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Education and Disability

The UNESCO Institute for Statistics (UIS) is the statistical office of UNESCO and is the UN depository for global statistics in the fields of education, science and technology, culture and communication.

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The notion of equity is at the heart of the Sustainable Development Goals, including SDG 4 on education. Analysis of disparities linked to disability has long been a challenge due to a scarcity of reliable and comparable data. To address this problem, the Washington Group on Disability Statistics has developed questions for household surveys that allow the collection and analysis of internationally comparable data on persons with disabilities. This fact sheet presents attendance rates and completion rates disaggregated by disability status based on data from Demographic and Health Surveys that applied the questions recommended by the Washington Group. The findings of the analysis by the UNESCO Institute for Statistics (UIS) confirm that persons with disabilities are more likely to be out of school or to leave school before completing primary or secondary education. The fact sheet also summarises plans by the UIS for future data analysis and activities in standard setting to strengthen the evidence base for monitoring of SDG 4 and the design of education policy.

Introduction

In 2000, countries committed to achieving the Millennium Development Goals (MDGs), a set of goals to reduce extreme poverty and exclusion. As not all goals were achieved by the target year of 2015, the United Nations adopted a new set of international goals to be achieved by 2030: the Sustainable Development Goals (SDGs). Compared to the MDGs, which were limited in addressing equity and equality, the SDGs encompass and strengthen the notion of equity and human rights (Fehling et al., 2013). SDG 4 on education aims to "ensure inclusive and equitable quality education and promote lifelong learning opportunities for all".



Previously, persons with disabilities were not mentioned in any of the MDGs (UN, 2015c). This represents 1 billion individuals with one or more physical, sensory, intellectual or mental health impairments (WHO, 2016). Their inclusion is crucial to the realisation of the international goals to ensure that no one is left behind. Five of the 17 SDGs include explicit references to persons with disabilities: education (SDG 4), employment (SDG 8), inequality (SDG 10), sustainable cities and communities (SDG 11) and global partnership (SDG 17). Regarding the education goal, Target 4.5 specifically aims to "by 2030, eliminate gender disparities in education and ensure equal access to all levels of education and vocational training for the vulnerable, including persons with disabilities, indigenous peoples and children in vulnerable situations".

Measurement of disability

An important challenge in producing internationally-comparable data on persons with disability is how the term 'disability' is understood. There is no uniform definition, often confusion on what constitutes a disability, and methodologies used across countries are inconsistent when collecting this type of information (UN, 2015a). The notion of disability is complex and can be understood in a variety of ways. Different definitions lead to diverging estimates of the number of individuals with a disability. Another issue is the varying quality of the study design (Mont, 2007). Disability attributes could be measured with different methods and not be comparable. For example, disability could be measured through medical examinations, self-reporting ("Do you have a disability?") or questions about certain activities ("Do you have difficulty hearing?"). Often there is also a stigma related to having a disability and its prevalence may therefore be under-reported. These factors make it difficult to determine the extent of exclusion and to reach affected individuals with proper policies, for example to provide access to schooling for all children with disabilities.

To address the need for globally-comparable measures of disability, the Washington Group (WG) on Disability Statistics was established in 2001. The WG developed a set of questions for use in household surveys and censuses to identify persons with a disability based on the presence of difficulties in six core functional domains: seeing, hearing, walking, cognition, self-care and communication. During data collection, respondents answer on a four-category scale: no difficulty, some difficulty, a lot of difficulty, cannot do at all. According to the WG standard, a person is considered to have a disability if for at least one of the six functional areas the answer is "a lot of difficulty" or "cannot do at all". This method was found to be easy to implement for data collectors without medical expertise and to be translated in many languages, and importantly, to maintain comparability of collected data. For these reasons, the short set on functioning by the WG has been endorsed by the United Nations for the collection of data on disability characteristics in the 2015 round of population censuses (UN, 2015b).

The WG short set is suitable for persons aged five years and above but cannot capture certain developmental and psychosocial disabilities among children. The WG and UNICEF therefore collaborated to develop a set of questions for child functioning that addresses aspects of child development not covered by the short set of questions (WG and UNICEF, 2014). The WG also developed an extended set of questions for more in-depth



data collection on disability among adults. In addition to the six domains of the short set, the extended set covers areas such as upper body functioning, pain, fatigue, and affect (anxiety and depression).¹

Availability of survey data

The Demographic and Health Surveys (DHS) program collects and disseminates data on population, health, nutrition and other topics in developing countries. Recent DHS surveys contain a module that allows the collection of disability data based on the internationally-comparable short set of questions developed by the WG (USAID, 2016). Previously, information on disability was collected in a small number of DHS surveys but using country-specific questions instead of the WG set.

For this fact sheet, data from three comparable DHS datasets were available for analysis: Cambodia 2014, Maldives 2009 and Uganda 2011. All three use the short set of disability questions by the WG. In the near future, additional DHS datasets are expected to be available for analysis: Haiti 2016, South Africa 2016, Timor-Leste 2016 and Uganda 2016. For comparison, this fact sheet also contains information from two DHS surveys that did not use the WG set of questions: Colombia 2010 and Gambia 2013 (see **Table 1**).

Future Multiple Indicator Cluster Surveys (MICS) by UNICEF will collect data on children with disabilities based on the new set of questions on child functioning by the WG, but no survey results were available for analysis for this fact sheet.

Table 1. Availability and comparability of disability data in various Demographic and Health Surveys

Country	Survey	WG questions	Dataset available
Cambodia	DHS 2014	Yes	Yes
Maldives	DHS 2009	Yes	Yes
Uganda	DHS 2011	Yes	Yes
Haiti	DHS 2016	Yes	No
South Africa	DHS 2016	Yes	No
Timor-Leste	DHS 2016	Yes	No
Uganda	DHS 2016	Yes	No
Colombia	DHS 2009-2010	No	Yes
Gambia	DHS 2013	No	Yes

¹ More information about the different sets of questions is available on the website of the WG, at <http://www.washingtongroup-disability.com>



Comparison of prevalence: Washington Group vs. non-Washington Group

According to the World Health Organization (WHO), the global prevalence of some form of disability is in the realm of 15% (WHO, 2016). The WG questions make more rigorous comparisons across countries possible. **Table 2** provides the comparable disability rates in Cambodia (2%), Maldives (10%) and Uganda (5%) among individuals aged 5 years and older. Also provided are the rates for two countries with limited comparability: 5% in Colombia and 3% in Gambia.

Table 2. Disability rates in Washington Group and non-Washington Group countries

	Countries using WG questions (age 5 years and older) (%)		Non-WG countries (various ages) (%)			
Cambodia	2014	2.1	Colombia	2009-2010	4.9	All ages
Maldives	2009	9.7	Gambia	2013	3.0	7-69 years
Uganda	2011	4.9				

Source: Demographic and Health Surveys

Cambodia, Maldives and Uganda used the set of questions recommended by the WG. On the other hand, the two non-WG countries in Table 2 used country-specific questions that are not cross-country comparable. In Gambia, household members were screened whether they had difficulty seeing, hearing or using their legs. In Colombia, household members were asked whether they had difficulty in several functional areas similar to the WG set but also whether they had mental, emotional, heart or respiratory problems.

Table 3 compares the six core domains of functioning in the three countries that used the WG questions. Household members are classified as having a disability if the answer for any domain is “a lot of difficulty” or “cannot do at all”. In Cambodia and Uganda, difficulties walking are most prevalent (0.9% and 1.8%, respectively), whereas in the Maldives disability related to vision is most common (4.8%). Vision is also the second-most widespread disability in Uganda (1.7%) and third in Cambodia (0.7%).

Table 3. Proportion of persons 5 years and above with a disability by functional domain, countries using Washington Group questions

Country	Seeing (%)	Hearing (%)	Walking (%)	Cognition (%)	Self-care (%)	Communication (%)
Cambodia	0.7	0.6	0.9	0.7	0.5	0.6
Maldives	4.8	1.5	4.1	2.2	1.1	1.1
Uganda	1.7	0.9	1.8	1.4	0.8	0.5

Note: Disability = “a lot of difficulty” or “cannot do at all”.

Source: Demographic and Health Surveys

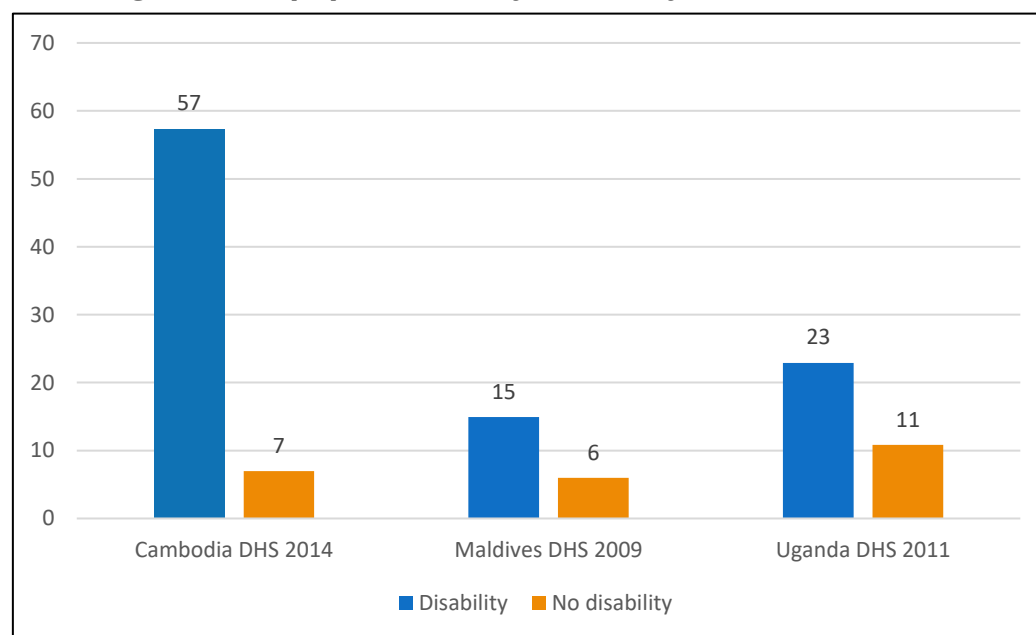


School attendance by disability status

Previous studies have shown that children with a disability have lower attendance rates in school than other children in the same age group (WHO and World Bank, 2011), and the analysis of the DHS data confirms this. In this fact sheet, only results for groups with at least 25 unweighted observations are reported to minimise errors associated with small sample sizes. The out-of-school rates in **Figure 1** indicate the proportion of children of primary school age who are not attending primary or secondary school. In all three countries that used the WG set of questions, out-of-school rates are higher for children with a disability. The most striking gap is in Cambodia, with a 50 percentage point difference between the out-of-school rate of disabled and non-disabled children (57% vs. 7%). In other words, 1 in 2 Cambodian children with a disability is not in school, compared to 1 in 14 children without a disability. The difference is smaller in the Maldives and Uganda, but the data are still proof of stark inequality: in these countries, the out-of-school rate of disabled children is more than twice that of non-disabled children.

The primary out-of-school rate was also examined for countries using country-specific questions instead of the internationally-comparable set of WG questions. Although the data are of limited comparability because of different measurement methods, the same pattern can be observed in the non-WG countries: the out-of-school rate of children with a disability is much higher than that of those without a disability (see **Figure 2**).

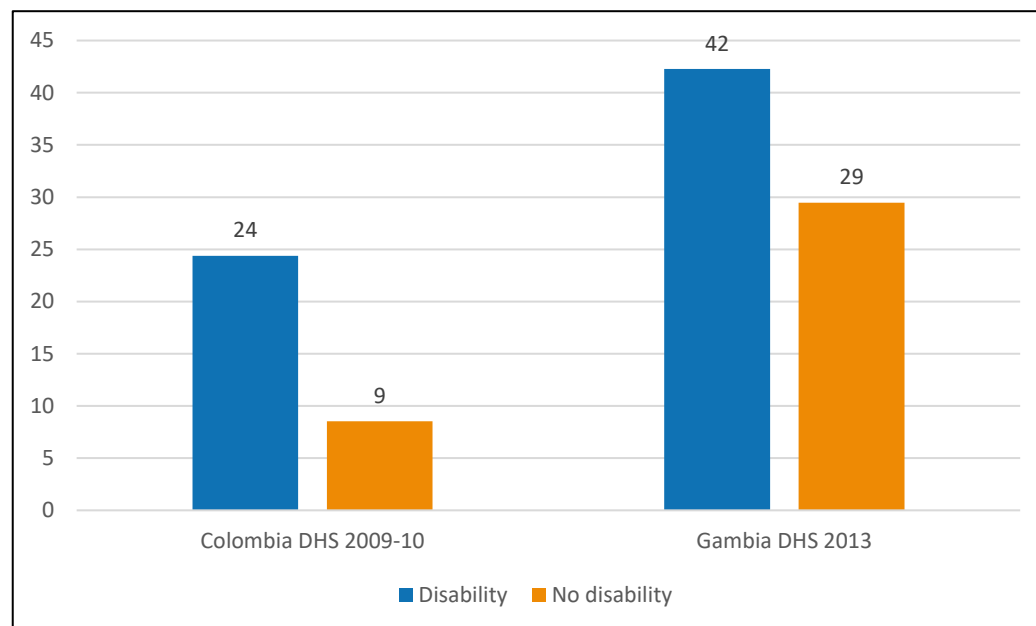
Figure 1. Out-of-school rate of children of primary school age, countries using Washington Group questions, by disability status (%)



Source: Demographic and Health Surveys



Figure 2. Out-of-school rate of children of primary school age, countries not using Washington Group questions, by disability status (%)



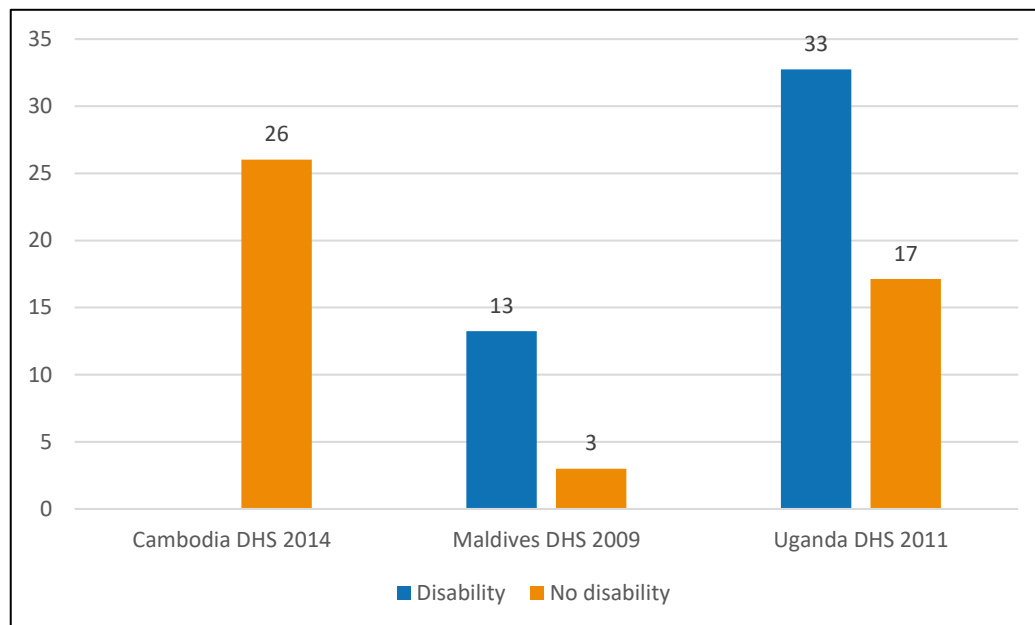
Source: Demographic and Health Surveys

The same gap in out-of-school rates is noted among adolescents of lower secondary school age (see **Figure 3**). In the Maldives and Uganda, adolescents with a disability are more likely to be out of school than those without a disability. In the Maldives, the out-of-school rate of disabled adolescents is four times that of non-disabled adolescents, whereas in Uganda, it is double. In the sample from Cambodia, the number of individuals of lower secondary school age with a disability is too small (less than 25) and therefore no out-of-school rate was calculated for this group.

The lower secondary out-of-school rate was also examined for countries that used country-specific questions instead of the internationally comparable set of WG questions (see **Figure 4**). In Colombia, the out-of-school rate of adolescents with a disability is more than four times as high as the out-of-school rate of those without a disability. In the data from the Gambia, the difference is negligible. However, as previously pointed out, disability was defined and measured differently in these surveys, thus making the results less comparable.



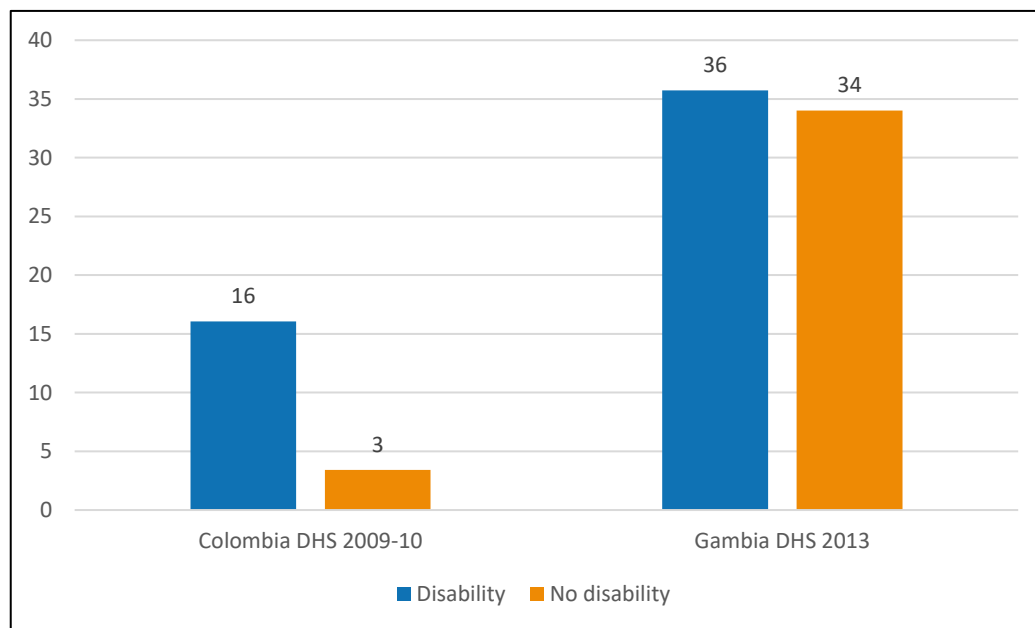
Figure 3. Out-of-school rate of adolescents of lower secondary school age, countries using Washington Group questions, by disability status (%)



Note: Cambodia: value for adolescents with a disability suppressed, less than 25 unweighted observations in sample.

Source: Demographic and Health Surveys

Figure 4. Out-of-school rate of adolescents of lower secondary school age, countries not using Washington Group questions, by disability status (%)



Source: Demographic and Health Surveys



Without exception, children with disabilities are more likely to be excluded from school than their non-disabled peers. For all WG countries and for both age groups (primary and lower secondary school age), the out-of-school rates of disabled boys and girls are higher than those of non-disabled boys and girls. At primary school age, the highest out-of-school rates are observed among Cambodian disabled boys (72%), Cambodian disabled girls (40%) and Ugandan disabled girls (29%) (see **Table 4**). At lower secondary school age, Ugandan adolescent boys have the highest out-of-school rate (34%). In the Maldives, disabled adolescent boys are excluded at a higher rate than disabled adolescent girls (17% vs 9%) (see **Table 5**).

Table 4. Out-of-school rate of children of primary school age, by disability and sex

Survey	Disability (%)			No disability (%)		
	MF	M	F	MF	M	F
Cambodia DHS 2014	57.4	71.8	40.0	7.0	8.0	6.0
Maldives DHS 2009	14.9	13.0	17.4	6.0	6.8	5.1
Uganda DHS 2011	22.9	17.7	28.6	10.8	11.0	10.7

Table 5. Out-of-school rate of adolescents of lower secondary school-age, by disability and sex

Survey	Disability (%)			No disability (%)		
	MF	M	F	MF	M	F
Cambodia DHS 2014	.	.	.	26.0	25.8	26.2
Maldives DHS 2009	13.2	17.0	8.6	3.0	4.0	2.0
Uganda DHS 2011	32.7	34.5	30.7	17.1	15.0	19.3

Note: Cambodia: value for adolescents with a disability suppressed, less than 25 unweighted observations in sample.

Completion of education by disability status

Not only do children and adolescents with a disability have lower school attendance rates, they are also less likely to complete primary or secondary education compared to their non-disabled counterparts. **Figure 5** shows the primary completion rate for countries using the WG questions.² The widest gap is observed in Cambodia, where 72% of 14- to 16-year-olds without a disability have completed primary education, compared to only 44% of those living with a disability. While almost all non-disabled 15- to 17-year-olds

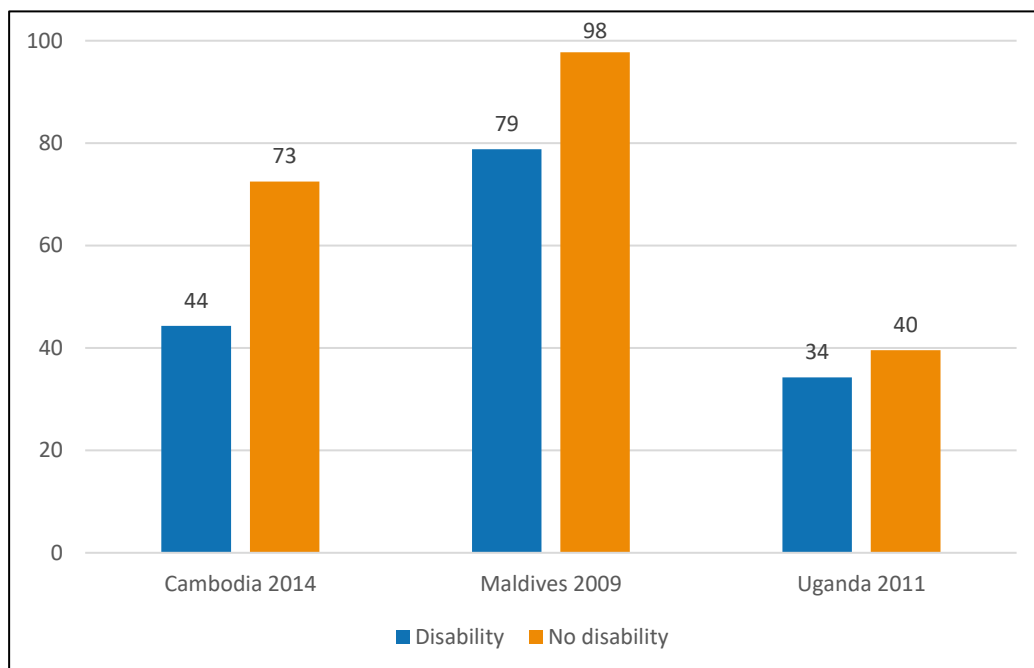
² The completion rate, one of the official indicators for monitoring SDG 4 on education, is the percentage of a cohort of children or young people aged 3 to 5 years above the intended age for the last grade of each level of education (primary, lower secondary or upper secondary) who have completed that grade. It indicates how many children and adolescents enter school on time and progress through the education system without excessive delays. The age group considered varies according to the official entrance age to primary education and the duration of each education level in individual countries.



completed primary education in the Maldives, only four out of five adolescents in the same cohort with a disability completed that level. In Uganda, the primary completion rate is low overall, but disabled adolescents aged 15 to 17 years still fare worse than their non-disabled counterparts.

Moreover, disparities increase at higher levels of education. **Figure 6** shows that only 4% of disabled young people (aged 17 to 19 years) in Cambodia completed lower secondary education, compared to 41% of those not disabled. In the Maldives, the gap also widens relative to primary education, as 55% of young people (aged 18 to 20 years) with a disability completed lower secondary education, compared to 79% of other adolescents. The same can be observed in Uganda, where disabled young people (aged 19 to 21 years) are one-half as likely to have completed lower secondary education as their non-disabled peers.

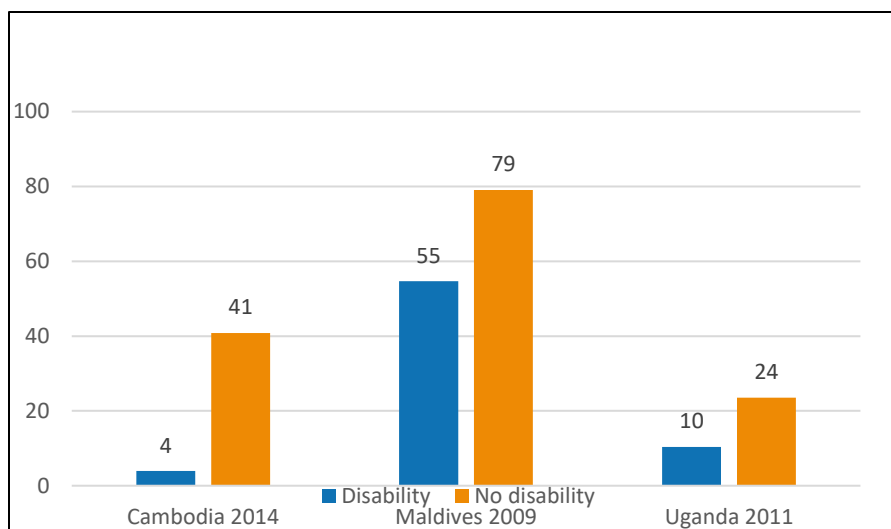
Figure 5. Primary completion rate, countries using Washington Group questions, by disability status (%)



Source: Demographic and Health Surveys



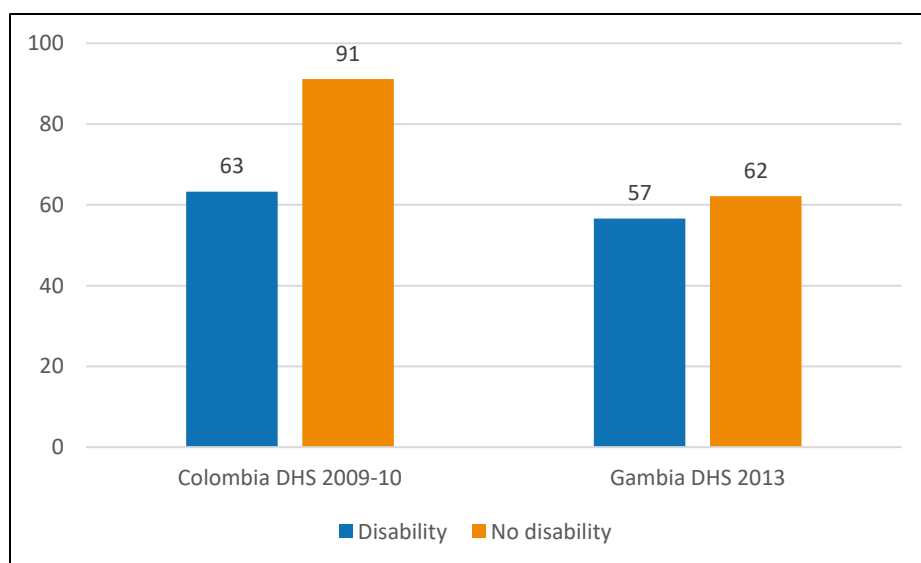
Figure 6. Lower secondary completion rate, countries using Washington Group questions, by disability status (%)



Source: Demographic and Health Surveys

Similar patterns are observed in countries which did not use the WG questions to measure disability (see **Figure 7**). Children and adolescents with a disability are less likely to complete primary education than their non-disabled peers in Colombia and Gambia. There is a large difference between the two groups in Colombia (28 percentage points), whereas only little disparity is observed in Gambia (5 percentage points).

Figure 7. Primary completion rate, countries not using Washington Group questions, by disability status (%)



Source: Demographic and Health Surveys



Table 6 shows that overall, in the countries that were studied, females are more likely to complete primary education than males. However, gender disparity is much larger in the group living with disability. In the Maldives, only 69% of males aged 15 to 17 years living with a disability completed primary education, compared to 88% of their female counterparts. In Uganda, disabled males of the same cohort are one-half as likely to have completed primary education as disabled females of the same age.

For countries not using the WG questions, the same pattern of inequality is found in Colombia, with only 59% of young males (aged 17 to 19 years) living with disability having completed primary education compared to 67% of their female counterparts (*see Table 7*). In Gambia, a reliable primary completion rate for disabled males cannot be calculated due to low number of observations. However, the difference between the total completion rate for both sexes and the value for disabled females suggests that males living with disability fare worse their female counterparts in that country. It is important to recall that the countries listed in Table 7 use different measures of disability, which limits the comparability of the data across countries.

Table 6. Primary completion rate, countries using Washington Group questions, by disability status and sex

Survey	Disability (%)			No disability (%)		
	MF	M	F	MF	M	F
Cambodia DHS 2014	44.3	.	.	72.5	67.8	77.6
Maldives DHS 2009	78.8	69.1	87.9	97.8	96.6	98.8
Uganda DHS 2011	34.3	23.2	47.7	39.5	36.0	43.1

Note: Cambodia: male and female values suppressed, less than 25 unweighted observations in sample.

Table 7. Primary completion rate, countries not using Washington Group questions, by disability status and sex

Survey	Disability (%)			No disability (%)		
	MF	M	F	MF	M	F
Colombia DHS 2009-2010	63.3	58.8	67.1	91.1	88.6	93.9
Gambia DHS 2013	56.6	.	73.5	32.1	64.6	59.9

Note: Gambia: male value suppressed, less than 25 unweighted observations in sample.



Conclusion and next steps

Application of the question sets by the Washington Group on Disability Statistics over the coming years will result in increased availability of internationally-comparable data on the situation of people living with disabilities. The analysis in this fact sheet is based on a small number of countries with data collected with the WG questions and the results confirm findings from previous studies: compared to persons without disabilities, those with disabilities are more likely to be excluded from education. They are also likely to suffer from multiple disadvantage with regard to access to education, for example the cumulative negative effects of being poor, living in a remote area and having a disability, but this could not be examined in this fact sheet because of the small sample size in the survey data available for analysis.

Data from household surveys and population censuses complement data from administrative records because they make it possible to analyse various aspects of exclusion linked to personal and household characteristics, including those related to disability. To ensure continuous improvement of the knowledge base for monitoring of SDG 4 on education, in particular its equity component, the UIS is integrating disability as a standard dimension of disaggregation into its process of indicator production from household survey data, while adhering to strict international standards to ensure reliability and cross-country comparability.

The UIS is also working with partners to harmonise the definition, calculation and disaggregation of indicators, for example through the Inter-Agency Group on Education Inequality Indicators (IAG-EII) that was established in 2016.³

The results of analysis by the UIS are disseminated through the UIS database, fact sheets, data visualisations and other UIS products. One important publication to which the UIS will contribute analysis of data on education and disability is the *Global Flagship Report on Disability and Development* that will be released by the United Nations in 2018.

³ For more information visit the IAG-EII site at <http://uis.openplus.ca/iag/>



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