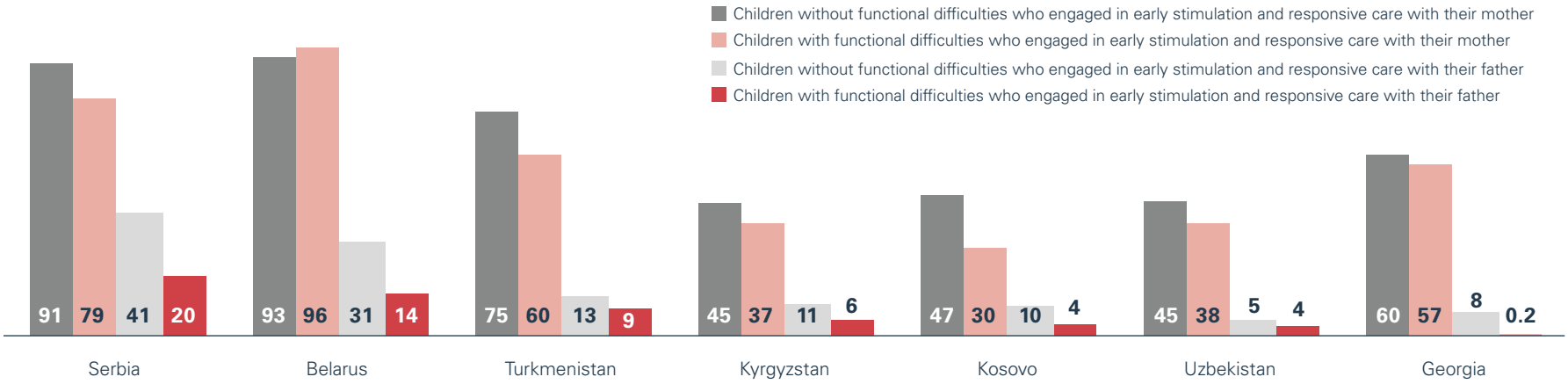
FIGURE 10 Percentage of children aged 24 to 59 months who engaged in four or more activities to provide early stimulation and responsive care in the last three days with any adult household member



Notes: Differences for Belarus, Georgia, Kosovo, Kyrgyzstan and Uzbekistan are not statistically significant. Values for children with one or more functional difficulties in Belarus, Georgia, Kosovo, Kyrgyzstan, Serbia and Turkmenistan are based on 25 to 49 unweighted observations. Values for Montenegro and North Macedonia are not shown as they are based on fewer than 25 unweighted observations.

Fathers generally engage less in early stimulation activities than mothers, but this disparity is more pronounced among parents of children with disabilities

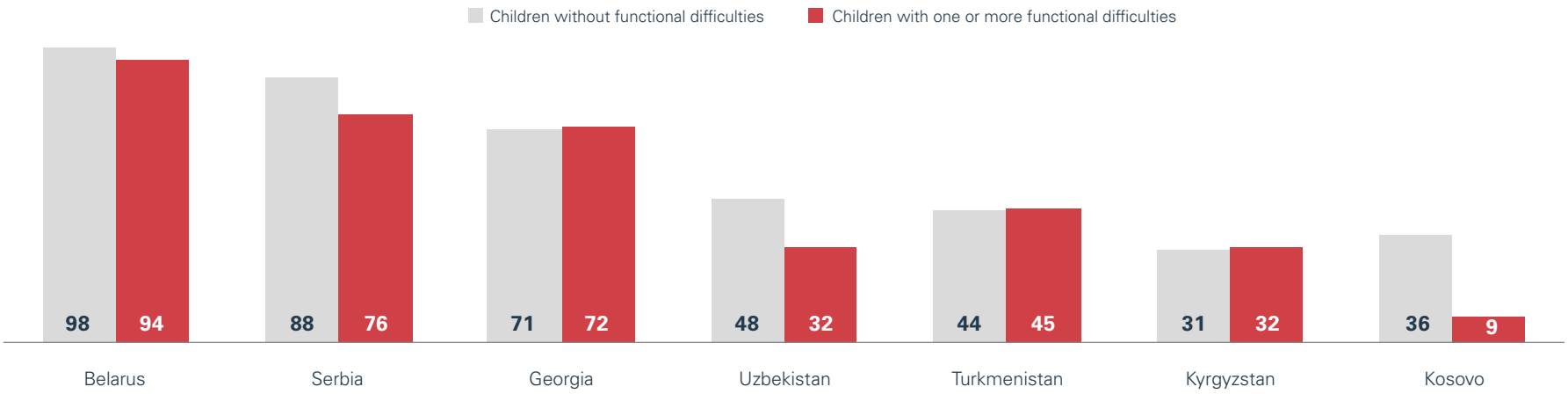
FIGURE 11 Percentage of children aged 24 to 59 months who engaged in four or more activities to provide early stimulation and responsive care in the last three days with their mother and father



Notes: Differences in the percentage of children engaged in four or more activities with their mother for Belarus, Georgia, Kosovo, Kyrgyzstan, Serbia, Turkmenistan and Uzbekistan are not statistically significant. Differences in the percentage of children engaged in four or more activities with their father for Belarus, Kosovo, Kyrgyzstan, Serbia, Turkmenistan and Uzbekistan are not statistically significant. Values for children with one or more functional difficulties in Belarus, Georgia, Kosovo, Kyrgyzstan, Serbia and Turkmenistan are based on 25 to 49 unweighted observations. Values for Montenegro and North Macedonia are not shown as they are based on fewer than 25 unweighted observations.

In Kosovo, children with disabilities are four times less likely to have three or more children's books than children without disabilities

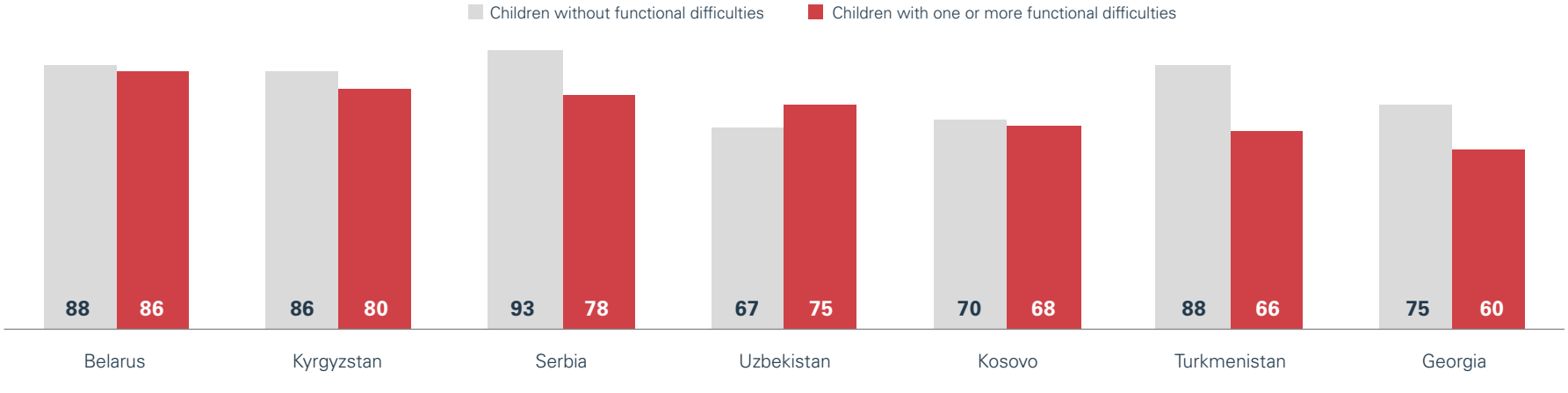
FIGURE 12 Percentage of children aged 24 to 59 months who have three or more children's books



Notes: Values for Belarus, Georgia, Kyrgyzstan, Serbia and Turkmenistan are not statistically significant. Values for children with one or more functional difficulties in Belarus, Georgia, Kosovo, Kyrgyzstan, Serbia and Turkmenistan are based on 25 to 49 unweighted observations. Values for Montenegro and North Macedonia are not shown as they are based on fewer than 25 unweighted observations.

In Turkmenistan and Serbia, children with disabilities are less likely to have two or more types of playthings than children without disabilities

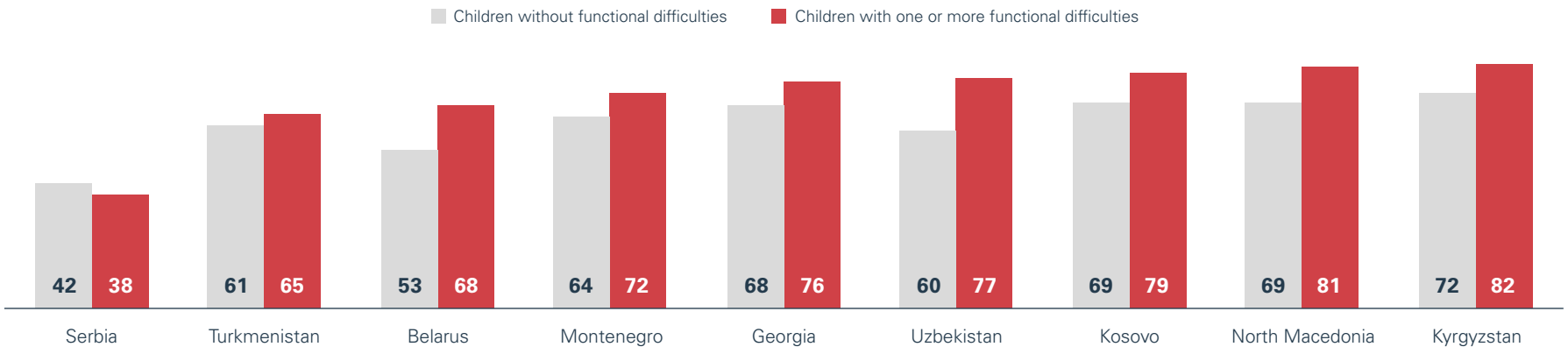
FIGURE 13 Percentage of children aged 24 to 59 months who play with two or more types of playthings



Notes: Values for Belarus, Georgia, Kosovo, Kyrgyzstan and Uzbekistan are not statistically significant. Values for children with one or more functional difficulties in Belarus, Georgia, Kosovo, Kyrgyzstan, Serbia and Turkmenistan are based on 25 to 49 unweighted observations. Values for Montenegro and North Macedonia are not shown as they are based on fewer than 25 unweighted observations.

In Uzbekistan, Belarus, North Macedonia, Kosovo and Kyrgyzstan, children with disabilities are significantly more likely to experience psychological aggression from caregivers than children without disabilities

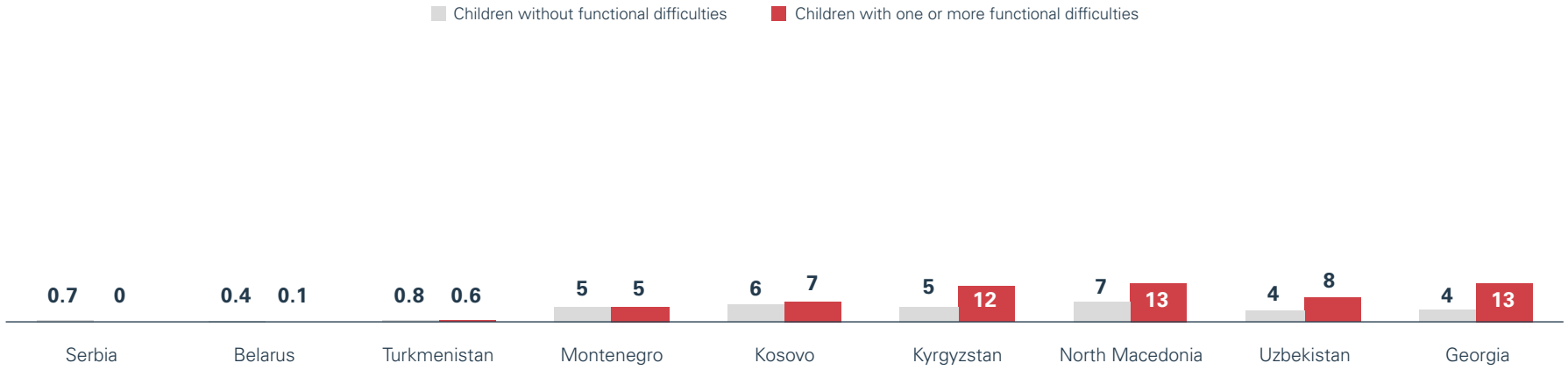
FIGURE 14 Percentage of children aged 2 to 14 years who experienced any psychological aggression by caregivers in the past month



Note: Differences for Georgia, Montenegro, Serbia and Turkmenistan are not statistically significant.

In Georgia, Kyrgyzstan, Uzbekistan, North Macedonia and Kosovo, children with disabilities are more likely to experience severe physical punishment than children without disabilities

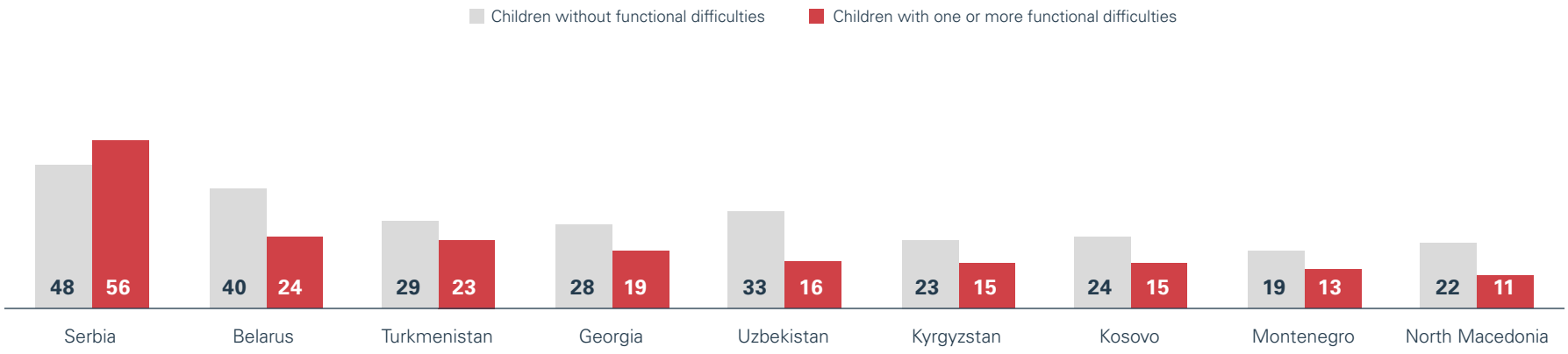
FIGURE 15 Percentage of children aged 2 to 14 years who experienced severe physical punishment by caregivers in the past month



Note: Differences for Belarus, Kosovo, Montenegro, Serbia and Turkmenistan are not statistically significant.

In Uzbekistan, North Macedonia, Belarus, Kyrgyzstan and Georgia, children with disabilities are less likely to experience only non-violent forms of discipline than children without disabilities

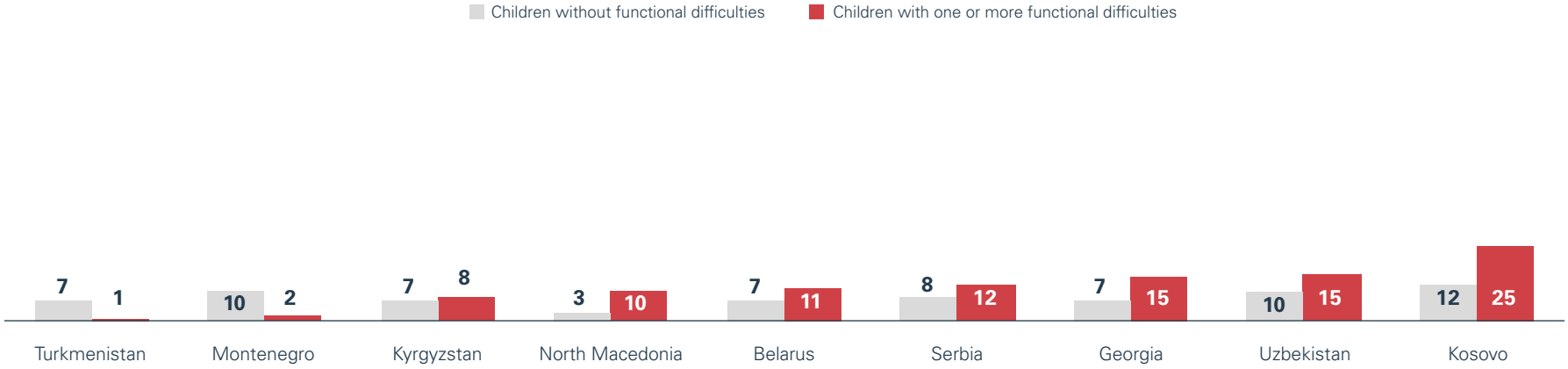
FIGURE 16 Percentage of children aged 2 to 14 years who experienced only non-violent discipline by caregivers in the past month



Note: Differences for Kosovo, Montenegro, Serbia and Turkmenistan are not statistically significant.

In North Macedonia, Georgia, Kosovo and Uzbekistan, mothers of children with disabilities are significantly more likely to believe that physical punishment is needed to raise a child properly, while in Montenegro and Turkmenistan the opposite is true

FIGURE 17 Percentage of mothers of children aged 2 to 14 years who believe physical punishment is needed to bring up, raise or educate a child properly



Note: Differences for Belarus, Kyrgyzstan and Serbia are not statistically significant.

Every child has the right to learn

Education provides children with the knowledge and skills they need to grow and prosper, creating well-being, pathways to future opportunities and healthier lives. Ensuring opportunities for all children to succeed in school requires equity and inclusion that guarantees access, participation, progress and achievement of key learning outcomes. This means addressing all aspects of a child's educational path and eliminating the disparities and barriers that begin early in life, accumulate during childhood and generate further disadvantages for the most marginalized children, including children with disabilities.

Indicators used in this chapter

The country data presented in this chapter are drawn from MICS conducted in Belarus, Georgia, Kosovo, Kyrgyzstan, Montenegro, North Macedonia, Serbia, Turkmenistan and Uzbekistan between 2018 and 2022.

Out-of-school rate: Percentage of children of:

- Primary-school age who are not attending early childhood education, primary school or higher
- Lower-secondary-school age who are not attending primary, lower- or upper-secondary school or higher
- Upper-secondary-school age who are not attending primary, lower- or upper-secondary school or higher.

Adjusted net attendance rate (ANAR): Percentage of:

- Children of pre-primary-school age currently attending pre-primary or primary school
- Children of primary-school age currently attending primary or secondary school
- Children of lower-secondary-school age currently attending lower-secondary school or higher
- Children of upper-secondary-school age currently attending upper-secondary school or higher.

Never attended school: Percentage of children aged 10 to 17 years who never attended school.

Reading:

- Percentage of children aged 7 to 14 years who read books or are read to at home.

Learning outcomes:

- Foundational reading skills: Percentage of children aged 7 to 14 years who demonstrate foundational reading skills by successfully completing three foundational reading tasks:
  - Word recognition (correctly reading 90 per cent of words in a story)
  - Literal questions (correctly answering three literal questions)
  - Inferential questions (correctly answering two inferential questions).

Only by correctly reading 90 per cent of words in a story and correctly answering the questions in all three categories of the module is a child considered to have foundational reading skills.

- Foundational numeracy skills: Percentage of children aged 7 to 14 years who demonstrate foundational numeracy skills by successfully completing four foundational numeracy tasks:
  - Number reading
  - Number discrimination
  - Addition
  - Pattern recognition.

Each category has several questions, and the child must answer every question in every category correctly to be considered to have foundational numeracy skills.

School-related support: Percentage of children aged 5 to 17 years attending school who received any type of school-related support, either in the form of tuition or other support (such as provision of textbooks, supplies, uniforms, etc.) in the current or most recent academic year.

Definitions and data interpretation issues

Several methodological issues need to be addressed to accurately interpret the findings in this chapter.

A relevant consideration is the limitation of the data in providing a comprehensive account of all factors affecting a child's learning experience. While the indicators used here measure education uptake and outcomes, they fall short in fully capturing the experiences of children with disabilities in obtaining an education and the barriers they face. Additional information and data sources are needed to gain such understanding.

Another data limitation is the inability to distinguish between children who are in mainstream education and those who are in disability-specific educational

settings. This is significant since many countries have highly segregated school systems for children with disabilities. For example, what is considered progression in a special education school may be significantly different from that in a mainstream school, fundamentally altering responses to what is considered 'at level' for the child. If this distinction could be captured, then the reported inequities between children with and without disabilities would likely be even greater.

Another constraint involves the indicator assessing educational support to students. While it measures whether a child receives such support, it does not provide any insights into whether that support is adequate in meeting a child's needs. This is particularly relevant in the case of children with disabilities for whom the support, especially non-monetary assistance in the form of supplies, uniforms, textbooks, etc., may not be adequate and therefore may have little or no bearing on their ability to benefit from it. While this indicator does provide information on access to support for children with and without disabilities, it should nevertheless be viewed with this limitation in mind.

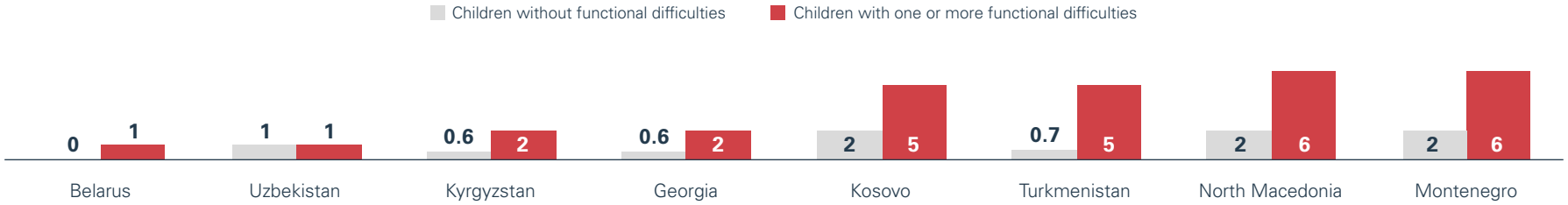
Results related to upper-secondary-school attendance are based on children who were less than 18 years old at the time of the survey. These results should thus be interpreted carefully given that they do not include persons above the age of 18 who may still have been attending upper-secondary school.

A final consideration is the fact that the denominators used for some indicators do not capture the entire population of children represented by the sample. For example, out-of-school indicators only represent the situation of children who have ever attended school. It is well known that the most marginalized children in society, including those with disabilities, tend to be overrepresented among those who are out of school, either because they have never attended school or because they have dropped out. Therefore, the results that show disaggregated information on school progression for children with and without disabilities reflect the experiences of a subgroup of children that, in all likelihood, face lower barriers to education than those who have never been able to attend school.

A similar consideration applies to the results on foundational learning. In this case, the indicators for foundational reading and numeracy skills are only generated for children who can complete three reading tasks and four numeracy tasks. Non-completion observations include children who started but were unable to finish the assessment tasks, who refused to take the assessment (or whose mothers did not permit them to take the assessment) or who could not participate in the assessment due to illness or an impairment. Inaccessibility could thus be a barrier to participation for some children (for example, if a child is blind or requires assistive technology or reasonable accommodations to participate and these could not be provided). Therefore, the results that show differences in foundational learning skills for children with and without disabilities should be interpreted with the understanding that children with certain difficulties are less likely to have been part of such an assessment.

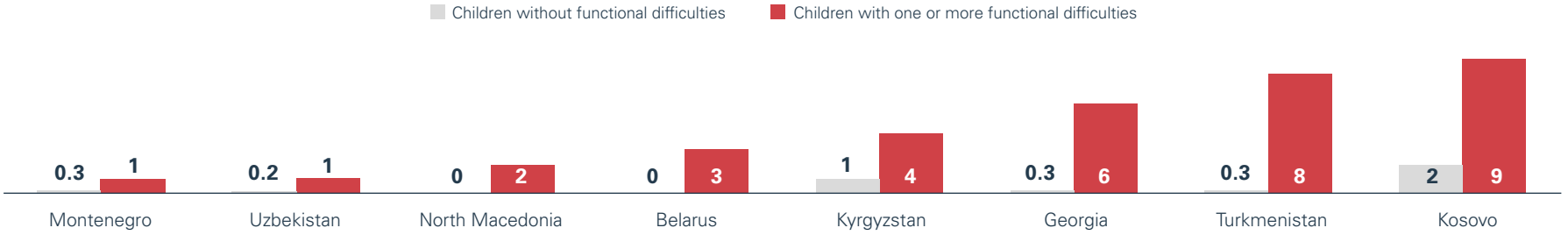
Children with disabilities are more likely to be out of school than children without disabilities, depending on the country and the level of education

FIGURE 18 Percentage of children of primary-school age who are not attending primary school or higher



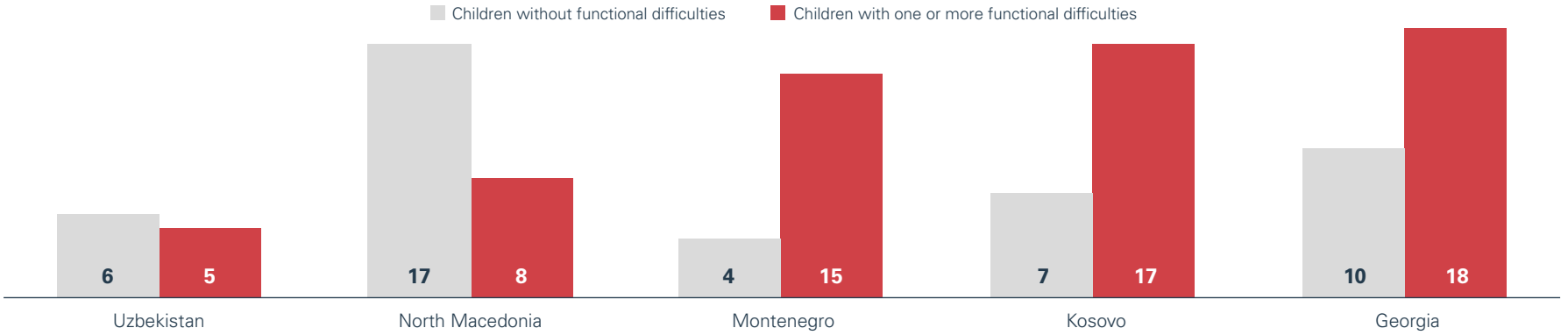
Notes: Differences for Georgia, Kosovo, Kyrgyzstan, Montenegro, North Macedonia and Uzbekistan are not statistically significant. Values for children with one or more functional difficulties in Montenegro and Turkmenistan are based on 25 to 49 unweighted observations. Values for Serbia are not shown as they are based on fewer than 25 unweighted observations.

FIGURE 19 Percentage of children of lower-secondary-school age who are not attending primary, lower- or upper-secondary school or higher



Notes: Differences for Montenegro and Uzbekistan are not statistically significant. Values for children with one or more functional difficulties in Belarus, Montenegro, North Macedonia and Turkmenistan are based on 25 to 49 unweighted observations. Values for Serbia are not shown as they are based on fewer than 25 unweighted observations.

FIGURE 20 Percentage of children of upper-secondary-school age who are not attending primary, lower- or upper-secondary school or higher



Notes: Differences for Georgia, Montenegro, North Macedonia and Uzbekistan are not statistically significant. Values for children with one or more functional difficulties in Kosovo, Montenegro and North Macedonia are based on 25 to 49 unweighted observations. Values for Belarus, Kyrgyzstan, Serbia and Turkmenistan are not shown as they are based on fewer than 25 unweighted observations.

Disparities in school attendance between children with and without disabilities are small in Europe and Central Asia; however, in most countries, children with disabilities still experience slightly lower rates of school attendance at some point in their education

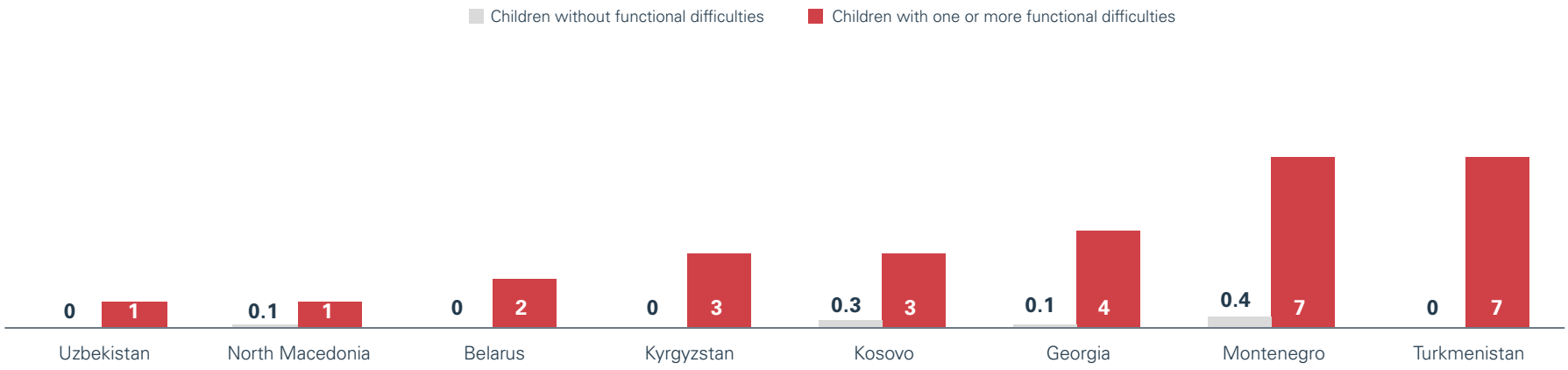
TABLE 4 Adjusted net attendance rate (ANAR) for children with functional difficulties divided by the ANAR for children without functional difficulties

	Pre-primary school	Primary school	Lower-secondary school	Upper-secondary school
Belarus	(*)	0.8	(1.0)	(*)
Georgia	(1.0)	1.0	0.9	0.9
Kosovo	(*)	1.0	0.9	(0.9)
Kyrgyzstan	(1.0)	1.0	1.0	(*)
Montenegro	(*)	(1.0)	(0.9)	(0.9)
North Macedonia	(*)	1.0	(1.0)	(1.1)
Turkmenistan	(1.0)	(1.0)	(0.9)	(*)
Uzbekistan	(1.0)	1.0	1.0	1.0

Notes: A value of 1.0 indicates equity between children with and without functional difficulties; values above 1.0 indicate higher attendance for children with functional difficulties; values below 1.0 indicate lower attendance for children with functional difficulties. Numbers in parentheses are based on 25 to 49 unweighted observations. An asterisk in parentheses (*) indicates that the results are not shown because they are based on fewer than 25 unweighted observations. Data for Serbia are not shown because all the values are based on fewer than 25 unweighted observations.

While the proportion of children who have been denied an education is low in all countries, children with disabilities are still more likely to have never attended school than their peers without disabilities

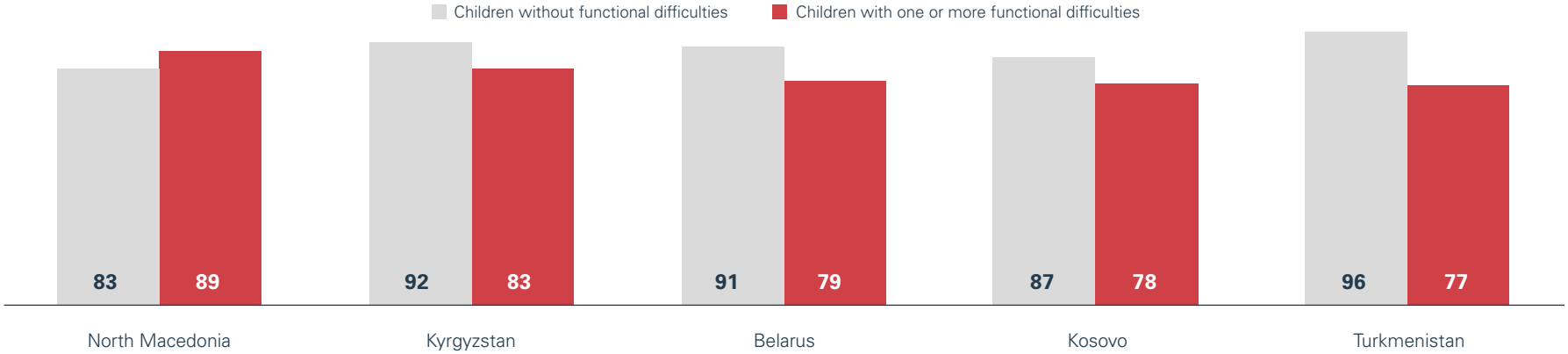
FIGURE 21 Percentage of children aged 10 to 17 years who never attended school



Notes: Differences for Kosovo and North Macedonia are not statistically significant. Values for children with one or more functional difficulties in Turkmenistan are based on 25 to 49 unweighted observations. Values for Serbia are not shown as they are based on fewer than 25 unweighted observations.

In Kyrgyzstan, Kosovo, Belarus and Turkmenistan, children with disabilities are less likely to read or be read to at home than children without disabilities

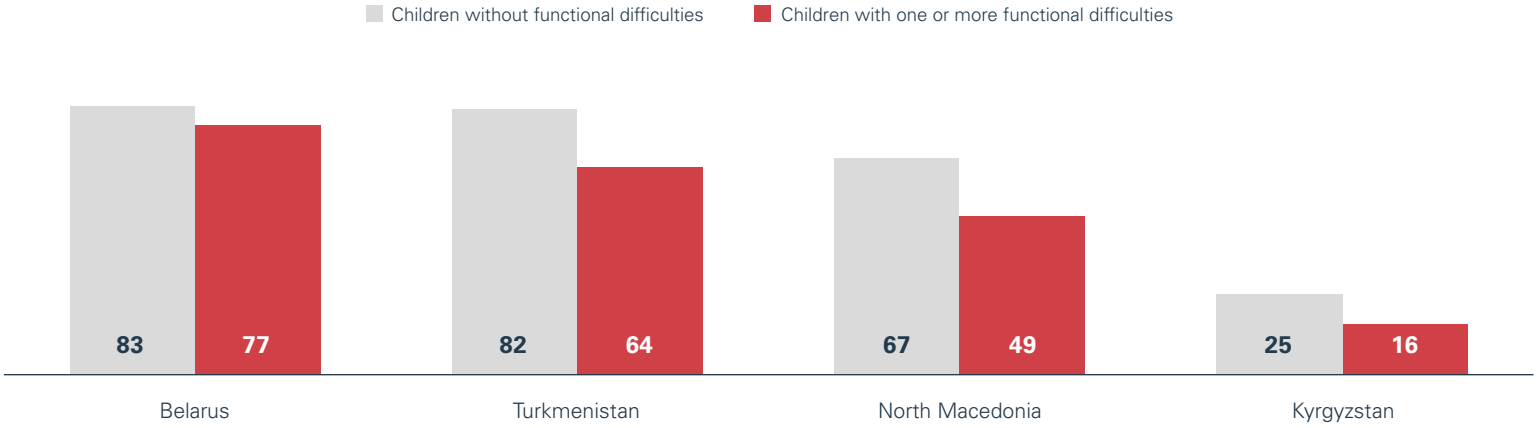
FIGURE 22 Percentage of children aged 7 to 14 years who read books or are read to at home



Notes: Differences for North Macedonia are not statistically significant. Values for children with one or more functional difficulties in Turkmenistan are based on 25 to 49 unweighted observations. Data on this indicator are not available for Georgia, Montenegro, Serbia and Uzbekistan.

In Turkmenistan, children with disabilities are significantly less likely to possess foundational reading skills than children without disabilities

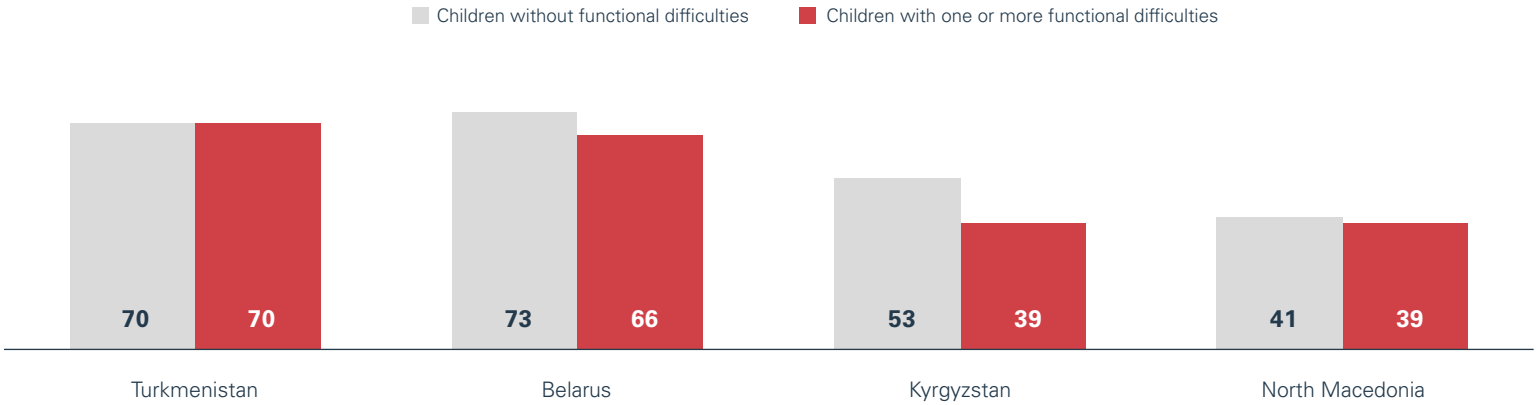
FIGURE 23 Percentage of children aged 7 to 14 years who demonstrate foundational reading skills by successfully completing three foundational reading tasks



Notes: Differences for Belarus, Kyrgyzstan and North Macedonia are not statistically significant. Values for children with one or more functional difficulties in Turkmenistan are based on 25 to 49 unweighted observations. Data on this indicator are not available for Georgia, Kosovo, Montenegro, Serbia and Uzbekistan.

In Kyrgyzstan, children with disabilities are significantly less likely to possess foundational numeracy skills than children without disabilities

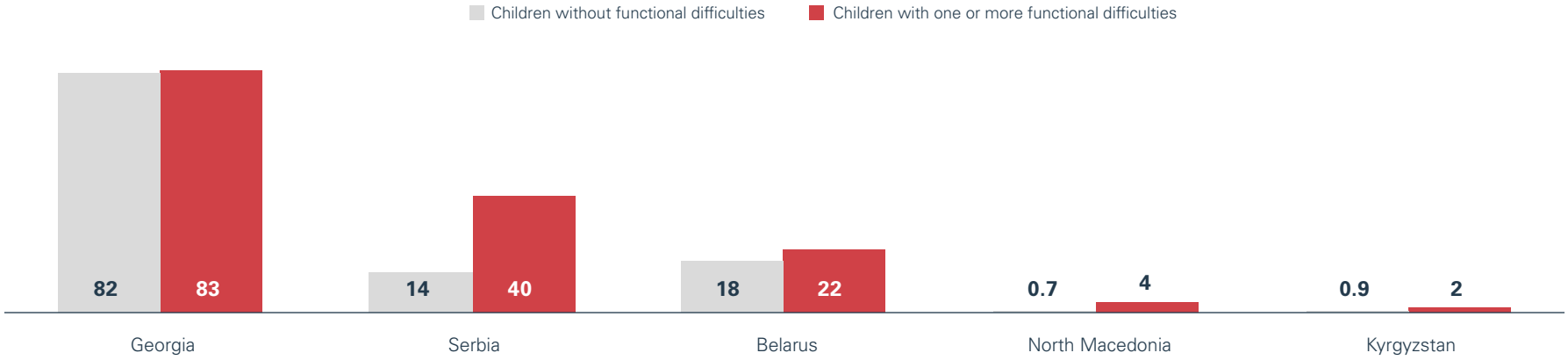
FIGURE 24 Percentage of children aged 7 to 14 years who demonstrate foundational numeracy skills by successfully completing four foundational numeracy tasks



Notes: Differences for Belarus, North Macedonia and Turkmenistan are not statistically significant. Values for children with one or more functional difficulties in Turkmenistan are based on 25 to 49 unweighted observations. Data on this indicator are not available for Georgia, Kosovo, Montenegro, Serbia and Uzbekistan.

In Serbia, children with disabilities are almost three times more likely to receive school-related support than children without disabilities

FIGURE 25 Percentage of children aged 5 to 17 years currently attending school that received any type of school-related support in the current or most recent academic year



Notes: Differences for Belarus, Georgia, Kyrgyzstan and North Macedonia are not statistically significant. Data on this indicator are not available for Kosovo, Montenegro, Turkmenistan and Uzbekistan.

Every child has the right to a fair chance in life

Goal 1 of the SDGs calls for an end to poverty everywhere, in all its forms, and acknowledges the need for a holistic view of poverty that extends beyond income levels. The SDGs also recognize the importance of mechanisms such as health insurance and social protection to achieve this goal, and target 1.3 calls for the implementation of nationally appropriate social protection systems and measures for all. Goal 10 acknowledges the need to ensure equal opportunity and reduce inequalities in achieving positive outcomes, including through the elimination of discriminatory laws, policies and practices and the promotion of appropriate legislation, policies and action.

Indicators and data sources used in this chapter

The country data presented in this chapter are drawn from MICS conducted in Belarus, Georgia, Kosovo, Kyrgyzstan, Montenegro, North Macedonia, Serbia, Turkmenistan and Uzbekistan between 2018 and 2022.

Health insurance coverage: Percentage of children aged 2 to 17 years covered by health insurance.

Social transfers: Percentage of children aged 2 to 17 years living in a household that received any type of social transfers and benefits in the last three months.

Discrimination: Percentage of adolescents aged 15 to 17 years who report having personally felt discriminated against or harassed within the previous 12 months on the basis of disability or on one of the other grounds for discrimination prohibited under international human rights law.

Definitions and data interpretation

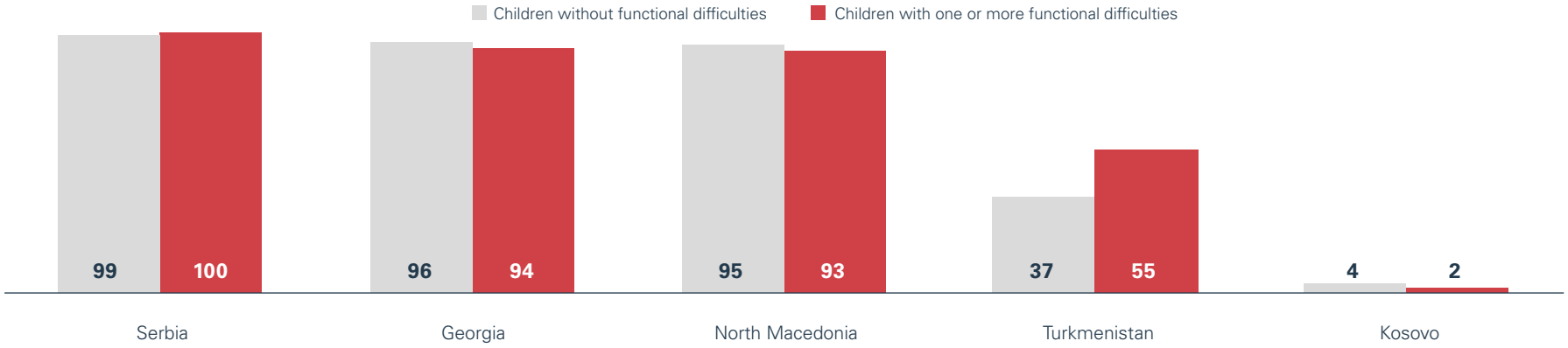
As with other indicators in this report, certain issues need to be taken into account in the interpretation of results. While social protection encompasses a host of interventions beyond social transfers, there is a dearth of internationally comparable data about many, if not most, non-cash interventions. Moreover, the MICS Social Transfers Module is designed to be customized at the country level and therefore the resulting data are not always comparable. For most countries, it is not possible to know whether the social transfer was in any way related to disability or was provided to the household based on other factors. Turkmenistan is a special case – in the opposite direction. Its MICS, which was used as the basis for this analysis, had a dedicated subsection of the Social Transfers Module for children that measured whether any child aged 0 to 17 years had ever received a state allowance for disability. This allowed data from Turkmenistan to specifically capture social transfers for children with disabilities.

One limitation regarding the results on discrimination is the high proportion of missing information among children with difficulties in certain domains. Since these data are collected through a questionnaire that is directly administered to children aged 15 to 17 years, those with certain difficulties could not be interviewed due to accommodation constraints during the survey implementation.

Another limitation regarding discrimination is the challenge inherent in a perception-based question. While results for discrimination can measure whether adolescents perceive that they have been discriminated against, either because of their disability or for another reason, these results cannot definitively show whether discrimination actually occurred. For this reason, results involving discrimination should be understood as being based on perception.

In most countries, no significant differences are found in health insurance coverage of children with and without disabilities; however, in Turkmenistan, children with disabilities are significantly more likely to be covered

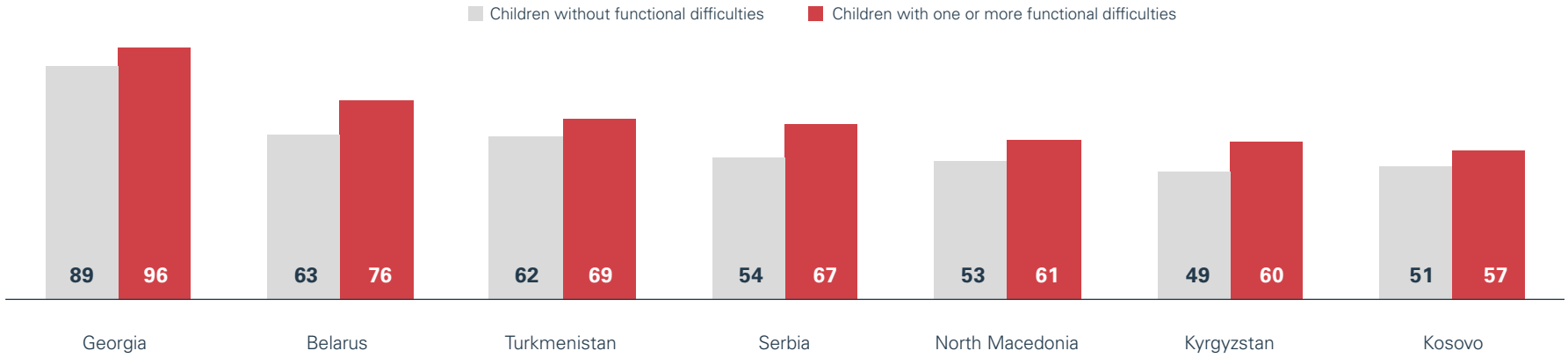
FIGURE 26 Percentage of children aged 2 to 17 years covered by health insurance



Notes: Differences for Georgia, Kosovo, North Macedonia and Serbia are not statistically significant. Data on this indicator are not available for Belarus, Kyrgyzstan, Montenegro and Uzbekistan.

In Kyrgyzstan, Belarus and Georgia, children with disabilities are more likely to live in households that receive social transfers and benefits compared with children without disabilities

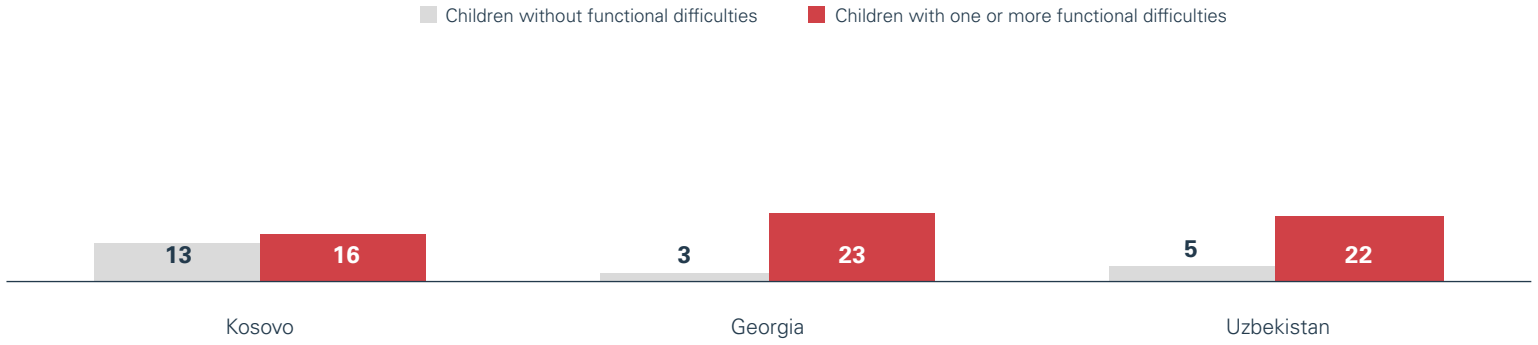
FIGURE 27 Percentage of children aged 2 to 17 years living in a household that received any type of social transfers and benefits in the last three months



Notes: Differences for Kosovo, North Macedonia, Serbia and Turkmenistan are not statistically significant. Data on this indicator are not available for Montenegro and Uzbekistan.

In Georgia and Uzbekistan, children with disabilities – versus those without disabilities – are more likely to feel discriminated against

FIGURE 28 Percentage of adolescents aged 15 to 17 years who report having personally felt discriminated against or harassed within the previous 12 months on the basis of disability or on one of the other grounds for discrimination prohibited under international human rights law



Notes: Differences for Kosovo are not statistically significant. Values for children with one or more functional difficulties in Georgia, Kosovo and Uzbekistan are based on 25 to 49 unweighted observations. Values for Belarus, Kyrgyzstan, Montenegro, North Macedonia, Serbia and Turkmenistan are not shown as they are based on fewer than 25 unweighted observations.

Fulfilling the rights of every child in Europe and Central Asia

Including children with disabilities in all aspects of life must be a priority – in Europe and Central Asia as in the rest of the world. Every child, everywhere, has something to offer. His or her energy, talents and ideas can make a positive difference to families, communities and the world.

Nearly 11 million children in Europe and Central Asia have some form of disability.

Comparable data from nine countries in the region provide insights into the characteristics and well-being of these children. The proportion of children with disabilities ranges from 2 per cent in Turkmenistan to 16 per cent in Uzbekistan. However, most children with disabilities in all nine countries have difficulties in only one domain of functioning. Psychosocial difficulties, particularly signs of anxiety, affect the largest proportion of children.

Notable differences are found in the way children with and without disabilities are parented. In Turkmenistan and Serbia, children with disabilities are less likely to receive adequate early stimulation and responsive care than children without disabilities. In these countries, children with disabilities are also less likely to have two or more playthings. In Georgia, North Macedonia and Uzbekistan, children with disabilities are at higher risk of experiencing severe physical punishment, and in these countries mothers of children with disabilities are more likely to believe that physical punishment is necessary to properly raise a child.

In most countries, children with disabilities are more likely to be out of school than their peers without disabilities. While the proportion of children in this region who have never attended school is low, children with disabilities are more likely to be in this group. In several countries, children with disabilities are less likely to read books at home or have someone read books to them. In a minority of countries, children with disabilities are less likely to possess foundational reading or numeracy skills, compared with children without disabilities. Only in Serbia are children with disabilities more likely to receive school-related support. In the majority of countries in the region, children with disabilities are just as likely as children without disabilities to be covered by health insurance; in a few countries, however, children with disabilities are more likely to live in households that depend on social benefits or transfers. In addition, children with disabilities are more likely than their peers without disabilities to experience discrimination.

Taken altogether, these data illustrate the deprivations experienced across Europe and Central Asia by children with disabilities. They also suggest that their lived experiences vary significantly. Findings can provide a starting point from which policies can be crafted to address inequities and ensure equal opportunities for all children.

From knowledge to action

All children with disabilities deserve the opportunity to thrive. For this to become a reality, governments must consider the full range of needs of these children and their families in providing programmes and services. They need to work together with persons or associations of persons with disabilities to ensure that:

- All social services and environments are inclusive and accessible, so that community-based care and assistance, critical information and opportunities to play and engage are available to every child, in times of stability as well as in humanitarian emergencies.
- Education is inclusive and accessible, so that children with disabilities can go to school in their communities and learn alongside their peers without disabilities.
- Children with disabilities are protected against violence, abuse, neglect and exploitation, are able to benefit from birth registration and family support, and can seek child-friendly, disability-inclusive support and justice when their rights are violated.
- Children with disabilities access psychosocial support, so that they are able to maintain their well-being and receive care for mental health issues such as anxiety and depression.
- Stigma and discrimination against children with disabilities and their families are eradicated, and the voices of children with disabilities are heard.
- Children with disabilities and their families are covered by adequate social protection that supports their individual needs, links them with critical services, and helps break the cycle of poverty, deprivation and exclusion.
- Parents and caregivers of children with disabilities receive support to raise their children in the best way possible while maintaining their own mental health and well-being.
- Robust, relevant and inclusive data are generated at regular intervals.

For every child, inclusion

The extent to which children with disabilities are deprived, feel discriminated against and lack hope for the future makes it clear that societies are not doing enough to realize the most basic human rights of all children. As a result, the vicious cycle of exclusion and disadvantage that leaves children with disabilities behind continues. Knowing that the problem comes down to barriers that society creates – which are a matter of choice, not immutable realities – means that there is potential for change. Part of that change will involve celebrating children with disabilities and embracing diversity in all its forms.

It starts right here, right now. When children with disabilities are seen and counted, they are no longer invisible, and the promise of inclusion becomes a real possibility.

The steps in between depend upon every stakeholder. They involve shared responsibility, accountability and working together to ensure that all children, including children with disabilities, are able to achieve their inherent potential.

Technical annex

The technical work behind this report aimed to produce estimates of the number of children with disabilities aligned with the Convention on the Rights of Persons with Disabilities and a biopsychosocial concept of disability. The regional and global estimates presented here rely mainly on information about functional difficulties or limitations among children gathered through sources with some degree of international comparability. While most of the data sources included in the estimates refer to data collected from 2017 onwards, the data points used for some countries are not the most recent ones, but those most aligned with the concept of disability underlying the global estimate.

Until this report, no estimation of the global number of children with disabilities had been made that takes into account a broad range of functional difficulties along with behavioural and mental health issues.

The only estimate available for many years indicated that 10 per cent of the world's population had some form of disability.[12] In 2011, this was updated to 15 per cent, and an estimate was produced on the number of children aged 14 or younger with a moderate or severe disability: 93 million children, or 5 per cent of children in that age group.[13] Such global estimates are affected by well-known limitations surrounding disability measurement.

The concept of disability described in the *WHO's Global Burden of Disease 2004* (upon which the 2011 estimate for children is based) refers to the perceived short- or long-term loss of health associated with a condition and is not entirely aligned with the ICF definition of disability. This metric of disability has been criticized for its lack of consideration of core participatory and rights-based principles and for being discriminatory on the value of persons with disabilities.[14]

Another limitation to this approach is that the weights attributed to each impairment do not account for the differential impact that an impairment may have on various individuals as a result of environmental conditions.[15] Since the weights used by the *Global Burden of Disease* do not vary across geographic regions, they disregard the multiple contextual factors that can worsen functionality in persons with the same impairments.[16]

The use of medical concepts of disability also has implications for the quality of data. Reporting of these impairments usually depends on parents' awareness of symptoms and a pre-existing diagnosis. Therefore, under-identification remains a problem since diagnosis depends on the availability of health-care facilities where children can be screened.

More recent estimates have introduced improvements, such as increasing the internal consistency of different sources of data by using a meta-analytic approach and adjusting estimates for comorbidity.[17] That said, these latest estimates are still largely focused on the burden of different impairments and medical conditions, rather than on the functional difficulties or restrictions to participation experienced by children with disabilities.

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How data were selected

UNICEF maintains a global database of disability data sources from 194 countries and areas. The database includes more than 1,000 data points together with information on methodological aspects that can impact the number of children who are identified as having a disability. The selection of data sources involved an extensive process of data compilation and consultations with country-level experts to overcome limitations on data availability and comparability, and to ensure their views were reflected in the data selection, harmonization and estimation process.

After screening the disability global database, sources of data collected prior to 2005, as well as those not derived from censuses or household surveys, were excluded. An additional selection criterion focused on identifying data aligned as closely as possible with the concept of disability described earlier. This meant selecting sources of data gathered through measurement tools that collect information on functional difficulties rather than specific impairments or health conditions. Another selection criterion was the use of a rating scale to capture the severity of functional difficulties, rather than the use of 'yes' or 'no' questions.

On the basis of these considerations, and in consultation with experts, 103 data sources were selected, including 31 sources for countries in Europe and Central Asia. Collectively, these data sources represent 84 per cent of the world's population of children and at least 50 per cent of the population of children within each region (Table 5).

Technical consultations

Heterogeneity across data sources is a common concern when generating global estimates. While this can be dealt with using a strictly statistical approach, incorporating country-level expertise into the data selection and harmonization process was considered important.

TABLE 5 Countries and areas, population coverage and data collection instruments

	Countries and areas		Percentage of child population	Type of instrument			
	Total number	Number included in the analysis		Child Functioning Module	Washington Group Short Set	GALI	Other
East Asia and the Pacific	33	16	80	10	5	0	1
Eastern and Southern Africa	25	13	74	5	7	0	1
Europe and Central Asia	55	31	59	9	1	20	1
Latin America and the Caribbean	37	14	74	10	3	0	1
Middle East and North Africa	19	10	73	5	5	0	0
North America	2	2	100	2	0	0	0
South Asia	8	5	96	3	1	0	1
West and Central Africa	24	12	74	9	3	0	0
Total	**203**	**103**	**84**	**53**	**25**	**20**	**5**

The estimation work was part of an iterative process that included three technical consultations with experts in the field of data on children with disabilities. They included professionals from national statistical offices, organizations of persons with disabilities and academia.

Following a standard protocol, the consultation sought to obtain the experts' views on the prevalence of children with functional difficulties in their countries. The initial part of the consultation was dedicated to building a common understanding of disability aligned with the ICF and the Convention on the Rights of Persons with Disabilities. This was followed by in-depth discussion of the available country-level information and the results of the data harmonization analyses and estimation work. For each consultation, UNICEF shared details on the process and methodology used for estimations as well as on the selected data sources for each region and country. Experts' inputs in relation to the data harmonization approach were incorporated and reflected in the regional and global estimates.

Data harmonization

Harmonization of age groups: Results by age group were harmonized to match the Child Functioning Module's age groups (children aged 2 to 4 years and 5 to 17 years). For some data sources, prevalence for the harmonized age groups was calculated directly from empirical results available at the country level. For the remaining sources, the harmonized results by age group were obtained using weighted averages of the data points available.

Adjustment of the Washington Group Short Set: Instruments that collect data based on a restricted number of functional domains tend to underestimate the proportion of children with disabilities. Results from several countries and areas that used both the Child Functioning Module and the Washington Group Short Set show that the number of children aged 5 to 17 years who are identified as having functional difficulties by the six domains covered by the Short Set is substantially lower than the number identified by the 13 domains included in the Child Functioning Module. While this underestimation is mostly due to the larger number of domains in the Child Functioning Module, other sources of underestimation should be considered, given that the two instruments are typically implemented under different conditions. For example, while the Child Functioning Module is intended to be administered to the child's mother (or if the mother is deceased or living in another household, to the child's primary caregiver), the Short Set is typically administered to the household head. Table 6 shows the differences in the estimates generated by the two instruments in seven countries and areas.

To correct for the underestimation of the percentage of children with disabilities, the data points based on the Short Set were adjusted. The process was as follows. First, microdata from 36 countries that used the Child Functioning Module were processed to generate country-level results of the percentage of children aged 5 to 17 years identified as having one or more functional difficulties based on: a) the full set of 12 functional domains, and b) the subset of 6 functional domains that are common to the two measures. Second, linear regression models were used to predict country-level results for the 12 functional domains based on the country-level results of the 6 functional domains and the country's under-five mortality rate.

TABLE 6 Percentage of children aged 5 to 17 years with functional difficulties measured by the six domains covered by the Short Set, by the same six domains in the Child Functioning Module and by the 12 domains in the Child Functioning Module

	Washington Group Short Set (6 domains)	Child Functioning Module (6 domains only)	Child Functioning Module (12 domains)
Costa Rica	4.0	7.1	21.1
Guyana	2.2	5.6	17.5
Mexico	1.5	4.1	11.2
Pakistan	2.5	5.0	17.9
State of Palestine	1.5	3.0	14.9
Tonga	1.4	2.7	9.8
Zimbabwe	4.7	4.9	10.1

Imputation of the estimate for children under 2 years of age

Data on disability among children under the age of 2 are scarce. To date, no questions on functional difficulties have been validated that could be implemented to collect data about very young children in surveys and generate results that are reliable and comparable cross-nationally. While most severe impairments manifest early, sometimes even before children are born, many functional difficulties only become evident as children grow up. Measuring functional difficulties in children under the age of 2, in the context of surveys or censuses, is thus complicated since mothers or primary caregivers might not be aware of such difficulties, especially if they are not severe. Yet, excluding children under this age would lead to a systematic underestimation of the number of children with disabilities. Estimates of major and severe impairments at birth among surviving children, and neurodevelopmental and cognitive impairments among babies born pre-term and full-term, range between 2.4 per cent and 2.8 per cent.[18] Even though these estimates are restricted to more severe impairments and conditions, they provide evidence that functional difficulties are to be expected from birth at a prevalence of at least that magnitude. Finally, since some functional difficulties only become evident to mothers as children grow older, it is also reasonable to expect that, within the first two years of age, a higher proportion of children with functional difficulties would be reported. Therefore, based on these considerations, it seemed reasonable to assume that the estimate for children under the age of 2 could be informed by the estimate for children aged 2 to 4 years in each country.

Estimation of the regional and global number of children with disabilities

The estimations use a meta-analytical approximation to calculate the regional and global number of children with disabilities. Meta-analysis of proportions was implemented using the prevalence rates of children with disabilities for each country, 95 per cent confidence intervals and the child population for all age groups. Country-level prevalence rates were transformed into the number of cases using the child population. Regional estimates were generated using random effects models considering that, despite harmonization efforts, the methods used to estimate the prevalence of disability were heterogeneous. This approach also assumed that prevalence estimates from countries that could not be included in the analysis were better informed by the random effects model. Random effects meta-analysis incorporates the heterogeneity of prevalence across countries rather than relying on the prevalence of larger countries, as assumed by the fixed effects model. The only exception was the North America region, where the two countries that constitute the region (Canada and the United States) used the same instrument and a fixed effects model was used. For all other regional estimates, random effects were utilized to incorporate the within- and between-country variability. The regional estimates were then used to generate the population-weighted global estimate (Table 7).

Analysis using country-level microdata

All data were obtained from publicly available MICS datasets. MICS survey design follows a probabilistic, clustered, stratified and multi-stage sampling approach to generate population-level indicators that are representative at the national level, urban-rural and other domains (usually regions), according to the country-specific stratification strategy.

As of May 2023, data were available across nine countries and areas in Europe and Central Asia. Results for country analyses that are based on 25 to 49 unweighted observations should be interpreted with caution. Results based on fewer than 25 unweighted observations were suppressed. Within figures, all numbers except those valued under one were rounded to the nearest whole value.

TABLE 7 Regional and global estimates

	Children aged 0 to 4 years				Children aged 5 to 17 years				Children aged 0 to 17 years			
	%	Lower bound	Upper bound	Number of children with disabilities (in thousands)	%	Lower bound	Upper bound	Number of children with disabilities (in thousands)	%	Lower bound	Upper bound	Number of children with disabilities (in thousands)
East Asia and the Pacific	3.5	3.3	3.8	5,333	9.5	7.5	11.6	37,788	7.8	6.7	9.1	43,121
Eastern and Southern Africa	5.2	4.5	6.0	4,509	12.8	11.2	14.4	24,356	10.4	9.5	11.3	28,865
Europe and Central Asia	2.7	2.4	3.1	1,515	6.5	5.6	7.4	9,299	5.5	4.9	6.0	10,814
Latin America and the Caribbean	3.8	3.3	4.5	1,978	12.6	11.5	13.7	17,102	10.2	9.6	10.8	19,080
Middle East and North Africa	4.5	3.3	6.0	2,246	16.9	13.5	20.5	18,694	13.1	11.3	15.1	20,940
North America	4.4	3.9	4.9	943	12.0	11.3	12.7	7,073	9.9	9.5	10.4	8,016
South Asia	3.7	2.9	4.7	6,254	13.0	10.2	16.1	58,177	10.5	9.0	12.2	64,431
West and Central Africa	6.8	5.8	7.9	6,139	18.9	15.3	22.7	34,944	14.9	12.8	17.2	41,083
World	**4.3**	**4.1**	**4.6**	**28,917**	**12.5**	**11.7**	**13.3**	**207,433**	**10.1**	**9.7**	**10.6**	**236,350**

Notes: Countries and areas in Europe and Central Asia include Albania, Andorra, Armenia, Austria, Azerbaijan, Belarus, Belgium, Bosnia and Herzegovina, Bulgaria, Croatia, Cyprus, Czechia, Denmark, Estonia, Finland, France, Georgia, Germany, Greece, Holy See, Hungary, Iceland, Ireland, Italy, Kazakhstan, Kyrgyzstan, Latvia, Liechtenstein, Lithuania, Luxembourg, Malta, Monaco, Montenegro, Netherlands, North Macedonia, Norway, Poland, Portugal, Republic of Moldova, Romania, Russian Federation, San Marino, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Tajikistan, Türkiye, Turkmenistan, Ukraine, United Kingdom and Uzbekistan. For a complete list of countries and areas in the regions and subregions, see <data.unicef.org/regionalclassifications>. Demographic data are from: United Nations, Department of Economic and Social Affairs, Population Division, *World Population Prospects 2019*, Rev. 1, online edition.

Endnotes

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6. The Washington Group Short Set is comprised of questions on difficulty with functioning in six basic activity domains (seeing, hearing, walking, remembering or concentrating, washing all over or dressing and communicating), and each has four possible response categories (no difficulty, some difficulty, a lot of difficulty and cannot do at all).
7. GALI is comprised of questions aimed at capturing limits in participation in everyday activities due to a health condition, as opposed to functioning as measured by the Child Functioning Module and the Washington Group Short Set. For more information on GALI, see: <https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Glossary:Activity_limitation>.
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