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# Cost of Raising Children with Disabilities in the Philippines

September 2022



# Preface and Acknowledgments

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The objective of the “Cost of Raising Children with Disabilities in the Philippines” study is to quantify as much as possible the extra monetary costs faced by households with children with disabilities and define such extra costs in relation to achieved living standards compared with other households with children. When these extra costs are significant, policy responses should consider how to reduce the disadvantage faced by such children. Beyond out-of-pocket costs, the study explores situations where children’s rights remain unfulfilled, thus limiting their participation in society.

The focus on costs follows from a previous assessment on the situation of children with disabilities and their families conducted by the Development Academy of the Philippines in 2018 with funding support from the United Nations Children’s Fund (UNICEF) and the Australian Government.

The focus of this study is on expenditure and the difference in costs compared with other families with children. To achieve this objective, the study sampled children with a disability ID card who were representative of this specific subgroup. The study also provided estimates on the number of children with disabilities in the Philippines with and without a disability ID card and their characteristics.

This study was undertaken under the guidance of the Department of Social Welfare and Development (DSWD) and UNICEF with funding from UNICEF and the Australian Government. The study also benefited from comments and supervision from a Special Research Advisory Committee set up for this study and comprising, in alphabetical order, the Council for the Welfare of Children, the Department of Health (DOH), the Department of Education, the National Council of Disability Affairs (NCDA), the National Economic and Development Authority (NEDA), NORFIL Foundation, Inc., the Philippine Institute of Development Studies (PIDS) and the Philippine Statistics Authority (PSA).

UNICEF engaged Oxford Policy Management, which subsequently collaborated with the Nossal Institute for Global Health, University of Melbourne and Life Haven Center for Independent Living. The data collection and survey operations were undertaken by BRETAC Consulting Corporation, which employed enumerators from their network of interviewers as well as enumerators with disabilities recruited by Life Haven.

The inception mission took place in October 2019, but the start of the project coincided with the beginning of the COVID-19 pandemic, which meant that field work had to be postponed. While some of the information required for the design of the survey were conducted remotely (via phone and teleconference) the length and complexity of the survey did not make it possible to conduct a phone survey. Field work protocol development and testing activities took place in the summer of 2021, followed by training of enumerators. Actual field work started in November 2021 and finished in mid-June 2022. The long period of field work was primarily due to challenges encountered in contacting local government units (LGUs) and obtaining information about the lists of children with a disability ID card.

UNICEF is extremely grateful for all the support from the above-mentioned institutions including the consortium led by the Oxford Policy Management. From DSWD, we would like to acknowledge Assistant Secretary Joseline P. Niwane, Director Rhodora G. Alday, Cynthia B. Lagasca, Zoe Dominique R. Cunanan, and Bonn Michael S. Canoza.

UNICEF Social Policy staff, Anjanette Saguisag and Rosela Agcaoili provided supervision and oversight of the study.

We also acknowledge the support of the municipalities included in the study which shared relevant information required for the sampling and the 239 barangay captains who took part in the survey.

A special thanks also to the enumerators who often conducted interviews in emotionally challenged circumstances and travelled to remote locations. We also thank the families who agreed to be interviewed and reserved time to respond to the questions. The study would have not been possible without their contributions.

# Messages

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In an effort to achieve its mandate of improving the quality of life of the poor, vulnerable, and marginalized sectors, the Department of Social Welfare and Development (DSWD) continues to innovate ways to enhance and strengthen its social welfare and development programs and services.

Part of the Department's mandate is to formulate policies and develop interventions along social protection including those that aim toward the attainment of an inclusive society for persons with disabilities.

As we recognize the importance of evidence-based information for policy and programs in addressing the issues and concerns of persons with disabilities, especially children, the DSWD fully supported the study on the 'Cost of Raising Children with Disabilities in the Philippines.'

The results of this study is beneficial for the Department to effectively develop interventions that are appropriate and responsive to their needs of children with disabilities and their families, hence, helping in improving their living conditions.

The DSWD is very grateful for the support received from the United Nations Children's Fund (UNICEF), the Australian Government, Oxford Policy Management (OPM) for the successful conduct and completion of this study.

We also acknowledge the support and cooperation of the Local Government Units (LGUs) who took part and shared relevant information in the study. The study would have not been possible without their contributions.

Significantly, this initiative for the children with disabilities is a testament to the recognition accorded by the government to persons with disabilities, emphasizing that they are an integral part of the society who deserves the utmost care and support from the government.

Together, let us join hands in creating a caring, nurturing and inclusive environment for the persons with disabilities of our nation.

**Erwin T. Tulfo**

Secretary

Department of Social Welfare and Development



Congratulations to the Department of Social Welfare and Development and all government partners for producing this very important study!

Almost three years ago, shortly before the COVID-19 pandemic, DSWD and UNICEF began working on a nationwide study to understand the deprivations experienced by children with disabilities and their families, including the barriers and bottlenecks they encounter in meeting their needs and realizing their rights. We sought to fill a gap in our systems that seemed to elude us in our efforts to do more for children with disabilities.

At the time, we were aware that children with disabilities incur extra costs to support their needs. But how much exactly, we did not know. This report will answer this question and give us a deeper insight into the experiences of these children and their families.

This is a labor of love for us and all our partners – the National Economic and Development Authority, the Council for the Welfare of Children, the National Council on Disability Affairs, the Department of Health, the Philippine Statistics Authority, the Organization of People with Disabilities, local governments, and other stakeholders. I would like to emphasize that this is the product of our collective effort from start to finish.

We thank the Australian Government for its fervent support of this unprecedented undertaking which encourages us to do more for children with disabilities as we work to address the recommendations of the study.

Maraming salamat po.

**Oyunsaikhan Dendevnorov**  
UNICEF Philippines Representative



Australia is proud to have supported the study on the Costs of Raising Children with Disabilities in the Philippines. A first of its kind globally, this study provides information about additional costs faced by families of children with disabilities, including estimates of these costs.

Australia has been a trusted partner of the Philippines in social protection for more than a decade. We believe that effectively addressing the needs of the most vulnerable Filipinos provides the bedrock for social cohesion and development. Recognising the multiple layers of exclusion they experience, we are pleased to shed light on the socio-economic challenges experienced by Filipino children with disabilities and their families.

This disability costing study was completed through the strong collaboration between Australia, the Department of Social Welfare and Development, and UNICEF. I commend the dedication of our partners in progressing this initiative despite the pandemic-related challenges of the last few years. I look forward to the final phase and most exciting part of this stream of work: the development and piloting of a social protection program for children with disabilities.

We also acknowledge the research teams from Oxford Policy Management, the University of Melbourne, and Life Haven Center for Independent Living for sharing your extraordinary professional expertise with the project.

This landmark study highlights longstanding gaps surrounding disability inclusion in the Philippines. I hope this great work becomes a key reference as we protect and honour the rights of children with disabilities.

**HK Yu PSM**

Australian Ambassador to the Philippines

# Executive Summary

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This report summarises the findings from the analysis of the Costs of Raising Children with Disabilities in the Philippines (CRCWD) study, which includes a nationally representative quantitative survey and qualitative in-depth interviews with households and health professionals. The survey fills a gap in national statistics in the Philippines, but it is also a unique survey globally. We are not aware of a similar national survey focusing on children with disabilities in such detail and comprehensiveness.

The survey's main objective is to assess the relevance and amount of extra costs associated with children's disability. The study design aimed at determining such extra costs by comparing wellbeing indicators and consumption expenditure of households with children with disabilities and those without. The survey contains a sample of both population subgroups (children with disabilities and those without).

The identification of children with disabilities relied on the lists of children who have a disability ID card provided by cities and municipalities. The complementary sample of other households with children was selected from the same locations of children with an ID card.

While the survey is not a disability prevalence survey, selecting children with a disability ID card using a rigorous sampling strategy provided an estimate of the **total number of children with a disability ID card in the Philippines**. This estimate **is equal to 325,000 children**. Among other households with children, the survey also identified other children without a disability ID card who have moderate and severe functional limitations. Such cases are very likely to represent children with disabilities who for various reasons do not have a disability ID card. While such observations are relatively few compared with those with an ID card, they represent 1.27 million. This reveals that **only one out of five children with disabilities has a disability ID card**.

Besides relying on the information on disability cards, the survey included the UNICEF/Washington Group module on child functioning and the short set of the Washington Group questions for adults. This enabled the assessment of functional limitations and their severity (mild/moderate/severe) of all people in the sample. This information gave evidence on the sensitivity<sup>1</sup> of survey questions on functional limitations in identifying disability by comparison against the medical assessment done in the process of issuing the disability ID card. **Sensitivity of the screening test was almost 60% for moderate/severe functional limitations and 86% if mild functional limitations were included. Therefore, most children with disabilities were associated with reported classification of 'some' functional limitations.**

Using information on functional limitations and disability ID card, the analysis of the survey singled out four analytical groups for inclusion in this report:

- Households with children who have a disability card, but no functional limitation
- Households with children who have a disability card and at least some functional limitation
- Households without children with disability card, but with a child who has at least some functional limitation
- Households with children who do not have any functional limitation nor a disability card.

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<sup>1</sup> The sensitivity is the percentage of children with a disability ID card reporting functional difficulty measures.

Information on the level of access to basic services and meeting the fundamental rights of children as recognised in international conventions was systematically explored across the above groups. Access to basic services included health, improved water and sanitation facilities, adequate shelter and education. Fundamental rights involved meeting acceptable nutritional requirements, and provision of a stimulating environment for the development of the child, as well as proxies to understand the extent of discrimination and participation.

The findings suggest that **children with a disability card and their families were in a situation of systematic disadvantage** across all the above dimensions, and the group with **the highest neglect was made up of children with functional limitations without a disability card.**

The analysis of the above deprivations and poverty dimensions served to develop non-monetary measures of wellbeing to be used in the analysis of the extra costs of disability. Such measures followed national conventions and proxy indicators often used in surveys by the PSA and previous work on children's deprivations and multidimensional poverty.

The survey also enabled the construction of monetary welfare measures, in particular, consumption expenditure and income aggregates. These measures were subject to scrutiny and comparison with measures in the Family Income and Expenditure Survey (FIES). While consumption expenditure is aligned and comparable with official statistics, unfortunately the income aggregate provided significantly lower estimates. This occurred despite the design of the relevant modules following, as much as possible, concepts and instruments used by the PSA. Therefore, while official poverty statistics are based on income, consumption expenditure was used in this analysis because it provided more reliable information.

**Consumption expenditure data confirmed the relative disadvantage of households with a disability card if children also have functional limitations. Again, the poorest group appeared to be households with children with functional limitations, but without a disability card.** However, these initial estimates did not take yet into consideration eventual adjustments due to the extra costs of disability.

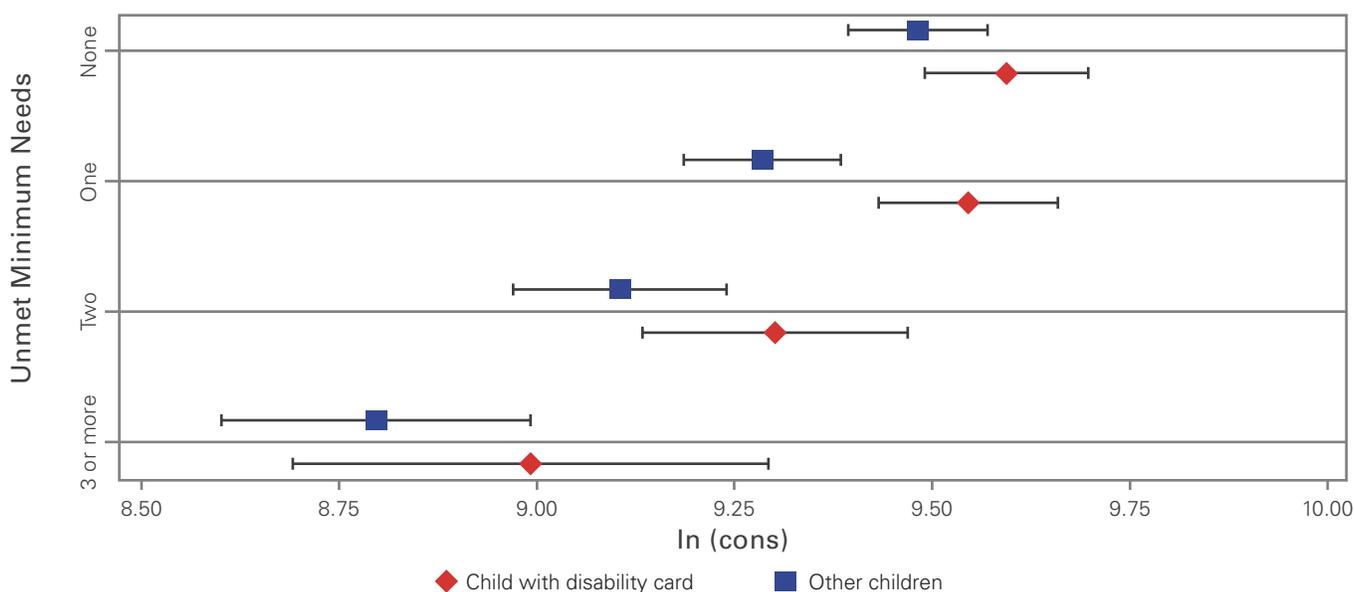
Information on the use of the disability card and consumption expenditure enabled the calculation of the subsidy provided to these households and the incidence of this subsidy across the income distribution. When using a concession card, people need to be able to pay the non-subsidised component to receive a benefit and the possibility to use the card depends on the availability of services. It emerged that, in the case of children, **the disability card provided very unequal support. Findings show 43% of the subsidy was received by the top quintile, while the bottom quintile received less than 6% of the subsidy.** While the potential subsidy is for everyone who has a disability card, only relatively well-off households benefited from the concessions.

In terms of costs to raise children with disabilities, **by far the main source of extra costs concerns health expenditure, where households with a disability card spent a share of their budget that was almost three times more than those of other households** (10.7 vs 3.7). Other common extra costs were education and transportation if the child was enrolled in school.

The determination of the extra cost of disability has relied on the comparison of consumption expenditure across households reaching the same standard of living. If households who have a child with disabilities have a systematic higher expenditure required to achieve comparable living standards, the difference in consumption expenditure can be considered the extra cost of disability.

This is exemplified in the figure below, showing for the same type of household (a couple with two children) the difference in overall consumption expenditure at different levels of one of the wellbeing measures constructed for this analysis. Consider the number of unmet minimum needs: no school enrolment for children aged between 5 and 17; forgone health treatment; unimproved water source and sanitation facility; and so forth.

**Unmet minimum needs, consumption expenditure and disability  
 (estimates and confidence intervals) for couples with two children**



The calculation of extra costs relied on the estimation of a regression model of non-monetary wellbeing indicators over consumption expenditure, a measure of disability, and other control variables. Almost a hundred regression models were estimated using three different types of wellbeing indicators:

- Subjective assessment of living standards
- Asset indexes
- Measures of non-deprivation in fundamental rights of the child

In alternative models, disability was measured considering children with a disability card, functional limitations and their severities, and the type of disability. Furthermore, regression models were estimated for the whole sample and then also separately for subgroups of households of the same/similar composition.

**Across all wellbeing indicators, the models consistently showed a strong positive correlation with the level of consumption expenditure and a negative impact of disability, confirming the presence of disability extra costs. Moreover, there was evidence that moderate/severe disabilities incurred higher extra costs compared with mild disabilities, and households with more than one child with disabilities had substantially higher costs.**

The model type used for an estimate of the extra cost was based on the asset index. At the median consumption, this was about PHP1,281 and PHP2,256 per month, respectively for mild and moderate/severe functional

difficulties. Within such models, **the extra cost entailed an equivalence scale for a child with disabilities that ranged between 1.4 and 1.8, depending on the severity of disability. This implies that a child with disabilities needs an expenditure that is 40 to 80% higher than other children without disabilities.**

Currently, the support provided by the disability card and cash transfers only covers a fraction of these extra costs and this support does not reach those most in need. It is also clear that the Philippine Health Insurance (PhilHealth) requires ramping up its implementation, effectiveness, and coverage for health-related costs for households with children with disabilities.

Recognising the extra costs of disability implies that poverty rates among households with children with disabilities are at least 25% higher than what ignoring these extra costs reveal. **After taking the extra costs into account, households with children with disabilities have poverty rates (percentage of poor) that are 50% higher than those of other households with children.**

These findings have concrete and strong **policy implications:**

- The need to increase awareness on disability registration and develop multiple entry and referral systems for early detection. The current registry managed by the DOH needs to increase its coverage and link disability assessment and registration with information about needs and severity of disability. Practical incentives must be provided for cities and municipalities to upload data into the central database. Complete and improved information in the registry could then be the basis for the planning of services for these children.
- Disability registration in the DOH database is the requirement to recognise the right to health insurance and PhilHealth services. Therefore, improving the database should also come with an increased awareness of health insurance coverage for households of children with disabilities. At the same time PhilHealth needs to increase the health packages, including, for example, access to assistive devices for people with disabilities and extending the network of accredited facilities and service providers.
- Still too many children with disabilities are out of school and inclusive education policies need to cover the existing implementation gap. There is a need to intensify advocacy and information on available interventions and increase guidance counsellors and Special Education (SPED) teaching assistants.
- The size and significance of extra costs need to be addressed with a disability allowance that could at least cover some of the extra costs. Given the limitation of the current disability registry, the initial amount of such allowance could be a flat amount of PHP1,000-PHP2,000 per month for all children with a disability ID card. This allowance would encourage households to acquire the disability card and allow LGUs to gather information on the severity of disability, which could be used to provide increased support for those with higher needs.
- Adjust eligibility assessment and financial support to children with disabilities in programmes that are means tested, such as the 4Ps. Specifically, eligibility assessment should factor the extra costs of raising children with disabilities by reviewing the proxy means test and recognising the higher poverty levels of these children and their households. For poor families with children with disabilities, the level of support should also increase to include the extra costs faced by these households.

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## List of Abbreviations

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<b>CRPD</b>	Convention on the Rights of Persons with Disabilities
<b>CRCWD</b>	Costs of Raising Children with Disabilities
<b>DSWD</b>	Department of Social Welfare and Development
<b>FCS</b>	Food Consumption Score
<b>FGDs</b>	Focus Group Discussions
<b>FIES</b>	Family Income and Expenditure Survey
<b>4Ps</b>	Pantawid Pamilyang Pilipino Program
<b>LGU</b>	Local Government Unit
<b>NCDA</b>	National Council of Disability Affairs
<b>OPD</b>	Organization of Persons with Disabilities
<b>OPM</b>	Oxford Policy Management
<b>PIDS</b>	Philippine Institute for Development Studies
<b>PDAO</b>	Persons with Disabilities Affairs Office
<b>PHP</b>	Philippine Peso
<b>PhilHealth</b>	Philippine Health Insurance
<b>PPS</b>	Probability Proportional to Size
<b>PSA</b>	Philippine Statistics Authority
<b>SPED</b>	Special Education
<b>UNICEF</b>	United Nations Children’s Fund
<b>WG</b>	Washington Group
<b>WHO</b>	World Health Organization

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## Introduction and Main Study Objectives

To understand the objectives of this study and its motivation, it is important to provide a background on the existing information on disability and specifically on children with disabilities.

## 1.1 Background

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In some respects, the Philippines has been a leading country in recognising the rights of persons with disabilities with a law on accessibility enacted in 1983, followed by the Magna Carta for Disabled Persons in 1992 (Republic Act 7277), then revised in 2006. The Philippines ratified the UN Convention on the Rights of Persons with Disabilities in 2008 and the UN Convention on the Rights of the Child in 1990 alongside regional commitments, including the Incheon Strategy “to Make the Right Real” for Persons with Disabilities in Asia and the Pacific.

However, implementation of the rights of persons with disabilities is falling behind and supporting programmes lack adequate coverage and depth. Information on the existing gaps is emerging from recent surveys and efforts by the PSA to disaggregate key statistics by disability status. Of particular importance have been the 2016 National Disability Prevalence Survey and the inclusion of six questions on functional limitations of the Washington Group Short Set in the Labour Force Survey, which can be linked to the Family Income and Expenditure Survey (FIES).

However, information about children with disabilities remains absent. Both the 2016 Disability Prevalence Survey and the Labour Force Survey excluded children under 15. Therefore, there is no reliable estimate on the prevalence of disability among children, nor are there nationally representative studies on access to services. While children with disabilities are entitled to a disability ID card, which recognises their status and provides access to discounts, there is no national database yet; registries tend to be kept within cities and municipalities and are not uploaded in the national database under the DOH.

Moreover, the Philippines still lacks a study that assesses the extra costs of disability for children and adults with disabilities, which would be the basis for properly assessing needs and developing programmes and services. Assessing the extra costs is also crucial to adjust poverty estimates for this subgroup of the population.

To address the information gap on the costs of disability, the PIDS conducted studies on women and children with disabilities looking at health costs and access to education<sup>2</sup>. In 2018, the UNICEF together with the DSWD also completed a study on the situation of children with disabilities (the precursor of this research).

The emerging picture shows the following: there is still a lack of proper accountability and coordination in the provision of services for children with disabilities; some of the services have low coverage (e.g. lack of assistive devices); and the discount and preferential treatment that persons with disabilities should have (not paying value-added tax and 20% discount on medicines, medical fees, transportation, restaurant and certain recreational expenses, together with a 5% discount on essential items) often does not materialise<sup>3</sup>.

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<sup>2</sup> See Agbon and Mina (2017): School Participation of Children with Disability: The Case of San Remigio and Mandaue City, Cebu, Philippines; PIDS Discussion Paper Series No. 2017-59 and Reyes et al. (2017): Health Practices of Children and Women with Disabilities; PIDS Discussion Paper Series No. 2017-60.

<sup>3</sup> There are a limited number of establishments where it is possible to obtain such discounts. Many rural areas and smaller cities are often not covered.

Furthermore, in 2016 a study conducted by the NCDA on government services and disability-related costs in two provinces (Rizal and Eastern Samar) found that households with a person with disabilities had significantly higher expenses compared with other households. The two provinces were purposely chosen to offer contrasting backgrounds, a primarily urban and relatively well-off province versus a rural and very poor one. In both provinces, the study found relatively low service provision and high cost of disability for medicines, transportation, and medical fees. However, the study did not estimate the costs of disability in relation to the welfare status of the household and, as such, could not provide robust estimates of the extra costs of disability. This was also limited by the relatively small scale of the study.

While the above study is a useful starting point, there is a need to conduct an in-depth study that considers the specific needs and extra costs that persons with disabilities in the Philippines need to incur to reach comparable living standards of households without persons with disabilities.

This information is essential to determine the level of support that should be provided to persons with disabilities. The Philippine Coalition on the UN Convention on the Rights of Persons with Disabilities highlighted the absence of such information and the need to ensure that DSWD develops programmes to address these extra costs, including costs of personal assistance, and that PhilHealth includes an adequate package to cover expenses for assistive devices.

## 1.2 Research Questions

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Evidence from various pilot studies with limited geographical coverage shows that children with disabilities and their families are in a situation of disadvantage. The objective of this study is to quantify such disadvantage in terms of out-of-pocket extra costs, lack of access to basic services, and indirect costs. The bigger aim is to produce such estimates through a nationally representative study.

The key research questions that the study addresses are the following:

- What is the direct out-of-pocket extra cost for households with children with disabilities? Such costs need to be considered in relation to the achieved living standards and participation in terms of fulfilment of basic rights, and compared with costs of other households with children (without disabilities).
- What is the current level of service provision for children with disabilities? This covers basic social services, such as access to education and health care, as well as disability-related services, such as provision of assistive devices and assistive technology. Are services available? And if they are, to what extent are they accessible and used by children with disabilities? What are the barriers to access?
- What is the level of reach of current programmes and their ability to support inclusion? For example, does the access and use of the disability ID card support the integration of children with disabilities into society? Do children with disabilities who need assistive technology receive it?
- Is it possible to quantify the indirect costs of disability? To what extent do family members forgo employment opportunities or reduce their working hours/receive lower pay to support a child with disabilities? This will be assessed in comparison with other households with children, which otherwise have similar characteristics in terms of education and location.
- To what extent are costs and needs different across urban/rural areas/remoteness, socio-economic status (poor vs non-poor), type of disability, age of child/household composition?

Answering these questions will help quantify the level of disadvantage, understand what services are required and what barriers need to be overcome as well as check whether service provision needs to be complemented with extra support, in the form of specific new services, cash support or a combination of the two.

While the main question is on the monetary quantification of the extra costs, this is assessed towards the end of the report to gradually build up the required components for the analysis.

Section 2 describes the study design, including the sampling strategy, and how to identify the subpopulation of interest. Section 3 provides the survey estimates on the total population of children with disabilities in the Philippines who have a disability ID card and an indirect estimate of those with a disability, but without an official recognition of their disability. An assessment of the sensitivity of the screening questions on functional limitations will follow. Section 4 looks at access to services such as education and health, use of the disability ID card (one of the main schemes for people with disabilities) and other social assistance.

All the indicators are analysed across the subgroups of interest: families with and without children with disabilities. Section 5 analyses welfare monetary aggregates (consumption expenditure and income) and other wellbeing indicators: wealth asset index, multidimensional poverty, deprivation indicators, and a measure of discrimination. Section 6 analyses the monetary costs of disability by identifying the sources of extra costs, and quantifying the extra costs by comparing consumption expenditure levels of families with children with disabilities with other families with a similar standard of living. The same section also presents results on the indirect cost of disability. Finally, the last section provides policy implications.

A battery of annexes contains details for the more technical readers: sampling approach and calculations, robustness checks on the consumption and income aggregates as well as related measures of external validity, confidence intervals in key estimates to consider sampling design, and the result of interviews conducted with health professionals.

Given the sensitive nature of the study and contact with a vulnerable subpopulation, the research design, questionnaires, protocols, and data management had been subjected to ethical review and were approved by the Melbourne School of Population and Global Health Human Ethics Advisory Group, University of Melbourne (ethics ID number 21437).

# 02

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## Study Design and Methodology

This section provides an overview of the overall study design and gives more details on the design features of the sample survey and the methodology used to estimate the extra costs of disability.

## 2.1 Study Design

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While this report focuses on the results of the main quantitative survey, the overall study approach is that of mixed-method methodology, where qualitative and quantitative research is integrated to deliver the expected outcomes of the study.

More specifically, the research design included three components:

- Focus group discussions (FGDs) and consultations with stakeholders, including exploratory interviews with families of children with disabilities, to inform them the design of the questionnaires for the sample survey;
- The large quantitative sample, which included household and key informant interviews at the community level;
- Further qualitative interviews with a small subset of the households interviewed in the main survey to better understand specific costs related to types of disability as well as interviews with some health professionals.

The three components of the research design are summarised in Figure 1. Before looking in detail at the design of the sample survey, the first and third elements of the research are summarised.

**Figure 1: Structure of the research design**

<b>Consultations + Focus Group Discussions</b>	<ul style="list-style-type: none"><li>• Inform the design of the questionnaires for the sample survey</li><li>• Main focus on relevant costs for the main types of disabilities</li></ul>
<b>Sample Survey</b>	<ul style="list-style-type: none"><li>• Household survey including children with and without disabilities</li><li>• Community survey to understand service provision</li></ul>
<b>Households' in-depth interviews + health professionals</b>	<ul style="list-style-type: none"><li>• In depth understanding of different needs and costs by disability types</li><li>• Understand goods and services required</li></ul>

In the first component, FGDs and semi-structured interviews were held with parents/guardians of children with disabilities with the aim of identifying the cost items that were likely to be relevant for children with disabilities in terms of actual out-of-pocket expenses. Interviews also sought to identify measures of welfare and participation in school and more broadly, in the community. The FGDs were undertaken as part of the inception mission and

were mainly held in Metro Manila and surrounding areas, while eight telephone interviews were conducted in the summer of 2020 primarily with respondents from areas outside Metro Manila. These interviews informed respondents the design of the questionnaires, which were shared with key project stakeholders. Based on comments received the questionnaires were further refined.

The third research step involved a purposive sample of respondents from the quantitative household survey for more in-depth qualitative interviews. The objective was to gain understanding about key unmet needs identified in the quantitative survey. These included forgone health services, assistive devices, adaptations to the home, not being enrolled in school, and need for support in caring for children with disabilities.

The sample included households with children with a range of impairment types and a mix of genders and ages in both rural and urban areas. From a target of 38 households, interviews with 29 households were completed. One household from the original sample was substituted with a replacement. Most respondents were women. A profile of children in households included in the qualitative interviews is listed in Annex G.

A few interviews were also conducted with health professionals to understand expected costs associated with different health conditions. Health professionals were recruited from Life Haven Center's networks. This purposive sample included allied health professionals and specialists from the private and public sectors. However, most of those interviewed were in private practices. A total of eight professionals were interviewed. Through these interviews, we estimated the hypothetical cost of health services that households had not used or were not aware of and, as such, could not provide an estimated cost. The impairment types and health conditions were based on conditions most often seen by the professionals and included the costs of ideal treatment and related expenses for each condition. This data was used to develop scenarios which are presented in Annex H.

## 2.2 Main Design Features of the Quantitative survey

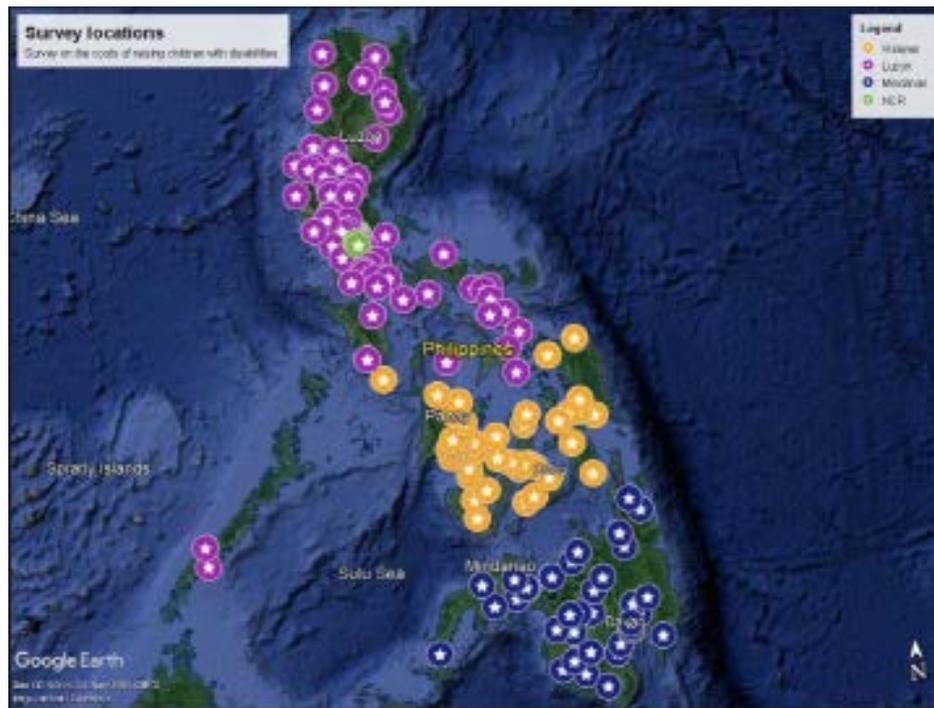
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The second component consisted of a nationally representative survey of two sub-populations:

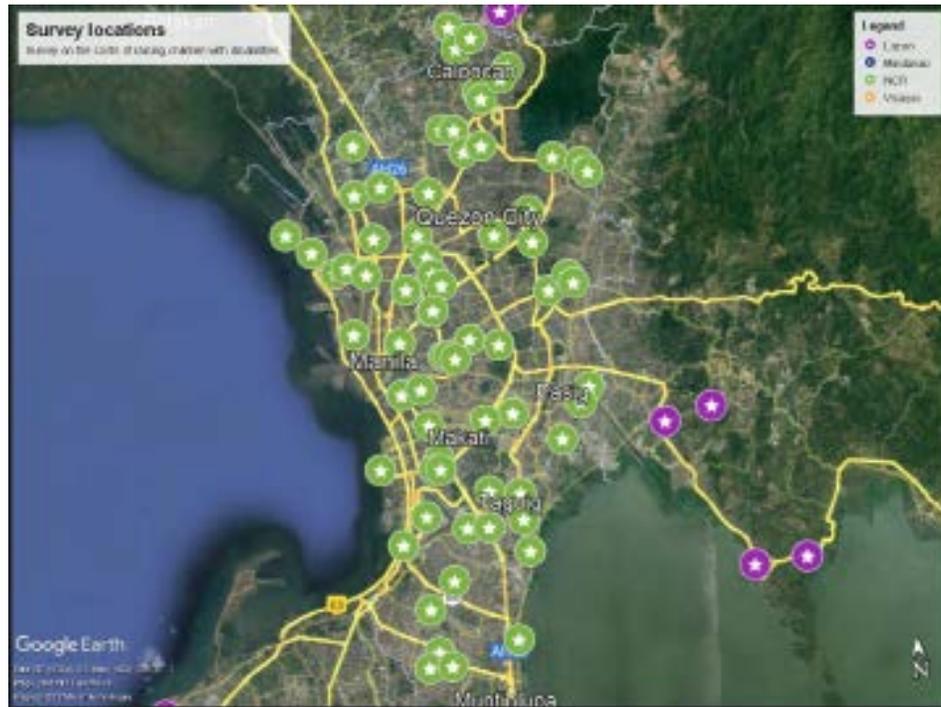
- a) children with disabilities who have a disability ID card;
- b) a comparison sample of other households with children who live in the same areas of children with a disability ID card.

Given that children with disabilities represent a relatively small group of the overall population and that identification of disability is a sensitive subject, the sampling frame was based on the list of children with disabilities in possession of a disability ID card. This ensured the inclusion of a substantial number of children with disabilities and the categorisation of different disability types. Locations (barangays) were randomly selected using probability proportional to size<sup>4</sup> in four main strata: the national capital region (NCR); Luzon, including the Mimaropa region, and henceforth referred to simply as Luzon; Visayas and Mindanao. Overall, 240 locations were sampled across all 17 regions of the Philippines, involving fieldwork in 69 provinces, for a total number of 2,753 completed interviews. A map with the approximate locations of the sampled areas is shown in Figure 2, followed by a more detailed map of locations in the NCR.

**Figure 2: Map with the locations included in the survey**



<sup>4</sup> The list of existing administrative and geographic units, together with their respective population, was based on the 2015 Census.



The lists of children with disabilities for the selected areas were obtained from the concerned LGUs<sup>5</sup> and children with disabilities were selected by systematic random sampling.

The second subpopulation was sampled in relation to the first group: all households living within the same block of the selected children with disabilities were listed to obtain information on those with children. Subsequently, a systematic random selection was executed.

While for the first subpopulation, the use of sampling weights (the inverse of the probability of selection) generated an estimate of the number of children who have a disability ID in the Philippines, the second subpopulation only provided a comparison group, which might not be representative of all children in the country. Nevertheless, this group of households could provide information on other children with disabilities who do not have a disability ID card. The sample captured a variety of different households with children in terms of composition, geographic location, poor and non-poor, etc.

Both groups of households were administered the same questionnaire which collected information on household composition, functional limitations, housing characteristics and assets ownership, school attendance, access to health services, employment and entrepreneurial activities, transfers and other incomes, consumption expenditure, and other wellbeing indicators. Some questions about the use of the disability ID card, assistive technology and SPED were asked only to certain households.

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<sup>5</sup> This step turned out to be much more challenging than initially envisioned since municipalities were extremely busy during the COVID pandemic and, even after the emergency, it was complicated to obtain responses from most municipalities. In each case, procuring the lists required several meetings to explain the purpose of the study, the signing of confidentiality agreements, addressing privacy concerns, etc. More details on this are provided in Annex A.

The household interviews were complemented by interviews with key informants in each location included in the survey. The key informants were the municipality officers in the Persons with Disabilities Affairs Office (PDAO) and the barangay captain. These interviews collected information on community characteristics and available services at the community and municipality level as well as distances to key service providers. Information on prices of a sample of items were also gathered at local shops.

## 2.3 Measurement of the Extra Cost of Disability

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There are three different methods that try to assess the disability-related additional costs: the goods and services method, the goods and services required, and the standard of living approach<sup>6</sup>. The goods and services method involves asking families of children with disabilities to identify and estimate the additional expenses they incur. The goods and services method asks not only what people spend, but also what would be required to achieve participation, often relying on professional experts to make an assessment. Finally, the standard of living approach identifies the extra cost on the different expenditure levels needed to reach the same living standard when comparing households with and without children with disabilities. (See box for more details on these different methods).

### Box 1: Different approaches in measuring disability-related costs

#### Goods and services method

With this method, the interviewer asks a respondent with disabilities to list the amount, type, and value in currency of all expenditures necessitated by their condition. A primary goal of this method is to estimate the range of expenditures and how they break down by the types of goods and services purchased. Enquiries about costs are usually structured around what people need to carry out daily activities, such as self-care, work, school, shopping, or various civic activities.

#### Goods and services required method

This method collects information on what expenditures would be needed to enable a person with disabilities to participate equally in society. This method requires bringing together experts to make preliminary lists of the range of goods and services needed, broken down by various subcategories of persons with disabilities. Then focus groups gather more detailed information to verify, expand, and modify the initial lists and gather information on what is being spent on these items. The expert group then adjusts the lists and the prices based on focus group discussions and augments estimates by conducting market research to estimate the costs of needed goods and services that are not available.

#### Standard of living approach method

This method makes statistical inferences from differences in the standard of living between households with and without persons with disabilities who have similar levels of income or consumption. The basic idea behind this approach is that two families, one with a member with disabilities and one without, with the same level of income and very similar characteristics (e.g., where they live, household size, etc.) should have similar standards of living, and if they do not that is the result of the extra costs associated with disability.

Source: Mont et al. (2022): Estimating the Extra Costs for Disability for Social Protection Programs; ILO Working Paper, <https://www.social-protection.org/gimi/ShowResource.action?id=57850>.

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<sup>6</sup> Mont et al. (2022): Estimating the Extra Costs for Disability for Social Protection Programs; ILO Working Paper, <https://www.social-protection.org/gimi/ShowResource.action?id=57850>

Each method has its advantages and disadvantages, and while the approach used in the Philippines for this study has elements of the three types of methods, the conceptual framework is the standard of living approach. The study focuses on actual expenditure based on available services but relates this to the level of living standards achieved and identifies where children lack access to basic services. In doing this, the study acknowledges that there are services that money cannot buy. Putting a price where the service does not exist can be misleading and creates the risk of overestimating the cost of participation, not accounting for the constraints faced also by other households.

The limitation of the previous NCDAs study, as well as other studies that looked at the cost of disability was that it was unclear to what extent costs were affected by the reduced functioning (or lack of participation) of people with disabilities and the level of household income. This could result in either underestimating or overestimating the cost of disability.

Indeed, costs are determined not only by the level of functioning difficulty or impairment, but also by available resources and interaction with the environment. For example, if a child with disabilities does not attend school, the household costs (actual out-of-pocket expenses) might be lower than for families with children without disabilities who attend school. This implies that it is important to measure the extra costs in relation to the achieved living standard. Moreover, the extra costs of disability need to be measured in relation to the control group of households with children without disabilities.

Fundamental to the methodology adopted in this study is the measurement of the household standard of living, so that extra costs can be assessed by comparing households at the same welfare level. The assumption is there is a positive relationship between the standard of living and consumption expenditure and to reach the same level of living standards, households with children with disabilities incur higher costs than other households.

The methodology involves obtaining a measure of standard of living that is independently constructed from the following: income or consumption expenditure; the degree and type of disability; income or consumption expenditure; and several other socio-economic characteristics of the household, such as location, education, employment, and household composition that can affect the measure of standard of living.

Regressing the standard of living by the household consumption expenditure (or the household income), a variable measuring disability (the degree of severity or categories of disability type), and controlling relevant socio-economic indicators, including the receipt of programmes and services for children with disabilities, enables the measurement of the monetary extra cost of disability for different types of households. These are households with children with disabilities and those without. The outcome of the methodology is depicted in Figure 3. The assumption is that for families with children with disabilities there is an extra cost, but this could decrease, remain constant or increase depending on the achieved standard of living.



Source: Authors' graphical representation based on Zaidi and Burchardt (2005).

This approach to estimating the extra costs of disabilities has been implemented in various countries and has gradually gained prominence after the estimation done for the United Kingdom by Zaidi and Burchardt in 2005. However, very few studies looked at costs for families of children with disabilities and all these studies were in high-income countries.

One crucial aspect of this approach is the measure used in the standard of living approach. In the literature, this was primarily confined to some form of household level asset index or indicators of the overall self-assessment of the living conditions of the household. This approach mainly used existing data sources where the possible indicators of living standards were limited by the information available in the original dataset.

For this study, given that the survey's focus is on children with disabilities, the questionnaire collected a set of possible indicators of standard of living that not only applied the traditional approach of using wealth indexes, but also used alternative measures. These alternative measures included multidimensional poverty indexes tailored to the rights of the child, the child's level of participation in school or in the community, deprivation indexes, and the self-assessment of living conditions. From this perspective, the study is innovative because it provides an assessment of the implications of using different measures of standard of living on the extra costs of disability.

The analysis conducted for the study makes an explicit assessment on the way the extra cost changes with higher levels of living standards and attempts to measure this in relation to basic children's rights.

One recognised limitation of the standard of living approach is its indirect method of the estimation of the extra costs, which gives little guidance on what makes up the extra costs. Consequently, this approach provides limited details on the policy measures that should be adopted. Therefore, the study also collected specific disability-related expenditure in the quantitative survey and qualitative data collection components.

Another limitation of the standard of living approach is that cost estimates only reflect what households who have members with a disability spend, but this does not mean that these estimates ensure participation and achievement of basic rights. However, lack of participation can be assessed by direct measurement of the achievement of basic rights, without the need for complex analysis.

# 03

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## Children with Disabilities and their Characteristics

Before providing information on wellbeing measures and monetary indicators of the subpopulations of interest, it is important to provide estimates on the number of children with disabilities, those with and without a disability ID card. It is also useful to investigate the link between the disability classification based on medical assessment and information about functional limitations captured in the survey. A third subsection compares key characteristics of the different subpopulations.

## 3.1 Number of children with a disability ID card

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As explained earlier, the survey was designed to provide an estimate of the number of children with a disability ID card. Cities and municipalities which issue these cards should maintain a disability register. However, while the disability register is required by law and the responsibility for its maintenance falls under the DOH, the database is incomplete.

Disability ID cards indicate eligibility to access services and support. The ID serves as a discount card for essential goods and services to reduce the costs of living for persons with disabilities. Cardholders are entitled to a 20% discount and exemption from value-added tax on travel fares, accommodation, restaurants, cinemas, medical services and medicines. There is also an additional 5% discount on certain basic need items, including some food items, drinking water and construction materials. For private sector service providers, discounts are reported for deduction from their tax bill.

Given that the disability ID Card is a concession card, the cards attract applications from various people, including some reportedly unqualified applicants who were approved. PDAO officials have no authority to question an application if the paperwork is correct. The advantage of the card is believed to be primarily for those living in urban areas where services exist, and for people who can afford them. (Section 4.2 provides more details on the cost and use of this card.)

The number of persons with disabilities who possess this card is unknown, information about children with disabilities is even more scarce with little clarity on whether all cities and municipalities in the country issue cards to children.

The survey sampled 240 locations in 174 cities and municipalities; some of the locations were in the same city/municipality. (There are more than 1,600 municipalities in the Philippines). The sample covered the 17 regions of the country and included locations in 69 provinces. None of the randomly sampled locations did not issue cards to children, but in some of the selected locations, the number of cards issued was very low.

The issuance of the card was prompted by very specific circumstances, such as the need to have a medical examination outside the LGU, instead of a systematic issuance of cards to all children with disabilities.

There were also contrasting cases. In Metro Manila, Valenzuela City had a well-kept information system and database but the City of Manila did not share data from a central registry and provided information only at the barangay level. The number of children with a disability card was very low in Manila compared with Valenzuela City.

The survey estimate for the overall number of children with a disability ID card is 325,000 (but this has a relatively wide 95% confidence interval of 297,000 and 353,000). The sample was designed to provide relatively reliable estimates from three main geographical areas. Table 1 shows estimates from Luzon, Visayas together with Mindanao, and the NCR. Assuming a national population of 112 million people and 36% are children, then children who have a disability ID card are less than 1% of all children, or more precisely, 0.81%. Rates in NCR are higher than in other parts of the Philippines.

**Table 1: Estimated number of children with official disability status**

Geographical Areas	Estimate*	(95% Conf. Interval)	
Luzon, including the MIMAROPA Region	138389	119509	157270
Visayas and Mindanao	144666	125524	163808
National Capital Region	41992	35456	48528
Philippines	325047	297378*	352717*

(\*) Numbers for the confidence intervals should not be added together to produce the national level confidence intervals, since this is based on a separate calculation of the standard error.

The 2010 Census provided an estimate of similar prevalence for all children with disabilities, 0.9%, whether or not they hold a disability ID card. The number of children with disabilities in the *Listahanan* database (*Listahanan 2*) was even lower<sup>7</sup>.

These numbers appear low compared to the common assumption of a disability prevalence among children of one every twenty, or 5%<sup>8</sup> and more recent estimates of 10% globally, and 8% in East Asia and the Pacific<sup>9</sup>. While the objective of the study is not to conduct a disability prevalence survey, the comparative subsample of households with children who do not have a disability ID card could provide insights on the magnitude of other children with functional limitations who have, or are at risk of, disability but do not hold a disability ID card.

<sup>7</sup> In the 2nd *Listahanan* National Assessment there were 938,150 considered as having a disability, presumably because they held a disability ID card (based on data shared during the inception mission). Out of this total number 320,922 were classified as poor, representing only 1.1% of poor people. A total of 85,250 were poor children (under 18) with disabilities, or 0.5% of all poor children. The *Listahanan* also collected information on people with functional difficulties, which among the poor were 758,624 or 2.6% of poor people, and 173,455 children or 1.1% of poor children. See DSWD (2019): National results of *Listahanan 2*. <https://fo1.dswd.gov.ph/wp-content/uploads/2021/01/Listahanan-2-National-Profile-of-the-Poor.pdf>.

<sup>8</sup> UNICEF (2013). *The State of the World's Children 2013. Children with Disabilities*. New York: UNICEF; <https://www.unicef.org/sowc2013>.

<sup>9</sup> UNICEF (2021): *Seen, Counted, Included: Using data to shed light on the well-being of children with disabilities*, UNICEF, New York, 2021.

## 3.2 Number of children with functional difficulties

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The survey complemented the official designation of disability provided by the disability ID card with self-reported functional limitations among all household members. This information was collected from all households, whether or not they were sampled as having a disability ID card.

Functioning is an umbrella term that aims to capture elements of an individual's health condition (or impairment) alongside activity limitations and how these may restrict participation in everyday life. The Washington Group on Disability Statistics (WG) has developed question sets based on this functioning approach that asks the difficulties an individual may have in performing everyday activities. The WG questions which will be asked by enumerators with limited experience of disability are designed to be included in census and population surveys. The WG also developed a child functioning module with UNICEF<sup>10</sup>.

Different versions of the child functioning module were used with children aged 2 to 4 and with those aged 5 to 17 with the questions asked to the child's carer. For children under 2, functioning questions were not reliable so the carer was asked whether screening at birth identified any health conditions/risks. The WG short set of six questions were asked for all adults living in the household. It is important to note that the WG questions do not identify impairments or health conditions. The questions use activity limitations as a proxy for disability (in terms of functional limitations) to allow identification of persons with disabilities and the disaggregation of datasets by disability.

Two important assessments can be made using these data: 1) verify to what extent children with a disability ID card have functional limitations 2) calculate prevalence of children with functional limitations in the control sample.

### 3.2.1 Sensitivity of functional limitations as a screening test to detect disability

In the Philippines, the issuance of a disability ID card is based on a medical diagnosis, and eligibility is not means tested. Applicants are required to provide a medical certificate from a doctor as well as proof of residence from a barangay captain and a voter identification card, or similar ID. If an applicant's impairment or health condition is visible, the applicant may not be asked to provide a medical certificate. While a directive issued by the DOH in relation to the application form provides some general guidance on the disability classification<sup>11</sup>, doctors lack detailed information and guidance in the issuance of a certificate for the disability ID card.

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<sup>10</sup> See Loeb, M., Mont, D., Cappa, C., De Palma, E., Madans, J., & Cialesi, R. (2018). The development and testing of a module on child functioning for identifying children with disabilities on surveys. I: Background. *Disability and health journal*, 11(4), 495-501.

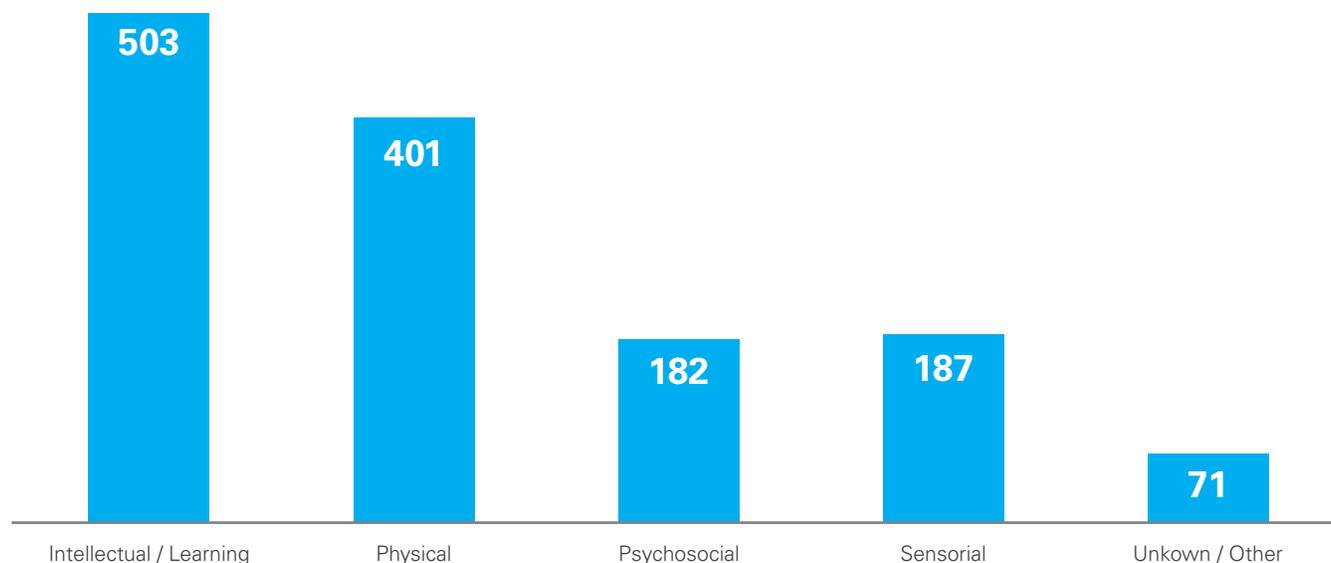
<sup>11</sup> See <https://dmas.doh.gov.ph:8083/Rest/GetFile?id=695610>.

The categories of disability used at the LGU level varied significantly. For example, in October 2019 during the initial scoping fieldwork in one LGU, six types of disability were listed; in another, seven types of disability with the addition of 'learning disability'; and in another there were nine categories<sup>12</sup>. Subcategories for eligibility also differed among LGUs. For example, cerebral palsy was listed as an 'orthopaedic disability' in one LGU and as a 'psychosocial disability' in another. Recent changes have added cancer and rare diseases as distinct disability classifications.

The different classification of disability made it difficult to construct a common summary categorisation since disability classifications were not comparable. Even when the name of the type of impairment or disability was the same, the criteria used for the classification was inconsistent. Out of the 1,382 children with a disability ID card who were interviewed, there were about 20 typologies. In around 10% of cases, instead of providing a classification, only the medical diagnosis was reported on the card.

An attempt to group the original classifications in the four types of disabilities mentioned in the Convention on the Rights of Persons with Disabilities (CRPD)<sup>13</sup> showed that the largest disability (or impairment) grouping was intellectual/learning disability (37%), followed by physical disability (30%), psychosocial disability (14%), sensory disability (14%) with the remaining unknown (5%).

**Figure 4: Number of children by type of disability**



<sup>12</sup> In Balagtas, disabilities were classified within the following categories: 1) Physical/orthopaedic, 2) Psychosocial, 3) Hearing, 4) Intellectual, 5) Visual and 6) Speech. In Quezon City, disabilities were categorised as: 1) Learning disability, 2) Mental disability, 3) Orthopaedic disability, 4) Psychosocial disability, 5) Speech disability, 6) Visual disability, and 7) Hearing disability. Finally in San Luis, Batangas disabilities were classified as: 1) Psychosocial disability, 2) Mental disability, 3) Hearing disability, 4) Chronic illness, 5) Visual disability, 6) Speech impairment, 7) Learning disability, 8) Orthopaedic (musculoskeletal) disability, and 9) Multiple disabilities.

<sup>13</sup> To be precise, the Convention on the Rights of Persons with Disabilities (CRPD) speaks of four (non-exhaustive) impairment types: physical, mental, intellectual, and sensory. The classification used here replaces mental with psychosocial, which we recognise might not be directly interchangeable.

Functional limitations can be interpreted as a screening test for disability and the percentage of children with a disability ID card reporting a functional limitation measures the sensitivity of the test. These are reported in Table 2, distinguishing between those who have functional limitations (in at least one domain reporting ‘a lot of difficulty’ or ‘cannot do at all’) and those who have at least ‘some difficulty’ in one domain. Sensitivity is assessed for different age groups (less than 2; 2 to 4; and 5 to 17). Considering the degree of difficulty in functional limitations is important because disability is not a simple binary phenomenon but manifests itself in different scales of severity<sup>14</sup>. Throughout the report, we referred to difficulties as mild (corresponding to ‘some’ in at least one domain), moderate (corresponding to ‘a lot’ in at least one domain), and severe (corresponding to ‘cannot do at all’ in at least one domain).

**Table 2: Percentage of children with disability ID card with functional limitations**

Age Group	Percentage of Children with Functional Difficulties		Obs
	Moderate and Severe	Mild, Moderate, and Severe	
Age <2*	13.6	32.8	30
Age 2-4	44.1	84.6	138
Age 5-17	60.9	85.9	1214
Age 2-17	59.4	85.8	1352

(\*) This is based on screening at birth revealing either substantial or some risk/problems.

For children under 2, there were too few observations to reach conclusive evidence, but the medical assessment at birth does not identify disability, apart from a few cases. For children aged 2 to 4, the functioning questions seemed not to perform as well as those for children aged 5 to 17 for the moderate/severe threshold, but reached the same sensitivity when the mild functional difficulty was included. However, 14% of children aged 2 to 17 with a disability ID card did not report any functional difficulty, and to reach a high overlap, mild functional difficulties must be included.

The way degrees of difficulty are interpreted depends on cultural norms and possible stigma. For children with difficulties, it can be particularly delicate and sensitive for the carer. Training of enumerators and ad hoc fieldwork practices can also affect the estimates. The implication is that answers to functioning questions can provide very large fluctuation on the percentage of children with difficulties. For example, in recent Multiple Indicator Cluster Surveys (MICS) the percentage of children with moderate/severe functional difficulties was less than 2% in Vietnam and reached almost 30% in the Azad Kashmir region of Pakistan<sup>15</sup>.

<sup>14</sup> Mont (2007): Measuring Disability Prevalence; SP Discussion Paper No. 0706; Disability & Development Team, The World Bank: Washington, DC, USA, 2007.

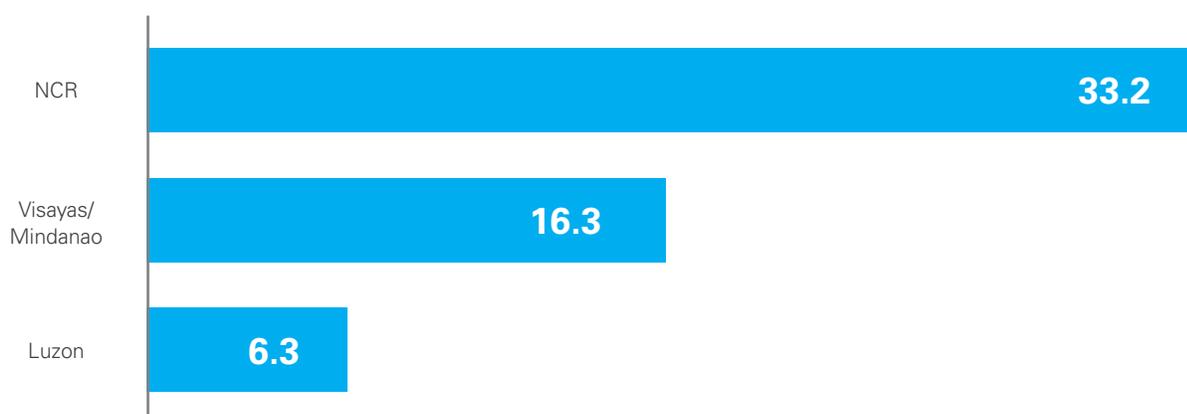
<sup>15</sup> See <https://mics.unicef.org/surveys> and annex F for a review and comparison with other countries.

In the case of the Philippines and this survey, mild difficulties must be included to obtain an acceptable correspondence with figures from the medical assessment. While the partial overlap of officially recognised disability and functional limitations may be surprising, these results are not different from those found in other studies. For example, a recent paper studying results in five different countries (Gambia, Cameroon, Chile, India, and Turkey) found sensitivity tests ranging between 9% and 62% in the case of moderate/severe functional limitations and 44% and 85% when milder functional limitations were included<sup>16</sup>. However, these sensitivity tests were comparable with medical assessments categorised by individual impairment type which were vision, hearing, mobility, and cognitive.

Other studies have also found low sensitivity when the recommended cut-off point of ‘a lot’ and ‘cannot do at all’ were used<sup>17</sup>. A study in Fiji focusing on children aged between 5 and 15 found that cases of moderate disability (based on clinical assessment) were commonly reported as having ‘some difficulty’ by parents and teachers, while cases of severe disability were reported in equal proportions across the three difficulty categories (some, a lot, and cannot do at all). The same study found a very high sensitivity (98%) using the ‘some difficulty’ category, but a low specificity (33%)<sup>18</sup>.

In cases where not even mild functional difficulty was reported, there were significant regional differences in the percentage of children with a disability ID card who were in this situation. The percentage was 6% in Luzon, it increased to 16% in Visayas and Mindanao and reached 33% in NCR (see Figure 5). The highest number of ‘undetected’ disabilities were found among those with learning/intellectual disabilities. In NCR, psychosocial disabilities were most likely not associated with a functional difficulty. It is important to highlight that five enumerators were responsible for more than 40% of these cases.

**Figure 5: Children with disability ID card not reporting functional difficulties**



<sup>16</sup> Boggs et al (2022): Exploring the use of Washington Group questions to identify people with clinical impairments who need services including assistive products: results from five population-based surveys. *International Journal of Environmental Research and Public Health*; 2022, 19, 4304: <https://doi.org/10.3390/ijerph19074304>

<sup>17</sup> Mactaggart et al (2016): Measuring disability in population-based surveys: The interrelationship between clinical impairments and reported functional limitations in Cameroon and India. *PLoS ONE*, 11.

<sup>18</sup> Sprunt et al (2019): The UNICEF/Washington Group Child Functioning Module- Accuracy, Inter-Rater Reliability and Cut-off level for disability disaggregation of Fiji’s Education Management Information System. *International Journal of Environmental Research and Public Health*; 2019, 16, 806: <http://dx.doi.org/10.3390/ijerph16050806>.

Unfortunately, these data cannot be used to assess the specificity of the functional difficulty questions, or to what extent children with functional difficulties and without a disability ID card have a medical impairment. This was not the objective of this study and would have required a medical assessment of the children reporting functional difficulties.

It is normal to expect that false positive will increase as we move from severe to mild functional difficulties but given the relatively low sensitivity of the moderate/severe thresholds, the mild category (some difficulty) should also be considered.

Finally, the analysis of these data reveal there were relatively few cases of households with more than one child with a disability ID card (2%). In comparison, there were higher cases of households with more than one child with functional difficulties (7% in the case of moderate/severe and 11% which also included cases of mild functional difficulties). A possible explanation for this is the family maintains one card because they can use just one card for all the children who need it<sup>19</sup>.

### 3.2.2 Functional limitations among children without disability ID card and adults

All household members were asked functioning questions. Table 3 reports the percentage of persons reporting functional difficulties depending on whether they are part of the same household with children with a disability ID card or other households. In households where there was a child with a disability card, after excluding that child, the percentage of children with a moderate/severe functional difficulty was higher than in other households<sup>20</sup>. This is expected as siblings are likely to also have disabilities. For adults, it is reasonable to assume that parents of children with disabilities are more likely to also have a disability<sup>21</sup>.

While the control sample of 'other households with children' was not designed to provide a representative sample of all children in the Philippines, the study still gave an estimate of the percentage of children with functional difficulties who do not have a disability ID card. This was 3.5% for moderate/severe functional difficulties and 8.5% when mild functional difficulties were included. In absolute numbers, this translated to 1.27 and 3.07 million children respectively. Considering only the children with moderate/severe functional difficulties, the percentage of children with disability ID cards was only a quarter of other children with functional difficulties. Only one out of five children with disabilities had a disability card.

Putting things in perspective, the sample of children with a disability ID card is only a small subset of all children with disabilities.

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<sup>19</sup> The survey team also encountered a case where the card was issued to a child without disabilities but used for the sibling who had a disability.

<sup>20</sup> To reduce possible sample contamination effects, children's names were checked against the LGU lists: 13 children were found to have a disability ID card among those not initially sampled as having one, and 25 children were found in the same household of the children sampled for having a disability ID card.

<sup>21</sup> Supporting this hypothesis, see Rajan Sonik, Susan Parish, Monika Mitra, and Joanne Nicholson (2018). Parents with and without disabilities: demographics, material hardship, and program participation. *Review of Disability Studies*, 14(9), 1-20.

**Table 3: Percentage of children with disability ID card with functional limitations**

Age Group	% with Functional Difficulties		Obs.
	Moderate/Severe	Mild/Moderate/Severe	
<b>Age &lt;2*</b>			
in HHs of children with disability ID (excluding sampled child)	0.0	3.2	115
in HHs of children without disability ID	0.0	1.5	269
<b>Age 2-17</b>			
in HHs of children with disability ID (excluding sampled child)	4.7	8.1	1,690
in HHs of children without disability ID	3.5	8.5	2,820
<b>Age 18+</b>			
in HHs of children with disability ID (excluding sampled child)	4.7	17.6	3,613
in HHs of children without disability ID	2.7	14.6	3,731

(\*) This is based on screening at birth revealing either substantial or some risks/problems

Among adults, the prevalence of functional difficulties appeared relatively low because the survey focused on households with children and a younger profile of adults in the sample compared to the general population<sup>22</sup>.

When considering different age groups in adults, functional difficulties increased with age and for older age groups these tended to be higher among women. Among adults, the survey was also used to experiment on a different way of asking the WG short set of questions that could reduce interview time. (This is discussed in Annex C.)

<sup>22</sup> For example, the percentage of those aged 60 and above is 5% in the sample, but in the whole population is almost 9%.

## 3.3 Characteristics of children and their families

Before considering indicators of access to services and wellbeing this section provides general information about the demographic characteristics of children by comparing them across different analytical groups.

The aim is to compare the sampled child with a disability card with another child from the control households. Within the control group, whenever there was more than one child in the household, a random child was selected for comparison purposes.

It was also useful to distinguish children based on their possession of a disability card and at least one functional limitation (mild, moderate, or severe). This grouping contains four subgroups of households/children:

- those with the card but do not have a functional limitation;
- those with a card and at least some functional limitation;
- those without the card, but with functional limitation; and
- all other children

The first and the third groups were relatively small in terms of observations, but the third group was particularly important because it provided the characteristics of children likely to have a disability, but do not have a disability ID card. As seen earlier, in terms of population, these children were significantly more than those with a card.

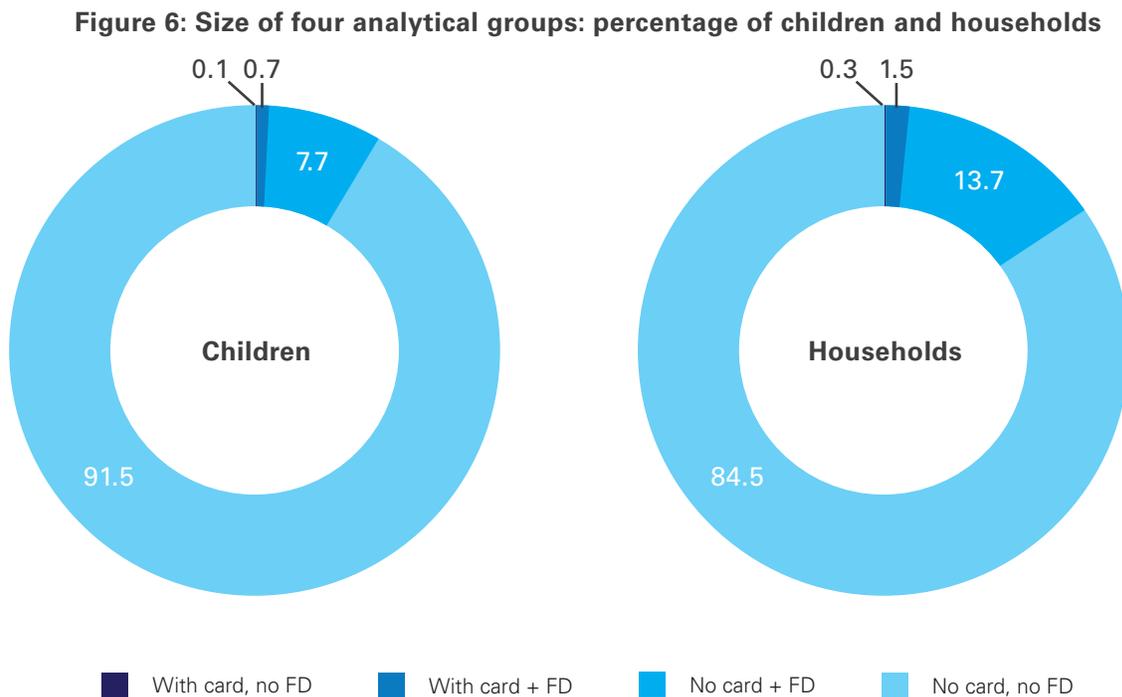


Table 4 reports sex and age distribution of children based on these different groups. Two clear results emerged: children with a disability ID card were more likely to be boys<sup>23</sup>, whereas there were no differences in sex for those with functional difficulties; and children with a disability ID card tended to be older than other children. The second result was expected since some types of disabilities, or developmental delays, might not be identifiable at a very young age. In some cases, parents might not accept their child could have a disability and postpone formal diagnosis.

**Table 4 Children’s age and sex by disability card and functional difficulties**

Characteristics	Sampled Child		Disability Card and Functional Difficulties (aged < 18)			
	Card	Other	Card, no FD	Card+FD	FD, no card	Others
<b>Children (Obs)</b>	1350	1402	255	1127	394	4500
<b>Sex</b>						
Boys	59.9	52.2	56.6	60.6	49.2	52.1
Girls	40.1	47.8	43.4	39.4	50.8	47.9
	100.0	100.0	100.0	100.0	100.0	100.0
<b>Age</b>						
<6	17.1	29.2	28.9	14.7	29.2	31.2
6-11	41.0	33.5	34.2	42.6	33.6	34.3
12-17	41.8	37.2	36.9	42.6	37.2	34.5
	100.0	100.0	100.0	100.0	100.0	100.0

Table 5 looks at the highest education level achieved by parents of the sampled children in the same group of households: whether there was a child with a disability ID card and at least one child in the household with some functional difficulty. There were cases when the father and mother did not live in the household and in some cases the sampled child did not live with his parents.

Among households with a child with disability ID card, there was a clear difference between those who with some functional limitation and those without. The latter had a significantly higher education level. In contrast, those with a functional limitation were more likely to reach primary education or less. The percentage of those with higher education (after secondary school) was the lowest among those with functional limitations but no disability card.

The same table considers the distribution of the geographical area where the household lives; household size; and the type of household, that is, whether it is a nuclear family (parents with children), a three-generation household or a more complex structure. Households with children who have functional limitations appeared to have similar characteristics irrespective of whether or not they have a disability card. The group of households with a disability ID card but with no functional difficulties were smaller, nuclear family household types, and were more likely to live in the NCR.

<sup>23</sup> It is common also in other countries to find higher percentage of disabilities among boys. See for example <https://www.oecd.org/els/family/CO1%209%20Child%20disability%20FINAL.pdf>. The leading causes of the gender differences are learning disabilities, which are more common in boys. This is also true in our sample where 373 boys were classified as having a learning/intellectual disability against 184 girls.

Table 5 provides information on the distribution of households across consumption quintiles. These are defined within the sample so they are consumption quintiles for households with children and not the whole population. Households with a disability card appeared to be overrepresented among the top quintile. Those without a card but with functional limitations were disproportionately found among the lower quintiles.

**Table 5 Parents' education and household characteristics by disability card and functional difficulties**

Characteristics	Sampled Child		Disability Card and Functional Difficulties			
	Card	With card	Card, no FD	Card+FD	FD, no card	Others
<b>Parents (obs)</b>	2093	2127	371	1735	291	1823
Primary or less	25.0	21.9	17.2	26.7	25.4	21.3
Lower secondary	13.3	15.2	12.7	13.3	18.8	14.6
Upper secondary	29.3	35.9	29.5	29.2	32.0	36.5
Higher	32.5	27.0	40.6	30.8	23.7	27.6
	100.0	100.0	100.0	100.0	100.0	100.0
<b>Households (obs)</b>	1357	1396	234	1123	190	1206
<b>Geographic area</b>						
Luzon	42.6	43.9	18.9	46.8	49.8	42.9
Visayas/Mindanao	44.5	42.5	53.1	43.0	38.8	43.1
NCR	12.9	13.6	28.1	10.2	11.4	14.0
	100.0	100.0	100.0	100.0	100.0	100.0
<b>Household size</b>						
Three or less	21.0	21.4	25.3	20.2	18.9	21.8
Four	22.7	28.0	27.0	21.9	25.2	28.4
Five	23.5	21.7	20.7	23.9	19.3	22.1
Six or more	32.9	28.9	27.1	34.0	36.5	27.7
	100.0	100.0	100.0	100.0	100.0	100.0
<b>Household type</b>						
Nuclear	67.1	63.3	70.2	66.5	62.8	63.4
Three generations	14.5	16.6	14.1	14.6	16.5	16.6
Other	18.4	20.2	15.7	18.9	20.7	20.1
	100.0	100.0	100.0	100.0	100.0	100.0
<b>Consumption quintile</b>						
Poorest	20.8	20.0	18.1	21.2	24.9	19.2
2nd	17.3	20.0	14.7	17.7	22.9	19.6
3rd	17.0	20.0	14.3	17.4	20.6	20.0
4th	17.0	20.1	14.6	17.4	13.6	21.2
Richest	28.0	19.8	38.3	26.3	18.0	20.1
	100.0	100.0	100.0	100.0	100.0	100.0

To expand on household structure and who may provide care, qualitative interviews targeted the primary carer of the child or children with disabilities. In most cases, the primary carer was female. Most women with primary care duties were the mother of the child with disabilities. Other women who took primary care roles included the sister of the child or the grandmother of the child. An uncle cared for the child after the child's parents left him at a young age. The uncle has no knowledge of the parents' whereabouts. Three fathers of children with disability were interviewed; one father said he was the primary caregiver.

# 04

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Fundamental Rights,  
Access to Services, and  
Wellbeing Indicators

This section provides results more specific to the objectives of the study: evidence on how the fundamental rights of children were fulfilled, including access to basic services (health and education) and use of assistive devices. The section also looks at the level of support provided by the disability ID card and social transfers and their distribution across the different incomes.

## 4.1 Fundamental Rights and Access to Basic Services

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Based on the Convention on the Rights of the Child, children's rights can be summarised according to four main pillars<sup>24</sup>:

- The right to survival: concerns basic needs such as adequate nutrition, healthcare, water and sanitation, and a safe place to live in.
- The right to development: primarily related to access and quality of education.
- The right to non-discrimination and protection: concerns the safety of the social environment within the home and community of the child.
- The right to voice and participation: the active role of the child in daily activities.

The survey collected information on all these dimensions, with more emphasis on the first two aspects, which have tangible and recognised indicators, and to a lesser extent on the third and fourth groups of rights, which require different tools of analysis.

Some indicators were measured at the household level while other indicators specific to each child were gathered from the main carer either for all children in the household or for the sampled children within the group of households. The latter refers to the child with the disability ID card and another random child within the control group of households.

### 4.1.1 Right to Survival

The right to survival can be assessed on the following dimensions: need and use of health services; nutrition, including the level of food expenditure and dietary diversity; access to water, sanitation and hygiene; and dwelling conditions.

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<sup>24</sup> See <https://www.unicef.org/thailand/what-is-crc>.

## Health

### Diagnosis and early identification

Early detection and diagnosis of health conditions and impairments are important for planning appropriate health care interventions and reducing the risk of severe and long-term disability. Qualitative findings showed that some families did not have any formal medical diagnosis for their child. Families that did have a medical diagnosis reported difficulties in obtaining one. Respondents said the process took a long time, involved significant travel and were unaffordable.

Families reported having to pay for multiple health procedures and consultations as part of the diagnosis process. One family said they paid for the same assessment twice because their new doctor was not satisfied with the findings from the previous doctor. The costs of assessment varied and could be prohibitive. One family said the cost of a single bone marrow biopsy was PHP13,000. The costs of diagnosis were also unaffordable for some families.

The family of an 11-year-old boy with epilepsy reported paying for diagnoses at multiple health facilities. The boy had a seizure when he was five months old and was admitted to a public hospital. The family was later referred to a private clinic to undergo an electroencephalogram (EEG) test. The EEG cost PHP7,000 but this did not give a clear diagnosis. Two and a half years later, the family went to a private hospital in another city for further tests. The family stayed with a relative for three months while tests were conducted. This included another EEG test costing PHP10,000, which was again inconclusive. A neurologist recommended magnetic resonance imaging scan which cost PHP30,000 but the family never received a clear diagnosis. The family also incurred costs for consultation fees and medication.

Some families said they obtained a medical diagnosis only during or after a hospital admission due to sudden illness. Other families said they sought medical diagnosis after they noticed, or someone had pointed out to them, that their child was not speaking or walking at the same age as other children. One family said their child was diagnosed with cataracts at five months old.

### Health insurance

In 2019, an amendment of the Magna Carta for persons with disabilities (Republic Act No. 11228) established that all persons with disabilities should be automatically covered under the National Health Insurance Program of PhilHealth. Implementation rules later established that provision of insurance be based on the DOH database where cities and municipalities are expected to submit data with information on issued disability cards. PhilHealth is also expected to establish specific packages for persons with disabilities<sup>25,26</sup>. However, given that the above amendment is relatively new and that the DOH database is far from complete, it is important to assess to what extent people are aware of the health coverage and whether they can access support through their health insurance.

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<sup>25</sup> In 2013 PhilHealth already introduced special benefits for Mobility, Orthosis, Rehabilitation and Prosthesis (also known as ZMORPH).

<sup>26</sup> It is also important to know that if families are 4Ps beneficiaries there is also a provision for their automatic coverage under PhilHealth.

The survey collected information on people’s knowledge of access to health services for all household members, including children aged 2-17. The survey said a large proportion of children with the disability ID card reported not having access to any health insurance (77%). Amongst sampled children in households without the disability ID card, 87.3% said they did not have access to any health insurance. Within the group of children with a disability card, the lack of access to health insurance was higher for children without functional limitations (85%) compared to children with functional limitations (76%). The lack of access to health insurance was highest amongst children with functional difficulties but without a disability ID card (94%).

**Table 6: Reported knowledge of access to health insurance for children**

Access to Insurance	Type of Household		Disability Card and Functional Difficulties			
			With Card		Without Card	
	With Card	Other	No FD	FD	FD	Others
Without insurance	77.0	87.3	84.9	75.6	93.9	87.3
National insurance	18.3	12.4	13.1	19.0	5.4	12.4
Local insurance	4.1	0.0	1.7	4.5	0.5	0.0
Private insurance	0.7	0.2	0.2	0.9	0.2	0.3

Note: FD stands for mild, moderate or severe functional difficulties.

The survey found that in 72% of households with a child with a disability card, at least one household member reported having access to health insurance. Within this group, the proportion was higher among households with children without functional limitations compared with households with children with a functional difficulty (78% compared with 71% respectively). This measure was the lowest among households with children with a functional limitation but no disability card (61%).

**Table 7: Percentage of households reporting at least one member having access to health insurance**

	Sampled Child		Disability Card and Functional Difficulties			
			With Card		Without Card	
	With card	Other	No FD	FD	FD	Others
At least 1 HH member has insurance	72.1	64.1	77.8	70.7	60.9	64.6

Note: FD stands for mild, moderate or severe functional difficulties

### Access to health services

On the issue of access to the type of health facilities in time of need, the most common answer was government clinic, followed by government hospitals, private sector doctor or hospital, and a mix of private and public sector health provider.

**Table 8: Type of main health facility used by children**

Type of Health Facility	Sampled Child		Disability Card and Functional Difficulties			
			With Card		Without Card	
	With Card	Other	No FD	FD	FD	Others
Government Clinic (public)	42.1	54.7	52.8	39.7	42.5	59.1
Government Hospital (public)	32.7	26.6	23.3	34.5	29.5	23.9
Private Sector Doctor or Hospital	15.1	7.0	15.2	15.3	8.6	6.1
Mix of Public and Private Health Providers	9.0	10.2	6.5	9.7	17.3	8.8
Others	1.1	1.5	2.2	0.8	2.1	2.0
	100.0	100.0	100.0	100.0	100.0	100.0

Note: FD stands for mild, moderate or severe functional difficulties.

A higher proportion of children with a disability card had access to a private sector health provider (15%) compared with children without a disability card (7%).

The survey also asked respondents whether they had to forgo necessary treatment or consultation in the last six months. Table 9 shows that 24.9% of children with a disability ID card had to forgo treatment or consultation compared with 16.3% of the children without the disability card<sup>27</sup>. Among children without the disability card, 22.0% of those with functional difficulties had to forego treatment, compared with 14.4% of children without functional difficulties, a percentage similar to those with the disability card.

**Table 9: Treatment/consultation forgone in the last 6 months**

	Sampled Child		Disability Card and Functional Difficulties			
			With Card		Without Card	
	With card	Other	No FD	FD	FD	Others
Forgone Treatment/ Consultation	24.9	16.3	24.5	25.0	22.0	14.2

Note: FD stands for mild, moderate or severe functional difficulties.

Qualitative findings showed that proximity to health facilities was a contributing factor in the ability of families to access health services. Some families had limited knowledge on the availability of health services in their local area. One respondent said that while they wanted their child to see a speech therapist, they did not know whether speech therapy services existed in their hometown or the nearest city.

<sup>27</sup> Reasons for forgone treatment were cost and the risk of being infected with COVID-19.

Families accessed both private and public health facilities. For some families, the nearest facility was private, but the services here were more expensive. It is important to note that access to a health facility is not the same as access to the required health services. Different health facilities offer various services with much of the allied health services provided by private practice.

Families said they accessed occasional specialist treatment, such as hospital care and diagnostic services, as well as routine consultations, checkups, renewal of prescriptions, and therapeutic support services. Health facilities also played an important administrative role. They issued formal documentation, such as medical certificates required in applying for a disability ID card or for support from private donors and charities.

The direct costs of health services and associated costs, such as travel and transportation, were among the reasons for not accessing health services. Other reasons were unavailability of services, lack of time, and competing responsibilities of primary carers, such as work or the care of other children in the family. This could be a particular challenge for families with children who require frequent treatments or consultations, such as therapy sessions with a physiotherapist or occupational therapist. The costs of health services are discussed in more detail in the following sections.

*I only bring [my daughter] to the doctor when her leg is hurting. It swells so much that it almost looks like a longganisa [sausage] and oil comes out of it. That's the only time I bring her to the doctor, so they can give her antibiotics and other vitamins for the pain.*

The availability of services could be a concern for families. For example, the family of an 8-year-old child with leukaemia said that the local private hospital did not have the equipment for blood transfusions. The need for services could also change over time. One respondent said they had learned how to manage their child's seizures at home as the child got older, resulting in less money spent on emergency hospital care.

### **Financial costs of health services**

Families said health services were their single largest expenditure as they spoke of difficulties in paying for these in qualitative interviews.

Surgeries and specialist diagnostics were the most expensive health services. These were typically available only at major public hospitals. One family said they had spent between PHP1.5 million to PHP2.5 million on dialysis for their child who has a chronic kidney disease. They also spent PHP500,000 more for preparations for the child's transplant.

Families of children who required hospital care or specialist consultations at secondary and tertiary level health facilities related their financial difficulties. One respondent said she had to raise PHP13,200 for her child's bone marrow biopsy. During sudden hospitalisations, families have no time to source funds to pay the bill. One mother had to transfer her son from a private to a public hospital to save money. She said her husband had to 'borrow money from everywhere' to pay PHP65,000 for a blood transfusion.

Routine consultations with health professionals were another significant expenditure. The cost typically ranged from PHP500 to PHP1,200 depending on the health professional and whether the service is public or private. One family paid as much as PHP3,000 for a consultation with a developmental paediatrician. The total cost would have been higher if specific health procedures or assessments were included.

Money spent on routine consultations varied depending on the number and frequency of appointments. For speech therapy, one family spent PHP800 per session twice a week for about 10 to 12 years. A family with a child with cerebral palsy paid PHP1,200 three times a week for joint therapy sessions with a physiotherapist and occupational therapist.

Medications were also expensive and for families with children with a chronic health condition, prescription drugs could be their biggest health expenditure. Medications include antibiotics to reduce risk of infection and drugs for pain management. Families of children who need regular prescription medicine, often on a daily basis, have to adjust household budgets to pay for doctor's appointment every time there is a need to renew or change prescriptions. Parents of children with complex health conditions said that the cost of medication frequently changed with the changing medical needs of their child. One respondent had to pay for additional medicine to reduce the side effects of health management medications.

*There has been lots of medication and it's always changing. There's Dilantin, Valproic, Gabitril, Clonzaepam, and many more. We have maybe changed his medication at least ten times. His regular checkups are with his neurologist. [...] Now we are also consulting another doctor who is a stomach specialist as he always has stomach pain whenever he drinks his medication.*

Families also spoke of finding ways to obtain cheaper medication. One respondent bought medication in bulk directly from the manufacturer. Another one obtained discounted medicine by being a member of an organization of persons with disabilities (OPD). Respondents said informal contacts, such as local politicians or administrators, or knowing doctors personally also helped them obtain cheaper medication.

Other health care products were also noted. One respondent paid PHP2,000 for a nebulizer to manage their child's asthma. Another family spends PHP 2,000 a month on nasal spray.

### **Forgone and unmet health needs**

Families reported being unable to pay for and, therefore, forwent health services recommended for their child. These included the full range of health services and specialist medical services, such as surgeries and diagnostics, routine consultations, therapies and medication.

The higher the cost, the more likely treatment, even for preventable conditions, would be forgone. The family of a 6-year-old child with a vision impairment spent PHP45,000 for surgery on one eye to remove a cataract. However, they could not afford to pay for the same procedure on the other eye. One respondent, whose child did not have a formal medical diagnosis, was unable to take the child to hospital in an emergency because the family could not afford the 'doctor's fee' and transportation to the hospital.

Families also reported having to cancel or postpone routine health appointments due to insufficient funds. Families who needed to travel to health clinics would forgo routine consultations such as medical checkups and therapy sessions because of travel costs. One respondent said they would only bring their child to the local health facility when it was 'absolutely necessary'. The mother of a child with visual impairment said there was not enough money to pay for regular checkups to assess her daughter's eyesight.

Some families were unable to pay for all the maintenance medicines prescribed for their child. Other respondents said they were unable to pay for any medication at all. One respondent could not pay for medication to manage their child’s seizures, which were more frequent and severe in hot weather. Respondents also missed medical appointments with doctors and dentists due to COVID-19 public health restrictions.

**Assistive devices**

Only 11% of children with a disability ID card have an assistive device (see Table 10). However, many more acknowledged that their child would need an assistive device (22%). For children with an assistive device, they were likely to report the lack of other/better assistive devices. The use and need for assistive devices tended to be most common for those with sensory impairments (hearing and visual disabilities) and for those with physical disabilities.

Recognising the need for assistive devices might be underreported and considering those who have an assistive device and those who say they would need one, 30% of children with a disability ID card said they require an assistive device. However, only 26% of these children said their need for an assistive device was met. The survey did not gather similar information on children with functional limitations who do not have a disability card.

When asked about the reason for the lack of an assistive device, the most common reason was cost and the household’s need to prioritise the purchase of medicines and therapies (87% of cases). Other reasons were the unavailability of assistive devices in their location and the need for consultations and tests, such as fitting.

**Table 10: Assistive devices and home adaptations among children with disability ID card**

	With Card		All
	No FD	FD	
Have Assistive Devices	10.4	11.2	11.0
Need Assistive Devices	6.3	24.6	21.9
Made Adaptations at Home	7.0	5.8	6.0

Note: FD stands for mild, moderate or severe functional difficulties.

The most common assistive devices were wheelchairs (49%), followed by glasses (22%), hearing aids (20%) and other devices.

Since the observations were few, these estimates are conservative: the median cost of a wheelchair was PHP6,500; hearing aid, PHP35,000; glasses, PHP2,000; and other devices PHP5,100.

Qualitative findings showed that, overall, families had limited knowledge of assistive devices, including types and availability of assistive devices for their child. Limited knowledge meant sources of information on assistive devices might be from informal sources and chance encounters and information on prices might not always be accurate:

*My daughter, who has an intellectual disability and hearing impairment] still needs a hearing aid. Back then when we were in [name of town] she saw a child who had a hearing aid. The child could hear and talk. Maybe she thought that having [a hearing aid] would allow her to hear and talk. She even dragged me outside the house so that I could see. I think she aspired to have the ability to hear and talk just like that child. I asked around to find out how much a hearing aid cost and it's about PHP100,000.*

Another respondent said that they only became aware of motorised wheelchairs when they saw someone using one. One parent said their daughter was encouraged to learn how to use her walker after she saw people using walking aids on Tik Tok.

The cost of obtaining assistive products was an obstacle. Families said they were unable to, or assumed they would be unable to purchase assistive products. The sibling caregiver of a 15-year-old child with a physical impairment, whose mother recently died, did not know how much a motorised scooter costs. The family assumed they could not afford it. Another family said they cannot afford the PHP1,700 hearing aid per ear for their child.

Respondents related paying for consultations with rehabilitation practitioners but were unable to pay for the recommended assistive products. One family spent PHP50,000 on optometrist fees but they were unable to buy the recommended glasses. Families with children using glasses reported paying for frequent assessments and updated prescriptions, as often as every six months in one case.

Some families obtained assistive products but still had unmet assistive device needs. A mother said her child had a wheelchair but still needed a leg brace and walking aid. The mother also said they were apprehensive about using the wheelchair because it had a metal frame that could cause injury if her child had a seizure while using it.

Problems with unmaintained assistive devices were also reported. One parent said their child's walking aid suddenly gave way. The family of a child with cerebral palsy said a suction machine, which they had bought secondhand broke down. A friend lent them her suction machine after her own child died but the respondent said the suction function was 'not that good'.

Assistive devices such as wheelchairs and prosthesis needed refitting as children outgrew their use. One mother said her 17-year-old daughter had outgrown her prosthetic leg. The leg was supposed to be replaced every two years. It was provided and fitted by the Philippines Charity Sweepstakes Office (PCSO) in 2017. The mother said she didn't know how to contact PCSO for a new fitting.

Some families were able to access assistive technology for free or at reduced costs from charitable organizations, such as the PCSO. One respondent said their family gave away a wheelchair which had been donated to them because their daughter felt self-conscious about 'people looking at her' whenever she used it. Others sought their own solutions with one parent providing the child with bamboo and pipes, as these were easier for her to hold while walking.

Survey findings showed that in 30% of cases, people paid to get the assistive device and in other cases, people obtained the item from the government, non-government organizations or from relatives or friends. Government support was most common in obtaining wheelchairs, while households tended to purchase glasses.

## Adaptations to the home

In qualitative interviews, few respondents said they installed changes in the home. As reported, less than 6% of households with a child with a disability card made some home adaptations. These were more likely in cases when the child has a physical disability (9%). Where information on medical diagnosis was available, it appeared to be more frequent in epilepsy and cerebral palsy cases. But these observations were relatively few.

For families who rented their accommodation, adaptations could be difficult and require agreement from the property owner. Others did not prioritise making adjustments because of competing demands for time and money.

For those who installed changes, most of the changes involved the adjustment of furniture, fittings, and amenities within the home. Most adaptations were simple, such as making the bed more comfortable and safer with padding and safety barriers. Adjustments in the home were made in areas where the child spent most of her/his time. The purpose was to make it easier for the child to move around by installing railings or larger doors. Changes to the structure of the home were limited. But in some cases, households made significant investments such as preparing a separate room for the child's therapy.

One family added a cement floor to their house as the previous unfinished floor was hurting their daughter's feet. They also made a platform out of bamboo to provide extra space for their daughter. These adjustments cost around PHP19,000 and made their daughter more comfortable. Another family was in the process of demolishing and rebuilding their home at the time of the interview. The previous house was too small and they wanted their daughter to have her own room. The family planned to add railings so the daughter could support herself and a bidet, which was essential. The cost of steel bars for the railings was PHP750 and they bought a bidet from an online marketplace for PHP275.

One family installed a new toilet bowl and pipes as their child frequently went to the toilet and the toilet would get clogged. This cost PHP1,500. Another family wanted to install child-safe electrical sockets as their daughter was plugging items into the socket. They also removed all locks from doors in the house:

*One time she was in the restroom and she locked the door. I was afraid that she might have a seizure while locked inside, so I called her and told her to open the door. Fortunately, I had left a small chair which I use when washing clothes. She stepped on it to reach the handle and opened the door. Since then, locks on all doors in the house had been removed.*

Other adjustments included buying a chair specifically for the child and providing a polyurethane foam mattress topper to aid sleep and rest. Higher electricity usage was also reported. One family had an air conditioning unit installed for PHP20,000 because their daughter was susceptible to heat. They estimate their monthly electricity bill to reach PHP3,500. Another family kept the lights on in their house all day because their child could not see well in some parts of the house. They do not have a refrigerator but their electricity bill is PHP2,000 a month.

## Nutrition and food

To assess food security among the study population, a food consumption score (FCS) was used based on a methodology developed by the World Food Programme<sup>28</sup>. The FCS is a composite score based on dietary diversity, food frequency, and relative nutritional importance of different food groups.

<sup>28</sup> Food consumption analysis. Calculation and use of food consumption score in food security analysis. Prepared by VAM unit HQ Rome. 2008

In constructing this score, a weight based on nutritional importance was assigned to each of the following food groups: main staples (2), pulses (3), vegetables (1), fruit (1), meat and fish (4), milk (4), sugar (0.5), and oil (0.5). Any condiments were assigned a weight of zero, while any food eaten at restaurants was assigned a weight of 4.

Thresholds based on the WFP FCS methodology were used to convert the food consumption score from a continuous variable to a categorical variable, showing poor, borderline, and acceptable FCS scores as shown in Table 11.

**Table 11: Food consumption score thresholds**

FCS	Profiles
0 – 28	Poor
28.5 – 35	Borderline
>35	Acceptable

The analysis shows that most households had an acceptable food consumption score<sup>29</sup>. In Table 11, more than 90% of the households across various analytical groups were in the acceptable range. The exception was for households with a disability card but no children with functional difficulties, where the proportion dropped to 84%. The FCS cannot factor for any intra-household effect.

**Table 12: Food consumption score**

	Type of Household		Disability Card and Functional Difficulties			
			With Card		Without Card	
	With Card	Other	No FD	FD	FD	Others
Poor	1.2	1.1	6.0	0.3	0.0	1.3
Borderline	6.6	4.9	9.6	6.0	7.2	4.6
Acceptable	92.3	93.9	84.4	93.7	92.8	94.1
	100.0	100.0	100.0	100.0	100.0	100.0

Note: FD stands for mild, moderate or severe functional difficulties.

<sup>29</sup> The food consumption score is measured at the household level, and it is an indirect measure that has limitations compared to anthropometric measures, which would have provided person level and more accurate information. Unfortunately, it was not recommended to include anthropometric measures in this survey since the questionnaire was already long and complex.

To complement the FCS measure, the survey also asked for a subjective assessment of hunger episodes, using a question often included in surveys in the Philippines (for example, the Annual Poverty Indicators Survey). Results show 12% of households had at least one episode of hunger because they did not have enough food to eat in the three months preceding the interview. The percentage was slightly higher among households with children with a disability card than other households with children; the percentage was higher among those with functional difficulties (see Table 13).

**Table 13: Frequency of hunger episodes in the last three months**

Frequency	Type of Household		Disability Card and Functional Difficulties			
	With Card	Other	With Card		Without Card	
			No FD	FD	FD	Others
Never	85.5	88.1	92.2	84.4	88.5	88.0
Once in three months	5.5	6.4	2.1	6.0	4.6	6.7
Once a month	5.3	3.5	4.2	5.6	3.5	3.5
Once every week	3.7	2.0	1.4	4.0	3.4	1.8
	100.0	100.0	100.0	100.0	100.0	100.0

Note: FD stands for mild, moderate or severe functional difficulties.

### Supported feeding and dietary needs

Costs associated with supported feeding and the specific nutritional and dietary needs of children were reported in qualitative interviews. Examples were paying for specialist medical procedures, special equipment to assist in preparing food, and prescribed dietary supplements.

For some children, medical procedures and assistive devices were needed to support feeding. The procedure for inserting a permanent feeding tube, or percutaneous endoscopic gastrostomy (PEG), was said to cost PHP8,000. To reduce the risk of infection associated with using a PEG, the family also paid for maintenance and cleaning products. The family spent PHP8,000 each time they needed a new pack of protective gauze pads.

Some families face a limited range of food options if their child has dietary requirements or has difficulties in eating certain foods. This could mean additional costs in the preparation of food. A child with Down Syndrome who had difficulty chewing and swallowing solid food, needed to have all meals prepared with a blender.

Families spent money on supplements, most often vitamin supplements, recommended by doctors. This included vitamin C, vitamin D, zinc, and multivitamins. One respondent said paying for vitamin supplements was important because it improved the overall health of their child. Another bought vitamin supplements so their child would not get the common cold while others said the supplements compensated for their child's nutritional deficiencies. Another respondent said vitamin supplements helped counteract the side effects of prescribed anti-seizure medication.

Protein supplements were also recommended for some children. The parent of one child related their child could only take liquid foods and required a complete nutritional supplement. The parent said because of the expense, the doctor said they could substitute some meals with milk formula. Dietary supplements were available but expensive. Another respondent said they stopped buying the high-protein milk recommended by their doctor because it was expensive. One parent had to borrow money to pay for four different dietary supplement products every month.

*We borrow money [to buy supplements]. Whatever can be bought with that amount, that's what we buy. The next time I get my pay check, we buy what is left. We only buy what's really needed first. What we buy first is [Taurine, an amino acid] since it's for her brain so that [her brain] can develop [...]*

### Water, sanitation, and dwelling conditions

As indicated in Table 14, common drinking water sources cited by respondents were bottled water, water from a tanker, peddler or neighbour. These were the main sources of drinking water for 38% of households with a disability card and 41.5% of households without a disability card. The proportion was highest amongst households who had a child with functional limitation but no disability ID card. The second main drinking water source among respondents was community water piped into the dwelling. This was the main drinking source for 35% of households across both groups-- those with the disability ID card and those without. The proportion was slightly lower (31.2%) for households with children with functional limitations but without a disability card.

**Table 14: Access to drinking water**

Type of Access to Drinking Water	Type of Household		Disability Card and Functional Difficulties			
			With Card		Without Card	
	With Card	Other	No FD	FD	FD	Others
Community system, piped into dwelling	34.9	35.1	38.2	34.3	31.2	35.7
Community system, piped into yard	7.8	8.1	7.3	7.9	9.5	7.8
Community system, piped into public taps	6.6	6.5	4.8	6.9	3.9	6.9
Other improved water source	7.8	4.7	8.8	7.6	5.0	4.7
Unimproved water source	3.9	3.4	0.0	4.6	5.3	3.0
Bottled water/tanker truck/peddler/neighbour	38.0	41.5	40.0	37.6	45.0	40.9
Others	1.0	0.7	0.8	1.0	0.0	0.9
	100.0	100.0	100.0	100.0	100.0	100.0

Note: FD stands for mild, moderate or severe functional difficulties.

Table 15 shows the breakdown of access to toilet facilities. Most households had access to a toilet with flush to septic tank. This was followed by toilets with flush to other sources, such as sewer system, pit latrine, or open drain. Less than 5% of households said they used an unimproved toilet, such as latrine without slab, hanging toilet or bush, as their main toilet facility.

**Table 15: Access to type of toilet facility**

Type of Toilet Facility	Type of Household		Disability Card and Functional Difficulties			
			With Card		Without Card	
	With Card	Other	No FD	FD	FD	Others
Flush to septic tank	86.7	86.1	89.8	86.2	78.3	87.4
Flush to other sources	6.5	7.8	4.3	6.9	17.5	6.3
Other improved latrine	1.5	1.2	0.7	1.7	0.2	1.4
Not improved latrine	3.7	3.3	3.4	3.7	1.8	3.5
Others	1.5	1.6	1.7	1.5	2.2	1.5
	100.0	100.0	100.0	100.0	100.0	100.0

Note: FD stands for mild, moderate or severe functional difficulties.

#### 4.1.2 Right to development: education

This section looks at the child’s right to development in terms of education enrolment and completed level of education. This section also analyses the time spent on school activities and the class setting in which children with a disability card receive formal education. Formal education could be as part of a SPED class or as part of mixed classes in a mainstream school. Education support provided in mainstream schools is often very limited. In general, education services for children with disabilities follow a special education approach, but recently there have been efforts to promote an inclusive education approach<sup>30</sup>. While there are specific policies and programmes promoted by the Department of Education, the survey intends to find out the extent to which these are implemented.

Table 16 looks at the highest education level achieved by sampled children aged between 5 and 17 across the different groups of children. The first observation is that children without a disability ID card completed higher levels of education compared with children with a disability card. A higher proportion of children completed primary education (44% compared with 33%); lower secondary education (32% compared with 16%); and upper secondary education (5% compared with 2%).

In addition, a small proportion of children with functional limitations but without a disability ID card were enrolled in a SPED class<sup>31</sup>.

<sup>30</sup> See for example, [https://www.deped.gov.ph/wp-content/uploads/2021/11/DO\\_s2021\\_044.pdf](https://www.deped.gov.ph/wp-content/uploads/2021/11/DO_s2021_044.pdf).

<sup>31</sup> The expectation was that children with functional limitations and without a disability ID card would have fared worst. This was not the case because within this group there was a higher proportion with only mild functional limitations (reported as ‘some’) compared with other groups. Furthermore, moderate/severe functional difficulties were driven by answers to questions related to anxiety and depression, which are likely to affect education in different ways than other types of functional limitations.

**Table 16: Education level completed**

Level of Education Achieved	Sampled Child		Disability Card and Functional Difficulties			
			With Card		Without Card	
	With Card	Other	No FD	FD	FD	Others
Less than primary	35.6	18.7	26.7	37.5	23.4	17.6
SPED	12.6	0.0	6.8	13.3	0.9	0.0
Primary	33.5	44.4	41.9	31.8	44.0	48.4
Lower secondary	15.9	32.1	20.5	15.3	25.6	29.7
Upper secondary and higher	2.4	4.9	4.1	2.1	6.0	4.3
	100.0	100.0	100.0	100.0	100.0	100.0

Note: FD stands for mild, moderate or severe functional difficulties.

Table 17 looks at the enrolment status of children across the different categories of sampled children but considered only children aged 5 to 17. Almost a third of children with a disability ID card were not enrolled in school (31%), compared with just 4% of children without a disability ID card. The relatively low lack of enrolment among those without a disability card but with functional limitations could be explained by the higher percentage of children with mild functional difficulties within this group.

**Table 17: Enrolment status (children aged 5 to 17)**

	Sampled Child		Disability Card and Functional Difficulties			
			With Card		Without Card	
	With Card	Other	No FD	FD	FD	Others
Public School	63.0	89.7	74.9	60.6	86.9	91.2
Private School	5.7	5.9	8.2	5.3	5.3	4.8
Not enrolled	31.0	4.1	16.0	33.9	7.8	3.9

It is also useful to look at the relationship between lack of enrolment and the degree of functional limitations and how a lack of enrolment is linked to income (consumption quintiles).

As expected, Figure 7 shows a strong and positive correlation between degree of functional limitation and lack of enrolment. Among those without functional limitations only 4.1% of children were not enrolled. However, the percentage increased to 40.5% if the child had severe functional limitations. Among those with a disability card and severe functional limitations, the percentage reached 53.6%. Moreover, while there was a negative relationship with consumption expenditure (higher quintiles saw a reduction of non-enrolment), the percentage of those out of school remained very high for children with a disability ID card and the relative gap between those with a card and those without increased.

**Figure 7: Percentage of children aged 5-17 not enrolled in school by level of functional difficulties, consumption quintiles and ownership of disability card**

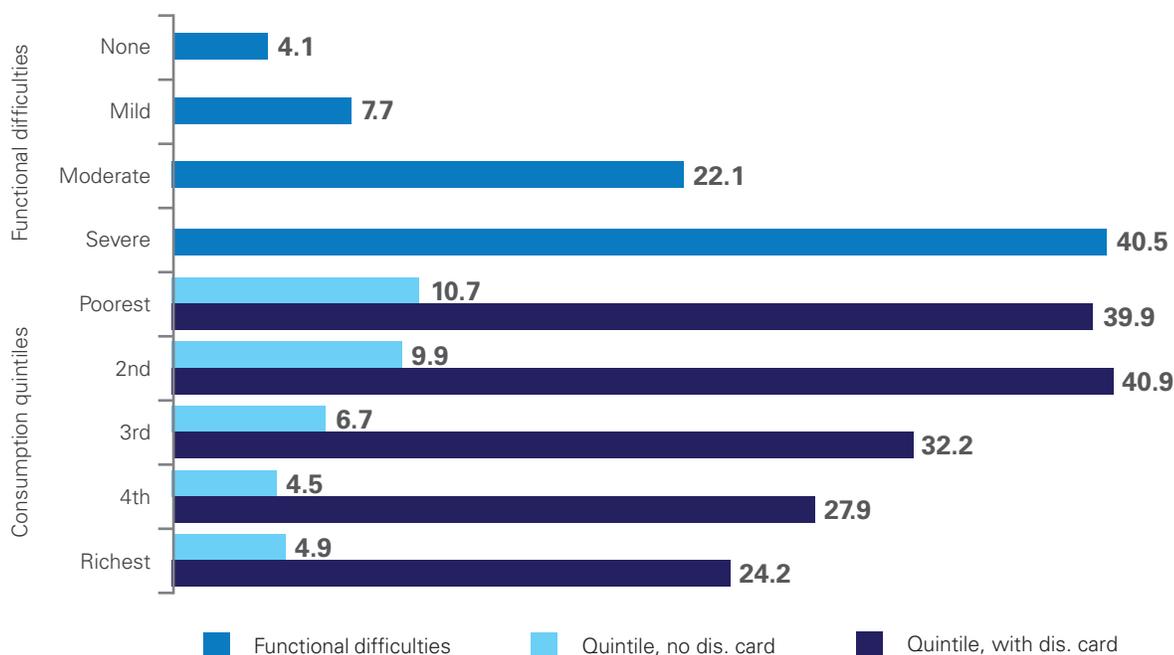


Table 18 shows the status of enrolled children with a disability ID card. Children spent less than four days in school activities every week (in-person or remotely because of COVID restrictions) and approximately three hours every day in schoolwork. Children with a disability card and functional limitation spent less time (less than three hours) per day in school activities compared with children without a functional limitation (3.3 hours). Among this group (children with a disability ID card), a higher proportion of children with a functional limitation were enrolled in SPED schools (25%) compared with children without a functional limitation (18.9%). The high number of children without a reported functional limitation who were attending SPED schools raises issues on the self-reporting of functional limitation compares with medical assessments.

**Table 18: School activities and class setting for children with disability ID card**

	With Card		Total
	No FD	FD	
No. of days per week spent in school or at home in school activities	3.7	3.6	3.6
Hours per day spent on school work	3.3	2.9	2.9
<b>Class Setting</b>			
SPED school- only for children with disabilities	18.9	25.0	24.0
Separate SPED class in mainstream school	8.3	8.5	8.4
Mixed classes in mainstream school	60.8	62.9	62.6
Others	12.0	3.6	5.0
	100.0	100.0	100.0

### Accessing education

In qualitative interviews, families reported going to great lengths to ensure their children attended school. The pre-survey interviews identified a range of cost categories. Costs common to families of children with and without disabilities were school uniforms, books and school fees. Additional costs incurred by families with children with disabilities were higher fees in SPED schools; the need for a shadow or support teacher for some children; and transportation costs.

The limited choices that families of children with disabilities faced compared with families of children without disabilities were evident. Interview respondents said they had to travel between 30 minutes to one and a half hours one way to bring their child to school. This could be because there was no dedicated SPED school or a school with a SPED programme near their home or because the nearby schools would not accept their child with disabilities.

For families with children with behavioural difficulties, attending school could be particularly challenging. One family tried several schools with no success. The respondent related that after their child was able to enrol and attend school, the school later requested the parents to withdraw their child.

### Enrolling in school

One parent of a 16-year-old child with a speech impairment said they wanted to enrol their child in school, but they did not have the financial means to do so. The parent said they were advised to enrol their child in a SPED school in a neighbouring town but this was not possible as they did not have their own transport and the school was far. Another said they would like their child to continue further education but they could not afford it.

One mother did not want to enrol their daughter in school. The 15-year-old child has an orthopaedic impairment and had never been to school. The mother said it would be financially difficult for her daughter to attend school, adding her daughter was better off at home with her. The mother also said she could not leave her other children at home if she brings her daughter with disabilities to school. She would also need the assistance of her older brother to help her carry her daughter.

Another parent tried to enrol their child in a school with a SPED programme. The child was able to enrol but could only access physical therapy. The school would not allow the child to attend classes because the child has seizure attacks. Another respondent said their child had to stop attending school after doctors found their child had rheumatic heart disease and required regular dialysis. The child has been home-schooled since and a teacher delivers the learning modules to the parent.

### Adjustments and reasonable accommodation in school

Positive experiences were noted by some parents, including one child who was given a scholarship to cover school fees for a year by the school head. The benefits of small SPED class sizes were cited along with a welcoming environment and acceptance by the other students. Attending SPED could have financial advantages. One parent said doctors and charitable organizations provided free medical assessments, school feeding and educational supplies at SPED schools. However, this was usually given once a year in December.

In non-SPED schools, the special needs of a child with disabilities were not always accommodated. One parent was concerned their child with poor vision was lagging behind in school because the child was seated at the back of the class and could not read what the teacher wrote on the board. Another parent said a teacher who usually

seated students in alphabetical order was initially reluctant to let their child sit in front but later agreed. Another parent said their child could attend classes on the ground floor but wondered how their child could attend classes if the classroom was assigned on the upper floors.

*If he doesn't have a shadow teacher, he won't be monitored by the teacher. If that's the case, he'll keep running [around the classroom]. There are instances when he shouts suddenly which can distract the class. It's not like in SPED. The reason SPED is expensive is because it's a maximum of four students per class, so [the children] are really monitored. In the regular [school] setup [he attends] now, there are 26 students in the class.*

*[...] Sometimes, because his speaking skills and social skills are poor, sometimes the teacher notices that he's just in a corner [...]. [The teacher] didn't know his table and chair were occupied by another child. He couldn't say somebody had stolen his seat. So, that's how it is. Sometimes, he comes home with writing on his shirt. When we ask the teacher, [the teacher's] not aware why. Something might happen to him and they wouldn't know because there are so many students.*

One parent complained that every year he has to explain his child's disability to the school and provide a medical abstract even though he had provided this information in the annual online enrolment. The parent said there was no financial cost involved, but it was time consuming and frustrating. The parent was concerned the information had not led to an obvious change in the manner of teaching and teachers' attitudes in the school. The parent said they had to visit the school the day before he was interviewed to explain again why their child was behind his studies.

Another parent said their child who has an intellectual disability attends a private Montessori SPED school. The parent said this was the family's 'heaviest' expense. The annual tuition fee is PHP45,000 excluding books, uniform, lunch, and other supplies, such as pens and notebooks. The parents have decided not to have another child because of the costs involved in raising and educating their child.

### **Bullying and stigma**

In non-SPED schools, bullying was reportedly common. One family said their fear of bullying was a reason why they did not enrol their child in school. Another parent reported difficulties with their child who did not want to go back to school after the child was physically 'pushed around'. The parent has reported the incident to the school. The child attends classes from home due to COVID-19 restrictions but the parent hopes their child would return to school when face-to-face learning resumes. Two parents said they spoke directly to the other children to explain their child's disability to stop bullying in and outside school.

*There are some who are direct with her [15-year-old with orthopaedic disability]. It can't be helped. They look at her, especially the other children. Children can't help themselves. They look because they don't understand. But she's brave. She doesn't let herself be bullied by children who laugh at her. She gives them the dirty finger.*

Children were not the only bullies. One parent withdrew their child from a public school after a teacher assaulted the child with a pencil. The family transferred their child to a private school and later to a less expensive public school. One parent reported their daughter had been bullied by the other parents at her elementary school. The

other parents could not accept that a child with disabilities was performing better in school than their children who did not have disabilities. Despite this experience, the parent said she 'never hesitated' to send her daughter to school.

### **COVID-19 and remote learning**

At the time of interviews, remote learning was in effect due to COVID-19 restrictions. Although some children were eligible for face-to-face learning at that time, none complied. Vaccine hesitancy may be a factor. One family said they were undecided about whether they should get their child vaccinated. Another said their doctor advised them not to vaccinate. Vaccine awareness and understanding of early childhood development were low among some participants, with a small number who speculated that their child's disability could have been caused by vaccination at a young age.

The parent of the child at the private Montessori SPED school said that school fees were reduced during remote learning. However, any savings were offset by having to purchase a laptop worth around PHP35,000; headset at PHP300, which frequently needed replacing as the child would pull on the cord and break it; and ring light for PHP800. The parent also bought an office table at PHP1,200; chair at PHP3,500; and upgraded their Internet connection at PHP1,300 a month. The parent said the school was 'sensitive' to each child's learning needs and wanted a 'good set-up'.

Parents who were home schooling in 2020 before the pandemic were provided with modules for their child to study at home. In 2022, some families shifted to online remote learning. Online learning was not provided in all schools, including SPED schools. Some parents had to pay for modules and tests, for example a one-off fee of PHP200 and then PHP50 a week. This was considered cheaper than what they normally paid for education. Others reported no fees for modules and online learning. One parent said they still needed to go to the school to collect modules. Another said the teacher brought the modules to a local market near their home and parents collected them.

Other expenses were the costs of accessing the Internet and data packages for mobile phones. Families did not buy new phones for their child. Phones were handed down from other family members and old ones were repaired.

One parent said their child was not challenged by the modules and was often bored. The parent considered asking their child's teacher to move her up a grade. The mother of a child with disabilities who did not go to school said there were more financial constraints in sending their child to school because her husband had no work as a tricycle driver during the pandemic.

It is also useful to look at some indirect indicators that signal the possibility of means that enable child development. These include providing children with books, educational toys, and access to some entertainment, such as watching DVDs, films, or online resources. These indicators are provided in Table 19. The percentages tended to be lower for children with a disability card and even lower for those with functional limitations. Children with functional limitations but no disability card appeared to be particularly disadvantaged.

**Table 19: Percentage of households who have books, entertainment and toys for children**

	Type of household		Disability Card and Functional Difficulties			
			With Card		Without Card	
	With Card	Other	No FD	FD	FD	Others
Books suitable for children	48.8	52.0	53.6	47.6	44.8	53.1
Possibility to watch DVDs, films, etc.	43.0	43.8	41.1	43.2	36.1	45.0
Toys, specially bought for children	35.5	33.5	38.9	34.9	35.4	33.2

Note: FD stands for mild, moderate or severe functional difficulties.

### 4.1.3 Non-discrimination and protection

To investigate this dimension the survey adopted the ‘Williams everyday discrimination index’. This index considers nine types of experiences in day-to-day life: i) being treated with less courtesy than other people, ii) being treated with less respect, iii) receiving poorer service in restaurants or stores, iv) people acting as if the person is not smart, or v) as if they were afraid, vi) thinking that the person is dishonest, vii) acting as if they are better than the person, viii) being called names and insulted, or ix) threatened. The nine items are strongly correlated, suggesting that it is possible to combine the items in a unidimensional measure (the Cronbach’s alpha is 0.86<sup>32</sup>). The frequency of such experiences is defined as ‘never’, ‘less than once a year’, ‘few times a year’, ‘few times a month’, ‘at least once a week’ and ‘almost every day’.

Unfortunately, due to an error in the program managing the interviews, these questions were skipped at the beginning of the survey for households with children with disability card (about 16% of all observations). This affected information in some clusters in NCR and Luzon. To generate comparable information, all clusters affected were excluded and sampling weights re-computed for this variable.

The percentage that reported episodes of discrimination with a frequency of at least a few times a year in at least one domain was almost double for households with a child who had a disability ID card (21% vs 11%) (see Table 20). Among households with children with a functional limitation but no disability card, the level of discrimination occurring daily was the highest. Among households with a child with a disability card, the reason for these negative experiences was disability in more than 70% of cases (either a physical disability, physical appearance, or caring for a child with disability). For other households, the primary reason was their education or income (more than 50% of cases).

<sup>32</sup> Usually, a value of 0.7 is considered sufficient to assume unimodality.

**Table 20: Distribution of frequency of experiences of discrimination by possession of disability card and functional difficulties**

Frequency	Type of household		Disability Card and Functional Difficulties			
	With Card	Other	With Card		Without Card	
			No FD	FD	FD	Others
Never/less than once a year	79.1	88.9	82.4	78.0	90.3	88.7
Few times a year	7.4	4.7	3.6	8.5	2.8	5.0
Few times a month	7.6	1.9	6.2	7.8	1.2	2.0
Once a week	3.6	1.5	5.4	3.3	0.6	1.7
Every day	2.4	2.9	2.3	2.4	5.1	2.6
	100.0	100.0	100.0	100.0	100.0	100.0

Note: FD stands for mild, moderate or severe functional difficulties.

Questions were also asked to explain attitudes towards disability. A statement was read and people were asked to what extent they agreed (options being strongly agree, agree, neither agree or disagree, disagree and strongly disagree). The responses were the following: “people in this village have negative attitudes towards people with disabilities”; “people in this village frequently support people with disabilities”; “people with disabilities should be supported to live independently”; “people with disabilities can get married the same as other people”; “people with disabilities can have children the same as other people”; “children with disabilities can become famous/successful”; “children with disabilities can equally contribute to society”; “school attendance of children with disabilities in regular schools has positive influence in their development”; “school attendance of children with disabilities in regular schools has negative influence on other children since teachers need to pay more attention to them”.

The answers to these questions did not reveal any strong bias towards disability. Most answers fell within the ‘strongly agree/disagree’ or ‘agree/disagree’ as expected. It is worth mentioning that strongly agree/disagree tended to be higher among households with a child with a disability ID card.

The PDAO officers or the focal person for disability and barangay captains were also asked the same questions. Results were similar to those obtained from the household interviews, as responses tended to be ‘politically correct’. However, the question on whether there is a detrimental effect on other children’s education when children with disabilities attend mainstream schools generated surprising responses; 43% of barangay captains agreed or strongly agreed with the statement and one third of the focal point persons for disability/PDAO officers agreed/strongly agreed. The percentage was significantly higher in Mindanao compared with the other areas.

Furthermore, the prevailing understanding of disability seemed to be a medical one, where integration is achieved through medical care and rehabilitation services (59% of respondents); 16% had a charitable understanding of disability; and the remaining 25% recognised the role of physical and social barriers.

In addition, 22% of PDAO officers/focal persons and barangay captains said that discrimination was one of the main obstacles for creating better conditions for children with disabilities. The most cited obstacle was the lack of proper disability assessment and related needs and interventions (58%).

#### 4.1.4 Voice and participation

This dimension was measured indirectly by trying to capture household and children’s participation in community life. The carer was asked whether the household had the following: a friend with whom they can ‘open up’; the possibility of obtaining financial help from friends/relatives; and the possibility of receiving practical help.

While the differences in responses to these questions were not very significant, families of children with a disability card tended to rely more on just one person while households with children with functional limitations but no disability card were more likely to have no one to rely on. Table 21 provides the results on the availability of practical help (help in minding the children for a few hours or similar needs). Results were similar for the other questions.

**Table 21: Availability of practical help outside the family**

Type of support	Type of household		Disability Card and Functional Difficulties			
	With Card	Other	With Card		Without Card	
			No FD	FD	FD	Others
Yes, one person	47.4	38.6	54.3	46.0	35.7	39.1
Yes, more than one person	27.6	34.8	24.9	28.4	25.7	36.3
No more	25.0	26.6	20.8	25.7	38.6	24.6
	100.0	100.0	100.0	100.0	100.0	100.0

Note: FD stands for mild, moderate or severe functional difficulties.

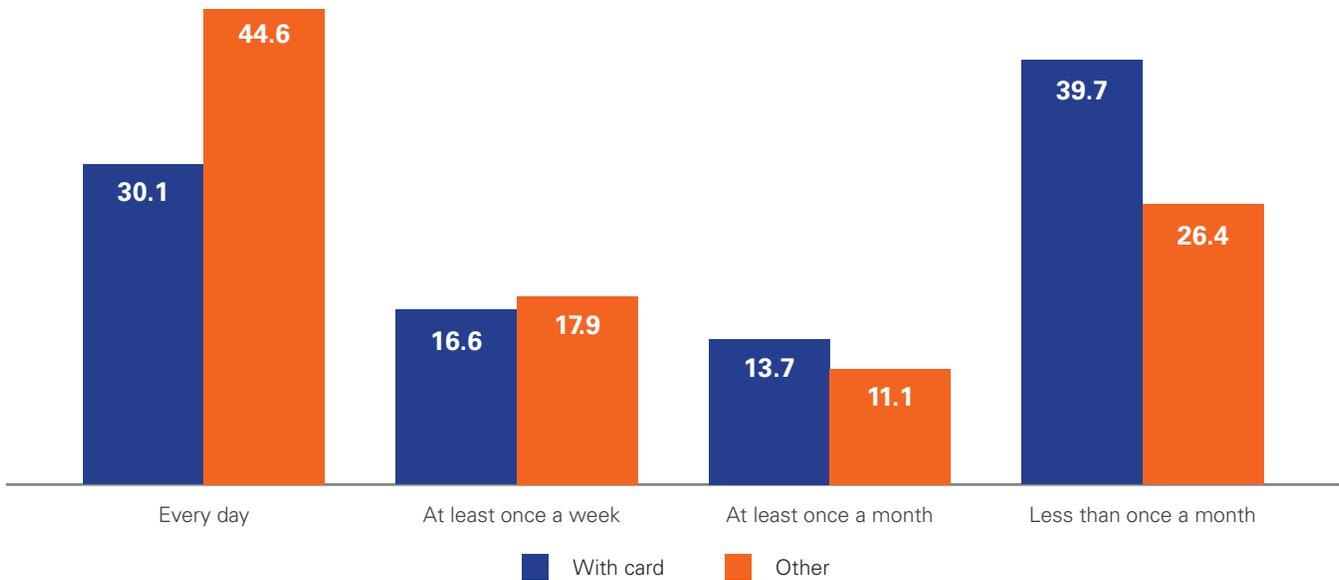
Households with children with a disability ID card were also slightly less likely to participate in community/village events, such as feasts or celebrations. Moreover, households with children with functional limitations but no disability ID card were less likely to belong to a community association (8% vs 14% in other groups).

Limited community participation by parents of children with disabilities was noted in pre-survey interviews. This included not being able to attend church or community events due to lack of time or the unwelcome attention from community members. While the limited participation was not highlighted in responses from the follow-up qualitative interviews, the lack of spare time of parents and primary carers was emphasised.

Considering the specific activities of the child with a disability ID card compared with a random child in other households<sup>33</sup>, children with a disability ID card spent significantly less time playing with other children (see Figure 8). In households without a disability ID card, 70% of children played with friends. This percentage dropped to 50% in the case of children with a disability ID card. Similarly, children without a disability card were more likely to spend time in school or some formal training compared with children with a disability card. The latter were more likely to play alone than with other children.

<sup>33</sup> In this case, it was not possible to consistently consider the case of children with functional difficulty and no disability card, because the selection of the child in households without card was random and so children other than the one with functional difficulties were selected.

Figure 8: Distribution of playing frequency with other children (for each category total = 100)



Qualitative interviews confirmed the limited play opportunities for children with disabilities. Parents of children attending SPED spoke of playful behaviour, including ‘teasing’, between their child and other children. Outside of SPED, there were reports of bullying and non-acceptance by children without disabilities and their parents, limited opportunities for group play and social interaction.

Concerns over health, including fear of infection, also limited the time a child could spend outdoors or with other children. One parent bought a digital tablet for their child, and the two children spent time on TikTok. Limited play and social interaction can further impact the early development of children with disabilities. One parent said that when their child had a supportive teacher, the child’s social skills improved significantly.

## 4.2 Privileges from Disability ID Card and Social Transfers

Persons with disabilities in the Philippines might also be supported with specific subsidies and cash transfers. The disability ID card is one of the most important policies that should support persons with disabilities. We will first look at the use of the disability ID card; next, the receipt of transfers; and conclude this section by considering the distribution of such support across income.

### 4.2.1 Use of disability ID card

As explained earlier, the disability card entitles people to receive significant discount on certain products, but since its use could be limited by availability of services and awareness, the survey collected information on the way the disability card was used.

Most respondents used the disability card to obtain discounts on medicines (73%); food (54%); medical fees (37%); and groceries (36%). (See Table 22). There was also a sizeable percentage of households who never used the card; the percentage was higher among households with children with a functional limitation.

**Table 22: Use of disability card across households with and without functional difficulties**

Card use	With Card		Overall
	No FD	FD	
Food discount	62.1	52.8	54.2
Discount on groceries	41.4	34.5	35.5
Discount on school supplies	21.5	8.3	10.3
Medicine discount	76.2	72.4	72.9
Medical fees	50.4	34.5	36.9
Transport discount	20.3	16.9	17.4
Other discount	4.3	5.0	4.9
Never used	3.9	12.2	10.9

Note: FD stands for mild, moderate or severe functional difficulties.

The overall trend in how the card was used held across wealth quintiles and in urban and rural areas. However, the proportion of respondents who used the card varied across quintiles and between rural and urban areas. For instance, 57% of respondents in the lowest quintile used the disability card for discounts on medicines against 82% of respondents in the highest quintile. A total 38% of respondents in the lowest quintile used the disability card for discounts on food while it was 66% in the highest quintile. In the poorest quintile, 19% never used the card compared with 4% in the richest quintile (see Table 23). Those who were relatively better off tended to use the card more compared with the disadvantaged. This is expected given that the household still needs to pay the non-subsidised part of the expense when using the concession card.

**Table 23: Use of disability cards across quintiles**

Card use	Consumption Quintile					Overall
	Poorest	2nd	3rd	4th	Richest	
Food discount	38.4	48.1	51.1	57.3	65.7	54.2
Discount on groceries	15.5	28.8	34.9	33.9	50.8	35.5
Discount on school supplies	5.5	12.4	10.0	15.1	9.5	10.3
Medicine discount	57.0	69.1	75.9	72.9	81.8	72.9
Medical fees	20.7	28.4	31.3	41.8	50.3	36.9
Transport discount	12.2	13.8	17.0	18.7	21.4	17.4
Other discount	3.9	3.0	5.3	2.7	7.2	4.9
Never used	19.4	13.3	10.1	13.7	4.0	10.9

Note: FD stands for mild, moderate or severe functional difficulties

Card use across various categories was higher in urban than in rural areas (see Table 24). This finding was consistent with the higher usage of the disability card among upper quintiles. This suggests that higher usage of the card was to an extent determined by access to service providers who accepted the card for routine transactions. Examples were medical stores, health service providers, grocery stores or food shops, which are part of the formal economy.

While discounts were available to holders of disability ID cards, there was a lack of consistency in how discounts were applied. For example, some restaurants gave the full 20% discount while others gave only 5%.

**Table 24: Use of disability card across rural/urban areas**

Card use	Area		Overall
	Rural	Urban	
Food discount	41.5	66.3	54.2
Discount on groceries	25.6	45.0	35.5
Discount on school supplies	8.5	12.1	10.3
Medicine discount	65.6	79.9	72.9
Medical fees	30.1	43.5	36.9
Transport discount	14.5	20.1	17.4
Other discount	2.6	7.0	4.9
Never used	18.3	4.0	10.9

## 4.2.2 Receipt of social transfers

The survey also enquired about direct financial support from various government programmes. Table 32 shows the percentage of households who received transfers from the government in the year before the interview. The Pantawid Pamilyang Pilipino Program (4Ps) has a good coverage of households with children, especially among those with a disability ID card. Households which have this card are more likely to also receive support from the local government as well as the Assistance to Individuals in Crisis Programme. Other programmes are the COVID-19 emergency aid through cash transfers and in-kind food support.

**Table 25: Households receiving government transfers in the 12 months preceding the interview (%)**

Programme	Type of household		Disability Card and Functional Difficulties			
			With Card		Without Card	
	With Card	Other	No FD	FD	FD	Others
Social pension for Indigent Senior citizens	7.9	8.2	7.8	7.9	8.1	8.2
Pantawid Pamilyang Pilipino Program	25.4	18.8	14.8	27.3	21.7	18.4
Assistance to Individuals in Crisis	3.7	2.0	9.0	2.8	0.6	2.2
LGU financial assistance to PWDs	23.1	1.4	15.5	24.5	2.7	1.2
Auxiliary support/services*	6.5	3.98	4.6	6.9	5.9	3.5
Covid-19 emergency subsidy programme	37.9	40.1	41.6	37.3	47.0	39.0
Supplementary feeding programme	26.3	23.8	20.5	27.3	28.0	23.1
Other programmes^	4.6	5.6	4.4	4.7	5.6	5.6

\* Auxiliary services include education assistance, assistive devices, transportation assistance, counselling services and the livelihood employment programme.

^ These include DOLE cash assistance programme, the sustainable livelihood programme, wage subsidies and other programmes  
Note: FD stands for mild, moderate or severe functional difficulties.

Respondents who accessed PhilHealth and/or 4Ps noted the importance of these schemes in assisting them cover their health costs through PhilHealth and education needs through the 4Ps. One respondent said the cost of giving birth could be reduced to PHP60,000 from PHP80,000 under PhilHealth with additional reimbursements of a similar value from the Social Security System.

However, not all qualitative interview respondents benefited from PhilHealth insurance or the 4Ps conditional cash transfer programme. Awareness of what could be covered under PhilHealth was low; respondents were not sure if the advice they received from medical professionals on eligibility of costs under PhilHealth was correct or not. Awareness of potential support from the DSWD and the Department of Labor and Employment was also low among interview respondents.

One family secured private 'health card' insurance for their child with disabilities. This covered the costs of routine procedures, such as visiting an ear, nose, and throat specialist that would normally cost PHP600. When their child had to stay in the hospital every three months, the health card, which costs PHP1,500 a month, covered their costs.

Other forms of assistance were assistive devices, such as wheelchairs and hearing aids for free or at reduced cost from charitable organizations and the local government. One family said they were given a wheelchair by the vice mayor. The Philippine Charity Sweepstakes Office (PCSO) provided prosthetic legs and wheelchairs.

During the COVID-19 health crisis, some families said they received food packs and/or hygiene kits from the barangay. These food packs and kits were given annually in December. The barangay also provided occasional financial support and allowed the use of the barangay vehicle for medical appointments.

Informal assistance came from the OPD, family network or individual contacts. For example, a family was able to buy glasses for their child for PHP2,500 instead of PHP 10,000 because they know the owner of the optical store. One parent said their child learned how to create TikTok videos and this helped her 'make friends'. The family received two gifts of PHP500 from other TikTok users. They do not know how these users knew their name or how they could contact them. Several respondents said having a 'sponsor' was a desirable way to relieve the financial stress but it was not clear how they could obtain a sponsor for their child.

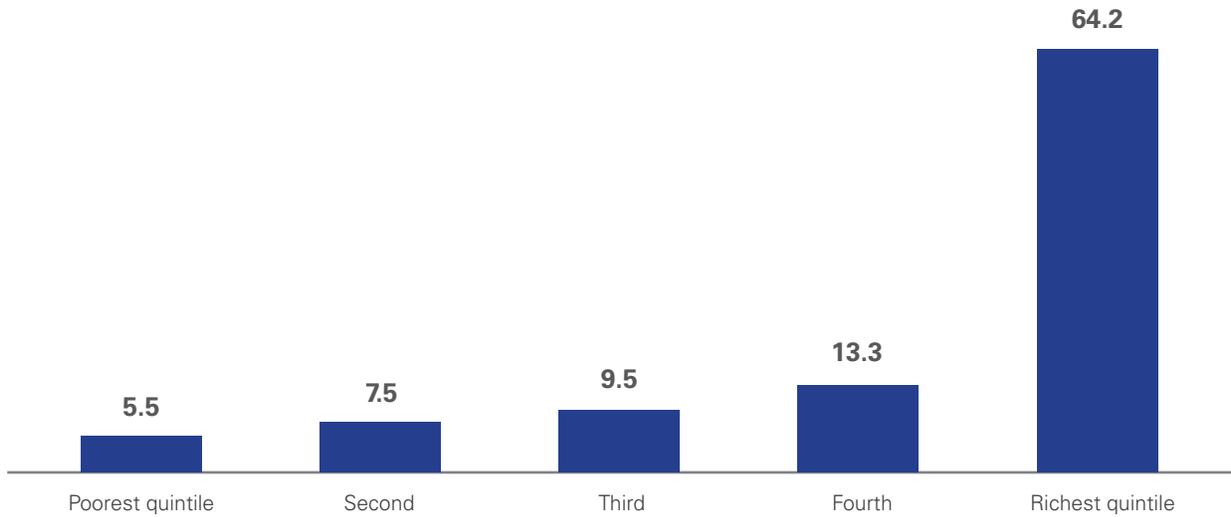
The father of a child with disabilities, who is a pastor, relies heavily on his congregation for direct and indirect financial support. His child goes to speech therapy sessions at a 50% discount because the therapist is a member of his church. The regular cost is PHP1,000 with two sessions per week. Previously, his child, who has a learning disability, required medication costing PHP2,500 twice a week which placed the family in 'huge debt'. Another family said the cost of caring for their child drove the husband to work abroad. The father has been working in Dubai and sending remittance payments for over 10 years.

#### 4.2.3 Distribution of card subsidy and transfers across the income distribution

Since the survey collected information on the use of the disability card and expenditure, it was possible to impute the overall subsidy value, which was included in the consumption expenditure (see Annex B for a detailed explanation). One benefit of the data is that they can also be used to determine the benefit incidence, that is, the distribution of the subsidy across welfare quintiles.

Figure 9 shows the distribution, where it is clear how most benefits go to the upper part of the distribution. While this result was partly expected, the actual magnitude of the estimates raises questions on the appropriateness of the 'concession card' from the perspective of its redistributive impact. Better-off households had more access to the concessions and by spending more received relatively higher returns.

**Figure 9: Distribution of disability card subsidy by consumption quintiles**

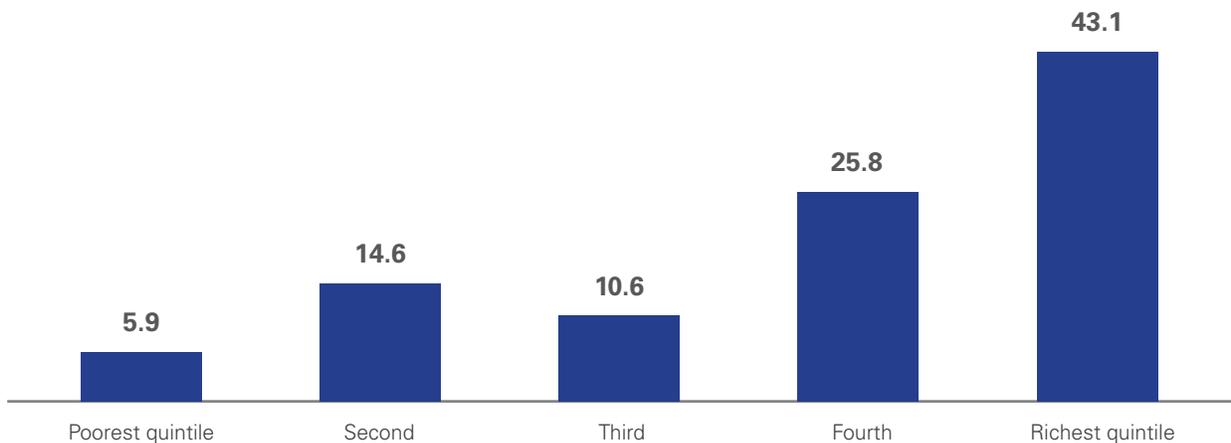


Note: Quintiles are corrected considering consumption expenditure before the subsidy.

Since there were some households with very high health expenditure which makes them fall into the top quintile, the same calculation was repeated excluding health expenditure from the aggregate and recalculating the consumption quintiles. This was done as a robustness check to validate the findings.

The results are reported in Figure 10, where the distribution of the subsidy was less unequal, but still received primarily by the fourth and fifth quintile.

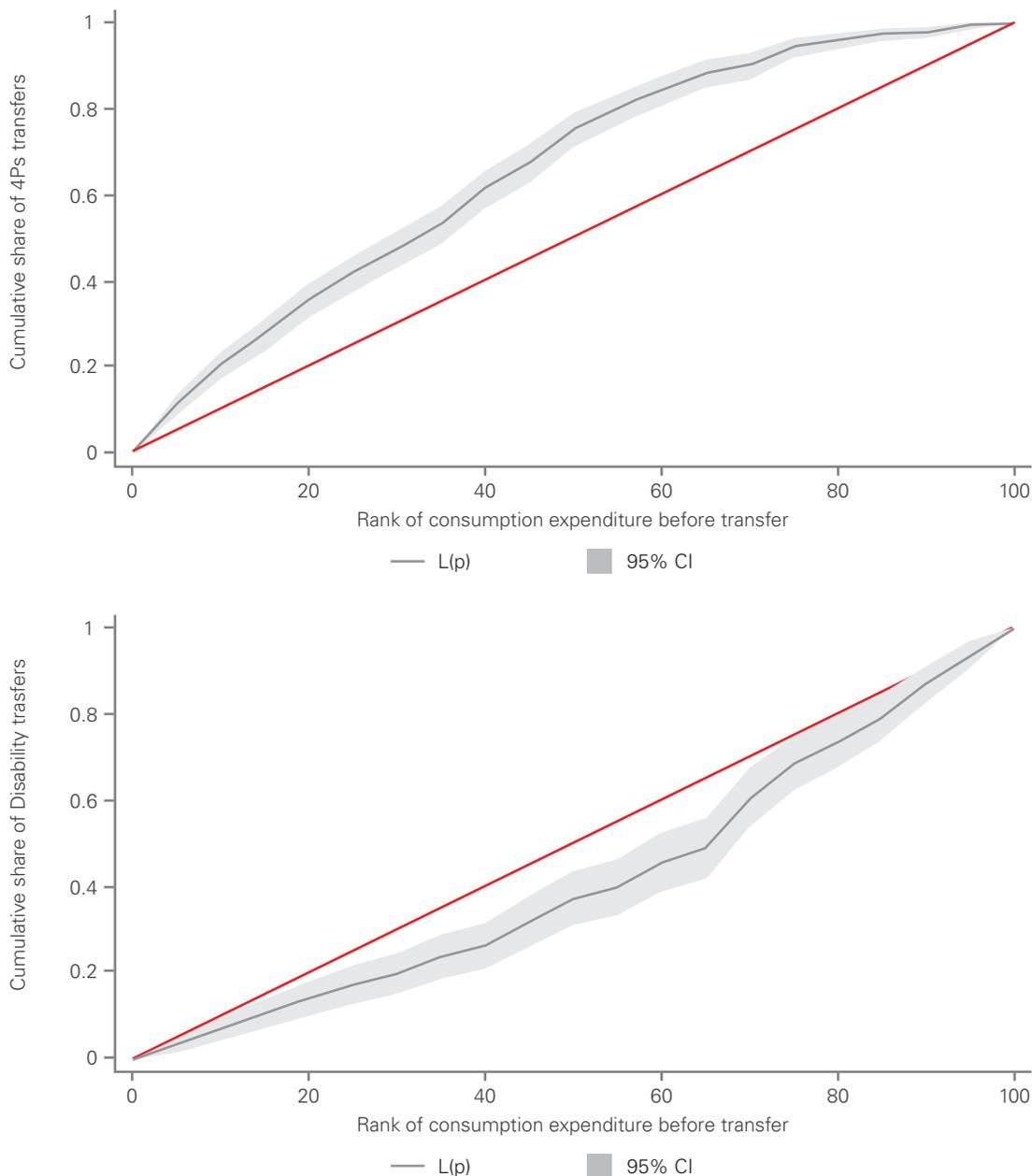
**Figure 10: Distribution of disability card subsidy by consumption quintiles, constructed excluding health expenditure**



The same distributional analysis can be conducted for the 4Ps programme and other government transfers received by persons with disabilities, such as Assistance to Individuals in Crisis, LGUs financial assistance to persons with disabilities, and auxiliary support/services.

While the 4Ps programme is pro-poor, once again support through other programmes left out the poorest and benefits were more likely received by those with the disability card and among them, those who were relatively better off. (See Figure 11.)

**Figure 11: Distribution of 4Ps and disability-related transfers across the distribution**



# 05

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## Monetary Welfare Measures and Other Wellbeing Indicators

Consumption expenditure and income are measures for analysing monetary poverty. In most developing countries, where the size of the informal economy is substantial, there is a preference to use consumption expenditure (See Deaton and Zaidi 2002), but in the Philippines, income is employed for official poverty measurement. It is important to be aware that the two aggregates do not measure the same concept of welfare. Consumption expenditure is closer to measuring an achievement, whereas to some extent, income captures an opportunity.

For this study, the survey collected information on both the consumption expenditure aggregate and the income aggregate. Indeed, consumption expenditure is important to understand whether children with disabilities and their families have different consumption patterns and if these emerge, what are the typical items that require extra expenditure and their size.

At the same time computing the income aggregate can be used to better understand the diversity of income sources, their relative importance, and whether these are affected in any way by disability. It can also be used to determine poverty rates among the population subgroups of interest (children with disabilities and their families) and compare them with those of other households with children.

The calculation of consumption and income aggregates is a delicate exercise requiring the gathering of information from different sections of the questionnaire; assigning imputations; adjusting for subsidies (particularly important in the case of the disability card discounts); correcting for price differences and adjustments for household size and composition. Moreover, results must undergo detailed scrutiny and robustness checks to ensure that measures are reliable<sup>34</sup>.

A discussion of this analysis, what was included in the aggregate, the price adjustment and robustness checks to compare measures with those available from the PSA are reported in Annex B. Instead, this section focuses on the results and the comparison of these aggregates between the analytical groups of interest.

After discussing the results of consumption and income, the section ends by considering other wellbeing indicators, including composite measures that can be used later for the standard of living approach to measure disability extra costs.

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<sup>34</sup> An important distinction has to be made between the consumption aggregate used in making welfare comparisons and the overall consumption expenditure. The welfare aggregate can exclude some expenditure that do not directly influence the wellbeing of the household. In some cases, health expenditure can be excluded from the welfare aggregate to reduce possible bias in welfare comparisons. However, in the context of this analysis, health expenditure is retained and will be corrected through the estimate of equivalence scales and retained to analyse the required consumption expenditure.

## 5.1 Welfare Aggregate Based on Consumption Expenditure

Table 26 shows the median monthly per capita consumption expenditure adjusted for price differences across time and survey locations for the different analytical groups. The group with the highest consumption expenditure was found among households with a disability ID card but without any functioning limitations. Other households with the disability card and reporting at least some functioning limitations also appeared to have high consumption levels but not very different from households with children with no functioning limitations. The group with the lowest consumption expenditure were households with children with functional limitations but no disability card.

Table 27 looks at the same groups with focus on consumption patterns. Households with the disability card had distinctively different spending patterns, most noticeably a higher percentage of their budget was spent on health and education and less on food.

Based on the literature review and information collected from initial focus groups discussions, transportation costs were expected to be higher among families with children with disabilities. One possible explanation was health-related transport was included in health expenditure and given the frequent health visits that expenditure was higher among children with disabilities. Qualitative interviews indicate that for families of children with disabilities, transport costs can be prohibitive and a constraint in accessing services.

**Table 26: Monthly per capita consumption expenditure by disability card and functional difficulties (adjusted for price differences), May 2022 prices**

Statistics	Sampled household		Disability Card and Functional Difficulties			
			With Card		Without Card	
	With Card	Other	No FD	FD	FD	Others
Median	2573	2430	2925	2540	2178	2465

Note: FD stands for mild, moderate or severe functional difficulties.

**Table 27: Consumption patterns by ownership of disability card and functional difficulties**

Consumption Group	Sampled household		Disability Card and Functional Difficulties			
			With Card		Without Card	
	With Card	Other	No FD	FD	FD	Others
Food	56.6	62.3	60.0	56.1	63.1	62.2
Alcohol and Tobacco	1.4	2.2	1.3	1.5	2.1	2.2
Education	5.0	4.2	5.4	5.0	3.5	4.3
Health	10.7	3.7	5.4	11.6	3.9	3.7
Clothes	1.2	1.3	0.9	1.3	1.1	1.3
Utilities	10.1	11.0	12.4	9.7	11.7	10.9
Transport	4.0	4.7	3.3	4.1	4.3	4.7
Communication	4.0	4.1	4.6	3.9	4.0	4.1
Personal care	3.3	3.5	3.3	3.3	3.9	3.4
Maintenance	2.0	2.1	1.9	2.0	2.0	2.1
Recreation	1.6	0.9	1.6	1.6	0.5	1.0
Total	100	100	100	100	100	100

Note: FD stands for mild, moderate or severe functional difficulties.

## 5.2 Income

Table 28 shows the monthly per capita income across different analytical groups. In general, households with a disability ID card had a substantially higher per capita income compared with households without the disability ID card. The group with the highest monthly per capita was found among households with a child with functioning limitations and disability card. The group with the lowest per capita income was among households with children with functioning limitations but without the disability card.

Table 29 looks at the same groups of households and their income patterns. Overall, households with the disability ID card showed comparable income patterns with other households, except for the income group with employer earnings wherein households with a disability card reported a higher percentage (9.2%) compared with households without the disability card.

As with consumption, the income calculation also included the overall subsidy value of the card.

**Table 28: Monthly per capita income, by disability card and functional difficulties**

	Sampled household		Disability Card and Functional Difficulties			
			With Card		Others	
	With Card	Other	No FD	FD	FD	No FD
Mean	3,653	2,827	3,286	3,718	2,705	2,846
Median	2,217	2,111	2,389	2,187	2,139	2,111

Annex B provides more details on the construction of the income aggregate and its comparison with FIES data. Unlike consumption data, the comparison of income figures with official statistics shows that in this survey, the income aggregate was substantially smaller than the FIES data. This difference remains even after considering some definitional differences but does not point to any specific source of the problem, since income patterns appear comparable. Unfortunately, the large differences mean that it is not possible to rely on the income aggregate for poverty measures and analysis as planned.

**Table 29: Income patterns, by disability card and functional difficulties**

Income Group	Sampled household		Disability Card and Functional Difficulties			
			With Card		Others	
	With Card	Other	No FD	FD	FD	No FD
Wages	51.1	53.7	58.8	50.1	52.6	53.9
Employer earnings	9.2	5.2	1.7	10.3	4.2	5.4
Non-agricultural employer earnings	8.8	11.0	4.9	9.4	11.6	10.9
Self employed earnings	0.6	1.0	0.6	0.6	1.0	1.0
Secondary wage	2.3	4.6	2.0	2.3	4.8	4.6
Income from crops	0.6	0.9	0.5	0.7	0.3	1.0
Income from livestock	0.2	0.4	0.1	0.3	0.5	0.4
Income from fish and fish products	0.3	0.8	0.2	0.4	1.2	0.7
Non-farm income	1.0	0.6	0.0	1.2	0.5	0.6
Government transfers	13.6	14.0	13.4	13.6	17.4	13.5
Domestic transfers	1.5	1.5	2.1	1.5	0.9	1.6
Transfers from abroad	5.5	4.5	6.0	5.5	2.2	4.9
Other transfers	0.3	0.3	0.1	0.3	1.1	0.2
Income from savings and investments	0.7	0.2	2.1	0.5	0.0	0.2
Card subsidy	2.2	0.0	1.9	2.3	0.0	0.0
Own production	1.8	1.3	5.7	1.3	1.7	1.3
Total	100	100	100	100	100	100

## 5.3 Monetary Poverty Measures

While official poverty measures use the income aggregate, given the problems reported in the previous section, it is appropriate to use the consumption aggregate to compute poverty estimates. The international poverty line of USD1.9 and USD3.2 per capita per day (2011 PPP<sup>35</sup>) were used for these estimates. The values of these poverty lines in 2018 were PHP43.1 and PHP72.6<sup>36</sup> respectively. Adjusted to May 2022 prices and expressed in monthly terms, the values were PHP1,493.2 and PHP2,515.2 per capita respectively. Given that the methodology used differs from the official approach used by the PSA, it is important to clarify that poverty measures produced in this report are not comparable with official measures. Moreover, the objective of this report is not to produce a poverty estimate but to make comparisons between children with disabilities and other children and determine the impact on poverty measures after considering disability-related costs.

Table 30 provides poverty estimates using two different international poverty lines<sup>37</sup>, the percentage of poor is about 9% for the USD1.9 poverty line and 32% for the USD3.2 poverty line. The consistently poorest group was households with children with functional limitations but without disability card, followed by those with functional limitations and card.

However, such estimates do not reflect yet the possible different needs of children with functional limitations due to disability-related costs. These are likely to underestimate the true poverty levels and will be addressed in the next section.

**Table 30: Poverty rates using consumption expenditure without health**

International poverty line	Type of Household		Disability Card and Functional Difficulties			
			With Card		Without Card	
	With Card	Other	No FD	FD	FD	Others
1.9 USD per capita per day	8.7	8.9	11.0	8.4	12.2	8.3
3.2 USD per capita per day	32.9	32.0	28.5	33.6	36.1	31.3

Note: FD stands for mild, moderate or severe functional difficulties.

<sup>35</sup> 2011 PPP stands for purchasing power parity based on the calculations made in 2011.

<sup>36</sup> See WB 2022: Poverty and Equity Brief for the Philippines

([https://databank.worldbank.org/data/download/poverty/987B9C90-CB9F-4D93-AE8C-750588BF00QA/current/Global\\_POVEQ\\_PHL.pdf](https://databank.worldbank.org/data/download/poverty/987B9C90-CB9F-4D93-AE8C-750588BF00QA/current/Global_POVEQ_PHL.pdf)).

<sup>37</sup> Given that in the measure of consumption for welfare analysis we have not included several items that are part of the measure of the consumption expenditure by the PSA, the poverty thresholds were adjusted multiplying it for the actual percentage of consumption used, i.e., 76% of all consumption expenditure. (Expenditure was not included for house rents and imputed rents, consumption from durable items, etc. See annex B).

The USD3.2 per day poverty line, equivalent to PHP2,515.2 per capita per month at May 2022 prices is similar to the official poverty line used by the PSA, which on average was PHP2,406 per capita per month at 2021 prices. Preliminary estimates from FIES for 2021 calculated a poverty rate of 18.7%<sup>38</sup>. Earlier estimates for the first half of 2021 showed a poverty rate of 24%. Rates computed by the PSA showed an increase of poverty compared with previous estimates of 2018.

We should emphasise again that the methodologies used by the PSA and in this study are different. Moreover, there are several factors that should be considered in reading these numbers. Poverty estimates for this study are for households with children, where we expect poverty to be higher than for other households and when compared with the total population.

Even the results of the 2021 FIES data from the first semester, showed a very different trend of income and expenditure data. The average family income in nominal terms was almost the same in 2021 and 2018, but average consumption was smaller. Significantly, income at the bottom part of the distribution increased in nominal terms compared to 2018, while consumption decreased. This has been a common pattern in many countries where precautionary savings due to the uncertainty of the pandemic have depressed consumption, while many policies sustained and supported income levels.

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<sup>38</sup> See [https://psa.gov.ph/sites/default/files/Preliminary%202021%20Full%20Year%20Poverty%20Statistics%20Publication\\_25Aug2022\\_1.pdf](https://psa.gov.ph/sites/default/files/Preliminary%202021%20Full%20Year%20Poverty%20Statistics%20Publication_25Aug2022_1.pdf).

## 5.4 Other Wellbeing Indicators

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This section considers other wellbeing indicators, and constructs multidimensional indexes of poverty, following the practice established in the country and other indexes that can summarise households' and children's living standards. Specifically, the intention is to identify non-monetary measures of wellbeing that can be used in the standard of living approach to measure the cost of disability (in section 6).

There are three main typologies of wellbeing indicators:

- self-evaluation measures of the household wellbeing (satisfaction with life, happiness, and position in society);
- asset indexes (wellbeing in terms of ownership of durable assets and housing conditions/facilities); and
- multidimensional measures of poverty and deprivation.

### 5.4.1 Self-evaluation measures

Table 31 reports the results of the self-evaluation indicators: happiness with life, satisfaction with life, and economic position in society. Questions on happiness and satisfaction with life were based on the work conducted in OECD countries<sup>39</sup>. Answers to the questions were given on a scale of five: very unhappy, somewhat unhappy, neither unhappy nor happy, somewhat happy, and very happy.

The same scale was also used for questions on satisfaction. Since answers at the bottom three options were few for both happiness and satisfaction, these had been merged as one. Finally, for the question on position in society, the survey employed the same question asked in the Labour Force Survey in the Philippines. Respondents were asked to imagine a ladder of ten steps and state on which step their household belongs. The bottom step would be the poorest and the top step would be the richest. Answers were grouped in low (steps 1 to 3), middle (steps 4 to 7) and high (steps 8 to 10).

Table 31 shows results across the usual analytical groups comparing results between households with children with a disability card and other households with children and functioning limitations. Distribution across the different categories does not show very large differences. Households with children with a disability card were less likely to be very happy/very satisfied.

Looking at position in society, the most significant difference was among those with a disability card and between those with and without functional limitations. The latter was relatively better off.

The correlation between these variables and a measure of welfare based on consumption expenditure was relatively low (between 0.13 and 0.17).

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<sup>39</sup> OECD (2013): OECD Guidelines on Measuring Subjective Well-being, OECD Publishing. <http://dx.doi.org/10.1787/9789264191655-en>.

**Table 31: Happiness, satisfaction, and position in society**

	Type of household		Disability Card and Functional Difficulties			
			With Card		Without Card	
	With Card	Other	No FD	FD	FD	Others
<b>Happiness with life</b>						
Unhappy/neutral	11.6	10.5	7.5	12.4	12.6	10.1
Somewhat happy	57.6	51.6	58.8	57.6	54.2	51.2
Very happy	30.8	37.9	33.7	30.1	33.3	38.6
Total	100.0	100.0	100.0	100.0	100.0	100.0
<b>Satisfaction with life</b>						
Unsatisfied/neutral	15.3	12.1	18.5	14.7	14.0	11.8
Somewhat satisfied	50.7	49.6	43.6	52.0	51.1	49.4
Very satisfied	34.0	38.2	38.0	33.4	34.9	38.8
Total	100.0	100.0	100.0	100.0	100.0	100.0
<b>Position in society (ladder)</b>						
Low (1-3)	33.6	36.8	19.5	36.3	33.8	37.3
Middle (4-6)	56.7	55.0	62.3	55.5	58.6	54.4
High (7-10)	9.7	8.1	18.2	8.2	7.6	8.2
Total	100.0	100.0	100.0	100.0	100.0	100.0

Note: FD stands for mild, moderate or severe functional difficulties.

## 5.4.2 Asset indexes

The asset index considers different assets and dwelling conditions that together would capture the household's living standards. Variables considered for this index included the quality of construction materials for roof and walls, the tenure of the house (whether owned, rented or occupied with or without consent from the owner), the number of square meters of the house, source of water, type of toilet, electricity, and whether the household owned various assets.

Assets included mobility assets (car and motorbike), communication assets (telephone, television, radio, etc.), air conditioner, washing machine, fridge/freezer, and other consumer assets. These items were grouped using principal component analysis<sup>40</sup> and 12 items were selected. This ensured diversity of assets and high correlation with the consumption welfare indicator. The resulting main component captured the common element across these items, which was the living conditions of the household.

<sup>40</sup> Both simple and polychoric principal component analysis were used to generate the asset index. Polychoric principal component analysis was estimated using the approach suggested by Kolenikov and Angeles (2009). Both methods provided similar results, but the polychoric index was chosen because it gave slightly better results. The final variables included in the model were: material of walls, dwelling tenure, water source, type of toilet, square meters of dwelling, car, motorbike, stove, refrigerator, personal computer, smart phone, and TV.

The resulting assets index had a relatively high correlation with the consumption welfare aggregate (0.51). The assets' index was used to generate quintiles from the first (with the lowest score), which represent those with the lowest living standards to the top quintile. Table 32 shows the distribution of the population across these quintiles for the usual analytical groups.

Persons in households with a child with a disability card but no functioning limitations appeared to be better off while those with a functioning limitation but no card were the worse off.

**Table 32: Distribution of population across assets' index quintiles**

Assets index quintile	Type of household		Disability Card and Functional Difficulties			
			With Card		Without Card	
	With Card	Other	No FD	FD	FD	Others
Bottom quintile	24.2	21.0	17.7	25.5	29.4	19.6
Second	18.4	20.1	18.3	18.5	21.0	20.0
Third	15.0	19.7	8.5	16.2	16.3	20.2
Fourth	17.6	20.2	21.5	16.7	14.9	21.1
Highest quintile	24.8	19.0	34.0	23.1	18.5	19.1
Total	100.0	100.0	100.0	100.0	100.0	100.0

Note: FD stands for mild, moderate or severe functional difficulties.

### 5.4.3 Deprivations and multidimensional poverty

The last type of wellbeing measure combines in one index different measures of deprivation and poverty across the critical life dimensions and the fundamental rights of children as discussed earlier.

The calculation of these indexes used commonly asked questions in UNICEF child poverty surveys and in the European Survey of Income and Living Conditions to capture social exclusion and measures of possible deprivation alongside established indexes in the Philippines, which assess child poverty and multidimensional poverty.

Given that the interest of this analysis is on monetary extra costs, indicators for measuring poverty focused on those that had more direct monetary implications or could be expressed in monetary terms. Therefore, authors ignored indicators of discrimination, voice and participation, which have a weaker cost implication<sup>41</sup>.

<sup>41</sup> Although it could be argued that enabling children to play with other children involves a cost, the relationship between income and children's play was very weak and even went in the opposite direction with children in the top quintile less likely to play every day with other children. Again, participation activities in the community might also come with a cost, but this is likely to depend on the community settings.

A set of five questions asked the respondent to declare whether the household can afford to get together with friends, family or relatives for a meal at least once a month; buy new clothes for household members if they need to; buy new shoes for household members if they need to; eat fresh fruits and vegetables every day; and eat a meal with meat, chicken, or fish (or vegetarian equivalent) every other day.

Responses to these questions were well correlated, suggesting that it is possible to combine the items in a unidimensional measure (the Cronbach's alpha is 0.81<sup>42</sup>). The resulting sum of the ability to afford these five elements showed a relatively high correlation with the welfare consumption measure (correlation is 0.34).

However, such measure does not provide an assessment of children's rights. This is reflected in a more comprehensive way in the multidimensional poverty measure developed by the PSA<sup>43</sup>, which includes 13 indicators in four main dimensions: health and nutrition, housing, education, and employment. Each dimension is weighted equally, and a mix of household level and person level indicators are used.

The PSA's multidimensional indicator can be used to estimate the percentage of people who are considered multidimensionally poor in two ways: one, people are deprived in at least one third of the weighted dimensions; and two, the average intensity of deprivation among the poor. However, one problem in using this index in the standard of living approach is the food consumption expenditure in one of the health and nutrition indicators. Therefore, an alternative multidimensional poverty measure was obtained to substitute this indicator with the food consumption score.

The percentage of multidimensionally poor households and people across the usual analytical groups is provided in Table 33. Households with children with a disability card were poorer than other households with children. However, households with a card but no functioning limitations were better off and those with functioning limitations without a card were significantly poorer than those without functioning limitations.

Among the poor, there were small differences in the intensity of deprivations across different groups. How the four dimensions contributed to the overall multidimensional poverty were different for households with children with a disability card and other households. For those with the disability card, education contributed to 45% of the deprivation. This percentage decreased to 35% among other households. In general, education and health contributed to 70% of the deprivation.

The overall index of multiple deprivations based on multidimensional poverty had a high correlation with welfare consumption expenditure (correlation was 0.54 using the food expenditure indicator and 0.41 using the food consumption score).

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<sup>42</sup> Usually, a value of 0.7 is considered sufficient to assume unimodality.

<sup>43</sup> See <https://psa.gov.ph/psa-press-release-tags/multidimensional-poverty-index-mpi>.

**Table 33: Multidimensional poverty: percentage and intensity**

	Type of household		Disability Card and Functional Difficulties			
			With Card		Without Card	
	With Card	Other	No FD	FD	FD	Others
<b>Multidimensionally poor</b>						
Household	33.6	26.8	22.4	36.2	32.1	25.9
People	35.6	28.3	24.1	37.8	31.4	27.7
<b>Intensity of deprivation among the poor</b>	42.0	39.8	40.7	42.2	39.8	39.8
<b>Contributions of dimension to multidimensional poverty</b>						
Education	44.8	35.4	41.8	45.0	37.3	35.1
Health	26.8	33.7	27.9	26.8	34.1	33.6
Housing	15.9	15.4	14.6	15.9	15.4	15.4
Employment	12.5	15.5	15.7	12.2	13.1	15.9
Total	100.0	100.0	100.0	100.0	100.0	100.0

Note: FD stands for mild, moderate or severe functional difficulties.

06

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The Cost of Disability

We are finally in a position to assess the presence and extent of disability-related costs that present barriers to full participation. Previous sections gathered and constructed the relevant 'ingredients': definitions of disability and functioning limitations, non-monetary measures of wellbeing and consumption expenditure.

This section starts by summarising the sources of extra costs of disability, before estimating and quantifying the disability-related costs through regression analysis, and looking at evidence of indirect costs or opportunity costs.

## 6.1 Sources of Extra Costs

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Evidence gathered during the scoping work and qualitative interviews highlighted several likely extra costs associated with disability. The largest source of extra costs was associated with health expenditure (medical fees for consultations and therapies, medicines, and assistive devices and their maintenance), transportation and education.

The analysis of consumption patterns revealed very substantial differences in the share of health expenditure for households with a child with a disability card and other households with children. Health expenditure represented 10.7% of all consumption expenditure for those with a disability card, and only 3.7% for those without a card. Furthermore, these figures are underestimated given that forgone health services and unmet health needs are significantly more common in households with children with a disability card.

For education, the share of expenditure was also higher among households with a child with a disability card compared with other households, but the difference was relatively small at 5% compared with 4.2%. However, this should be assessed against a very large difference in the percentage of households with at least one child aged 5 to 17 who was not enrolled, thus highlighting unmet needs. Figures show 31% of households with children with a disability card were not enrolled compared with 6% of households with other children.

For transport expenses, consumption patterns showed an unexpected result since transport share of overall expenditure was higher among households with children without disability card, 4.7% vs 4.0% for households with disability card. However, this result was partly affected by the inclusion of health-related transport expenses under health expenditure and by the constraints posed by the Covid-19 pandemic.

For example, before the pandemic it was more common for children without a disability card to go to school on foot. In comparison, transport was more expensive for children with a card who were usually accompanied by an adult which added to transport costs. Non-enrolment and forgone health treatments/visits were likely to be affected by these costs.

The importance of health-related travel expenses was confirmed by findings from the qualitative study. Direct costs of travel were multiplied for some families of children with disabilities. This included the cost of travel for the child, parent or primary caregiver, and at times an additional support person from the family. The frequency of travel to access health services was a key factor in increasing travel costs.

One family described its difficulty in paying transport fares to visit an optometrist. The combined cost of travel was PHP500 and the family visited the optometrist five times. One parent said the combined travel costs and doctor's fees prevented them from seeking medical advice or treatment. Another parent brought their child to the local clinic only when the child was ill because going to the hospital cost PHP120 per person one way. The same parent said they were advised their child needed physical therapy. They discontinued the therapy as it cost them PHP20,000 a month. Another mother described her experience:

*They advised me to bring [my child with orthopaedic disability] for dialysis for a month, so I spent PHP20,000 for that. This did not include the injection for his blood tests that cost PHP20,000, which had to be taken twice. It gave me a headache. Luckily, we had the funds to cover it.*

*It was hard and scary for us. We couldn't get near him during his operation and we were crying. Sometimes when he has an episode, I rush him to Manila alone. So, I learned how to drive. I tell him, you need to start helping yourself because I will not always be with you.*

Travel to metropolitan areas was essential to access some services or medications. One family said they would travel three hours and spend PHP2,000 on fuel to obtain Tacrolimus, a drug to prevent organ rejection following their child's transplant. Having a relative in a metropolitan area provided some families a place to stay if their child was admitted to hospital for long periods. This also helped lower the costs for food and consumables. Others did not have that option:

*We stayed there [in a provincial town] for two weeks while they monitored his haemoglobin. The doctor wanted to bump his haemoglobin level up to 11 but it stayed at 9. That's why the doctor told us to go to Manila to have another doctor check him. By God's mercy, the [second] doctor approved.*

*I didn't have a place to stay, so I travelled [to Manila] every day. It was expensive and I'm still paying for it up to today. There was no hospital expense but the things you use while you are there you have to prepare for [these other costs].*

Information on actual costs for health and education at the individual level for children with and without card are reported in Table 34. In the same table, the transport expenditure is reported with and without health-related costs. For all expenses, mean and median values are provided. Education expenditure is for children aged 5 to 17 who are enrolled in school, while health expenditure includes all children under 17.

Education costs were substantially higher for children with disability card compared with other children both at the median and mean. Health expenditure was very skewed; for more than 50% of children, health expenditure was equal to zero, but the mean for children with a disability card was almost 18 times higher.

Transport expenditure was measured at the household level. When health-related transport expenses are excluded, the mean expenditure was almost the same for households with and without disability card, but the median was lower for households with disability card. However, after including health-related expenses, the median value was the same and the mean was higher for households with a disability card.

**Table 34: Monthly expenditure on selected items for children/households with and without disability card**

Expenditure type		Mean	Median	Obs
<b>Expenditure per child</b>				
Education	Without card	196.6	41.7	3,606
	With card	459.8	75.0	848
Health	Without card	47.8	0	4,894
	With card	852.8	0	1,382
<b>Household expenditure</b>				
Transport (without health-related transport)	Without card	625.4	300	1,396
	With card	637.7	200	1,357
Transport (without health-related transport)	Without card	656.3	300	1,396
	With card	704.0	300	1,357

Note: Education expenditure is for children aged 5 to 17 enrolled in school and health expenditure is for all children under 17.

## 6.2 Estimates of Extra Costs

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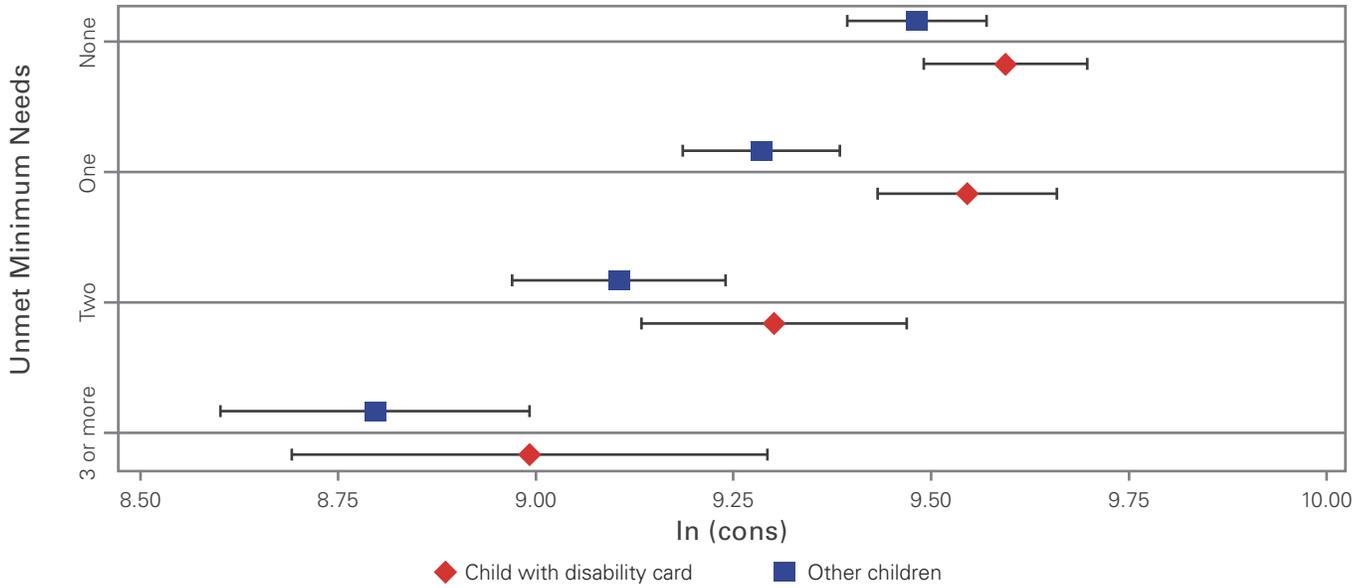
To assess the extra costs of raising children with disabilities and estimate the extent of these costs, the methodology looked at consumption expenditure of households at different levels of living standard achievement and determined whether for households with a child with disabilities such expenditures appear higher than those of other households. Any difference in expenditure would represent the estimated extra costs associated with disability. The expectation is that to reach the same standard of living, households with children with disabilities would need to incur higher expenditures than other households.

The assumption is a positive relationship exists between living standards and consumption expenditure; the higher the expenditure, the higher the achieved living standards. Indeed, in the various wellbeing measures, there was always a positive relationship with consumption expenditure, even though the strength of the relationship varied. However, there are elements of consumption expenditure that do not necessarily increase wellbeing. As shown in Figure 3, for households with children with disabilities we expect that the relationship between standard of living and expenditure will shift to the right compared with that of other children. The extra cost could differ based on the type and severity of disability and with the level of standard of living.

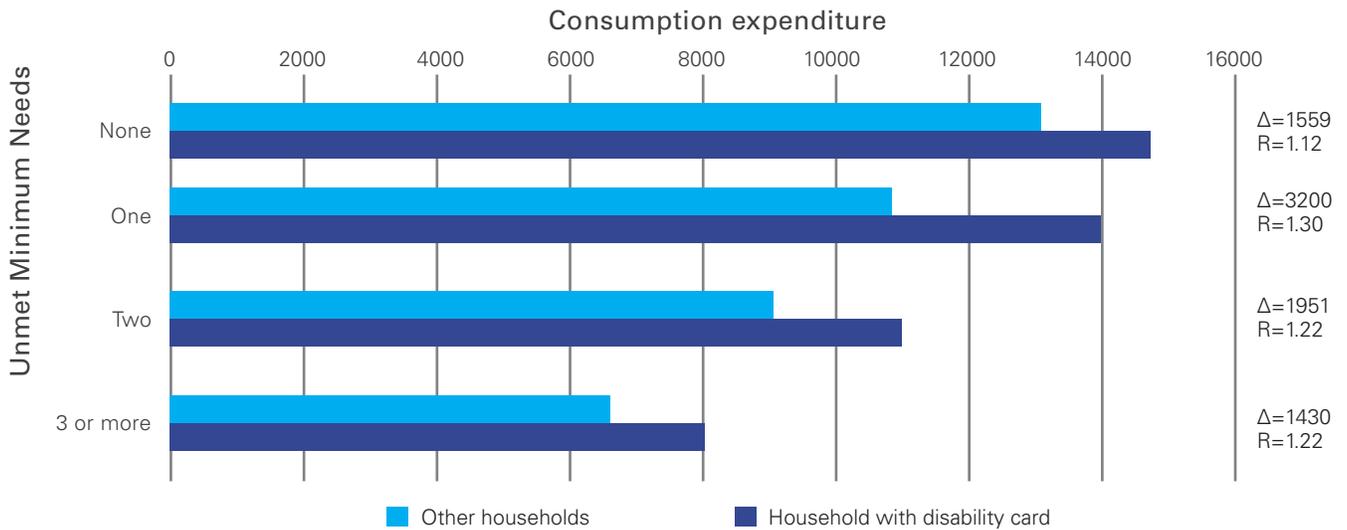
Figure 12 shows a simple graphical example of this relationship in the case of couples with two children, the most common type of households with children. In Figure 12, the standard of living is measured in terms of unmet minimum needs, so that the highest standard of living is determined by not failing to meet such minimum rights. These rights include being enrolled in school; not declaring to have forgone health visits/treatments; having at least one household member with health insurance; meeting the acceptable standard for the food consumption score; not reporting hunger episodes; meeting the minimum standards of water and sanitation facilities; and having adequate rights to live in their dwelling.

Figure 13 quantifies the different consumption expenditure and how it changes at different level of unmet needs. Mid-point estimates were used and were expressed in nominal consumption.

**Figure 12: Unmet minimum needs, consumption expenditure and disability (average estimates and confidence intervals) for couples with two children**



**Figure 13: Average consumption expenditure at different level of living standards and disability for couples with two children**



Note: "Δ" stands for the difference between expenditure for households with the disability card and expenditure for other households, whereas "R" provides the ratio between the two levels of expenditure.

Consumption expenditure increases as we move from many unmet needs to none. However, at the same level of standard of living, households with at least one child with the disability card, expenditure levels were higher than those of other couples with two children. The difference between the average expenditure of the two groups of households at the same level of living standards provided an estimate of the disability extra costs. As reported in Figure 13, extra costs appeared to increase in absolute value for households with higher living standards.

While the above graph provides an intuitive understanding of how the extra costs materialize and computed, in practice, the extra cost is better estimated through a regression model. This requires a non-monetary measure of living standards, consumption expenditure and a measure of disability (and its severity), and control for other factors that can affect the measure of living standards, such as children's age, their gender, and location variables.

The general specification of the regression model is the following:

$$LivStd = \beta_0 + \beta_1 \times \ln(cons) + \beta_2 \times dis + \beta_3 \times HHtype_i + \beta_j \times control\ variable_j + \epsilon,$$

where

- *LivStd* is the non-monetary living standard measure.
- *ln(cons)* is the household-level consumption expenditure expressed in logarithmic terms.
- *dis* captures disability (the presence of a child with disabilities, the severity of disability, etc.).
- *HHtype* identifies household of different composition.
- Control variables consider other factors that could affect the relationship, such as geographical location, the percentage of children of different age.

Given that the value of consumption is expressed in logarithmic terms, the disability extra cost is computed using the following expression:

$$EqScale = \exp\left(\frac{|\beta_2|}{|\beta_1|}\right)$$

where the coefficients of  $\beta$  are, respectively, that of disability in the numerator and the logarithm of consumption in the denominator.

Within the above general regression model, many regressions can be computed considering the different measures of living standards discussed in section 4. This includes different measures of disability (relying on the disability card or considering functional limitations, the number of members with card/functional limitations, the type of disability, etc.). Other measures either use household types to control the different household size or to conduct separate regressions for each type of household.

Before looking at the summary of the results of these regressions, consider the different nature of the wellbeing indicators, which can be affected by different dimensions linked to disability, especially for self-evaluation measures.

Indicators such as satisfaction with life, happiness, the assessment of the household position in society, and what the household can afford can be affected by their own conditions and experience of discrimination and social exclusion. This introduces the risk of producing a bias in the measure of the impact of disability<sup>44</sup>.

On the other hand, while the asset index was designed to exclude assets that were needed because of disability these could not be completely excluded. Asset indexes often tend to be insensitive to the needs of households of different size. Variables based on the absence of deprivations of fundamental rights have the advantage of considering specific children's needs and so move away from exclusively household-level variables. However, the way different rights and lack of deprivations are combined is not based on a coherent and theoretically supported weighting of the different measures. Some of the deprivations also rely on subjective assessments and constitute proxies of the actual non-deprivation.

Notwithstanding the above considerations on the limitations of some of the non-monetary wellbeing indicators, the regressions provided the following common results:

- For all wellbeing indicators and almost all household compositions, the disability variable reduced the level of living standards at the same level of consumption with statistically significant coefficients.
- There was consistent evidence that moderate/severe functioning limitations had a stronger negative effect compared with mild functioning limitations.
- The extra cost associated with disability increased if there were two or more children with disabilities.
- Disability related costs were higher in rural than in urban areas.
- Physical and psychosocial disabilities appeared to incur higher extra expenditure, followed by intellectual/learning and multiple/other disabilities, while the lowest coefficients were for sensory impairments. However, this finding was less stable and perhaps affected by the lack of adequate disability classifications.
- The size of extra costs varied depending on the wellbeing variable used in the analysis.
- The consumption expenditure was always positively correlated with all wellbeing indicators.

Table 35 provides some examples from three models estimated using nuclear families (parents and children). Nuclear families represented 64% of all observations, but similar results were obtained in models using the full sample. The table only reports the coefficients for the relevant variables of consumption expenditure and the extent of functioning limitations. Other control variables included in the model are dummies for the different types of nuclear families (in relation to the number of children); the proportion of children under 5; the proportion of girls and the location (NCR, Visayas and Mindanao). All these variables could affect the living standard variables and the intention is to obtain more robust coefficients for consumption and disability<sup>45</sup>. Full results of regression models are reported in Annex E in Table 49.

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<sup>44</sup> The bias could come from the correlation between the error term and the disability variable.

<sup>45</sup> For example, the expectation is that on average living standards in NCR are higher than in Visayas. The possible different percentage of observations from these locations across disability groups should not affect the estimate of the effect of disability.

**Table 35: Marginal effects and extra costs for nuclear households using different wellbeing indicators**

Variables	Society	No Deprivations	Asset Index
Ln(const)	0.6969	1.5273	1.2100
Only some FD	-0.1558	-0.3340	-0.1215
Moderate/severe FD	-0.3146	-0.7582	-0.2065
<b>Proportional extra expenditure</b>			
Only some FD	1.25	1.24	1.11
Moderate/severe FD	1.57	1.64	1.19
<b>Extra cost at median</b>			
Only some FD	3037	2963	1281
Moderate/severe FD	6917	7792	2256
Model	Logit	Ordered logit	OLS
Pseudo R2/Adj. R2	0.0681	0.104	0.4182

Compared with mild functioning limitations, moderate/severe functioning limitations have a significant negative impact and imply higher extra costs. However, the size of extra costs tended to vary significantly depending on the type of wellbeing variable used in the model. Overall, given that models using self-evaluation wellbeing variables and those based on deprivations could provide biased results on the disability variable, the results of the asset index model were more conservative and were taken as the benchmark. The asset index model also provided more robust results in relation to the control variables of the model and more stable results across the different household types.

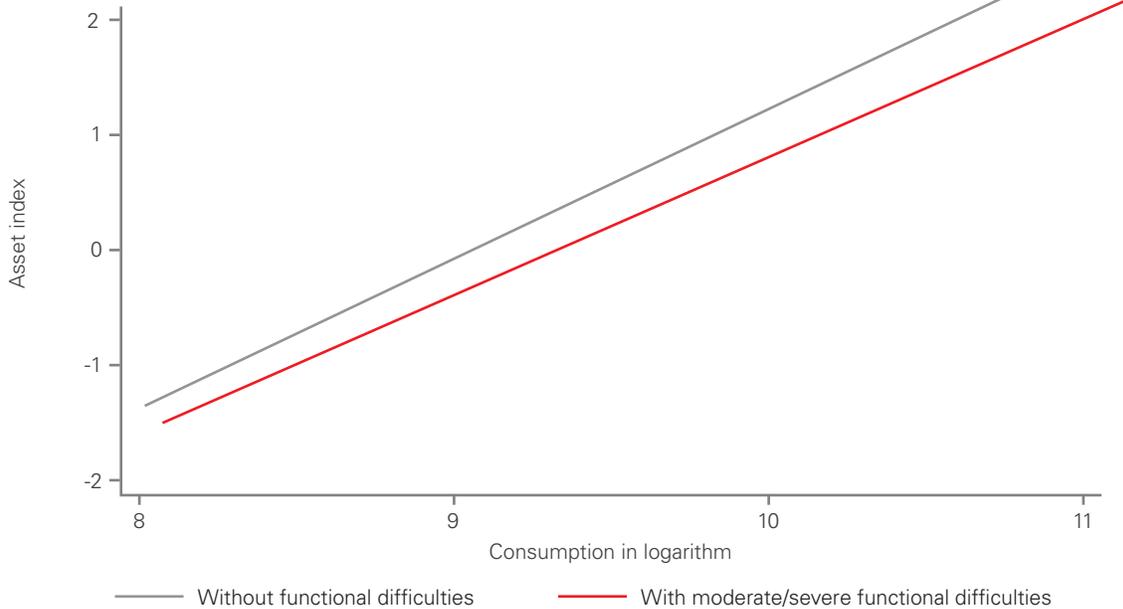
Including the consumption aggregate in logarithm implies not only a diminishing return of expenditure in terms of living standard but the effect of disability also has proportionally constant extra costs. Therefore, the absolute extra cost increases with the living standard that the household achieves. However, this shape is to some extent forced by the modelling choice.

To test this assumption, other models were estimated changing the way consumption expenditure was included in the model (simple consumption, squared, squared root). The model specification in logarithm provided the best fit. When real consumption was introduced without adjustments, an interaction variable between consumption and disability was negative and significant, adding to the already negative coefficient of the dummy variable for disability. The same interaction variable was not significant in the specification where the logarithmic form was used.

Finally, rather than calculate the effect of disability in the full model, two regression models were estimated independently. One, for cases where no child had functioning limitations and another model for cases with a child with moderate/severe functioning limitations. This model was estimated for couples with two children.

Results are shown in Figure 14 where the relationship for families with at least one child with moderate/severe functional difficulties fell on the right of the curve where children had no functioning limitations. The shape suggests that in such a case, the extra costs increase more than proportionally with higher living standards. This result provides further assurance on the assumption that the extra cost is not a fixed amount but increases proportionally with living standards.

**Figure 14: Relationship between consumption and living standard for couples with two children**



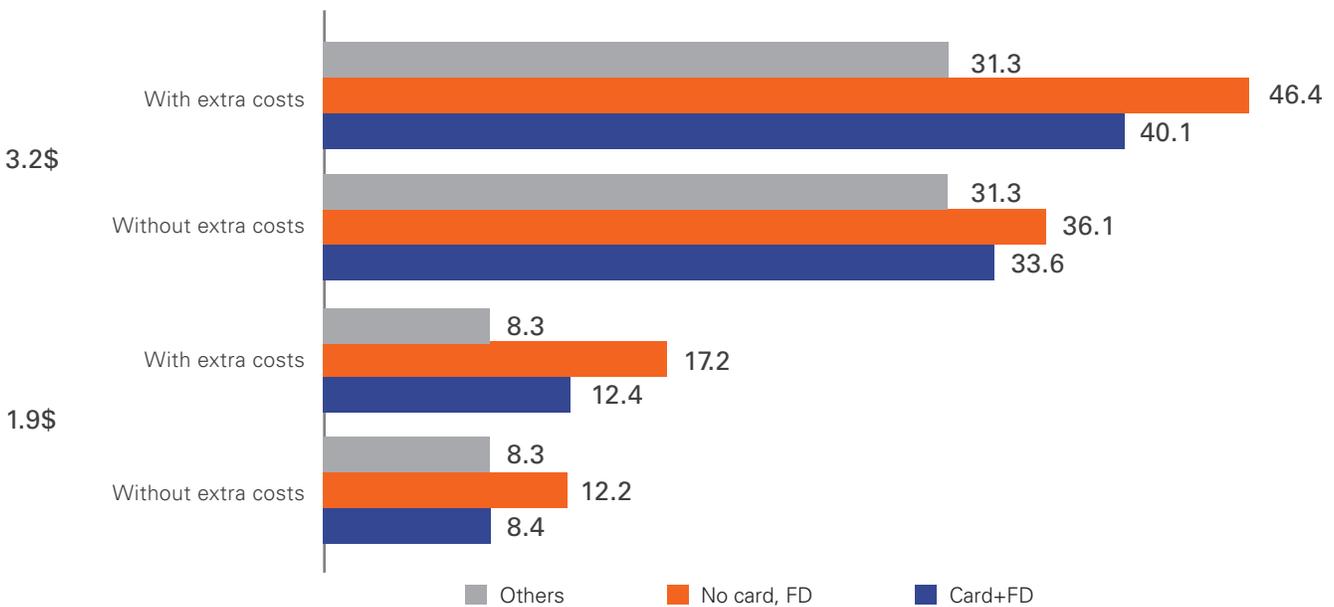
Assuming a proportional increase of the extra costs means that we can express the needs of a child with functioning limitations in terms of a multiplier of the needs of other children without functioning limitations. This calculation can be done indirectly considering the average household members, the number of children with disabilities and the proportional increase in expenditure. For example, if there are four household members and one child with severe functioning limitations and the household expenditure increases by 20%, this would imply that the equivalence scale for a child with disability is 1.8<sup>46</sup>. With some approximation across the different models, the equivalence scale for a child with a mild disability is 1.4 and for children with moderate/severe disabilities it is 1.8.

<sup>46</sup> The general indirect calculation is as follows: proportional increase in expenditure, given by the exponential of the ratio of the coefficient of disability and the coefficient of the logarithm of consumption, multiplied by the average household size and divided by the average number of children with functional difficulties in households with children who have functional difficulties.

## 6.3 Revised Monetary Poverty Estimates

Disability-related costs require a revision of poverty estimates. These are summarised in Figure 15 for the poverty headcount, the percentage of poor. Poverty estimates for households with children with functioning limitations increased by more than 25%, so that when comparing poverty rates of households with children with disabilities and other households with children, their poverty rate is 50% higher on average.

**Figure 15: Revised poverty estimates accounting for disability extra costs**



Note: FD stands for mild, moderate or severe functional difficulties.

The computation of the above poverty rates involved adjusting the needs of households with children with disabilities to the new equivalence scales. In the Philippines, a per capita approach was used, so that each member was counted as one. However, the above estimates were obtained by adjusting this calculation, so that a child with 'some functional difficulty' was counted as 1.4, and a child with moderate/severe functional limitations was counted as 1.8. For example, a family of 5 members with a child with severe functional limitations had an equivalent household size of 5.8. Using the 2021 official poverty threshold, the monthly poverty threshold for this household was not PHP 12,030, but PHP 13,954.8 (5.8\*12030/5).

## 6.4 Indirect Costs

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Indirect costs with monetary implications are primarily related to missed work opportunities due to the extra caring time required from parents, siblings and other family members of children with disabilities.

### 6.4.1 Indirect financial costs and forgone income

The literature refers to the household members dedicated to supporting the child with disability. Based on qualitative interviews, they are either not working, working part-time or accepting low-paid jobs to be close to the child with disabilities.

This section focusses primarily on indirect costs involving forgone income (current and future) and measures of care time. These costs are compared between households with children with disabilities and other households with children.

For direct costs, we consider household needs while for indirect costs we primarily look at income and the means that households have to support and pay for its needs.

In the qualitative interviews, mothers and primary caregivers had to give up their job to care for their child. One family said the mother left her job as a salesperson earning PHP6,000 a month when her child fell ill. Her husband earned around PHP8,500 a month based on hours worked. When their child fell ill, the father helped his wife look after their child. His income dropped between PHP2,500 and PHP1,500 a month. On a monthly basis, the family can lose PHP8,500.

A respondent who sold fish at a market said she needed to buy more ice to keep her fish fresh whenever she accompanied her child to and from school. She said the costs of travel, additional ice, and missed revenue from not being able to sell at the busiest time in the morning, cost her business PHP500 a day. Occasionally, her husband, who is a fisherman took care of the daughter while the mother worked. He loses PHP1,000 in income if there was a catch that morning or PHP150 in lost allowance if there was no catch. Another mother had to take time off work when her child was ill to be at the hospital for checkups with the doctor.

Variations in monthly income and potential losses made it challenging to budget for additional costs. One mother works in a factory for PHP375 a day, which is around the minimum wage. The low daily wage was offset by the security of having two weeks' paid leave that she could use when her son had to be admitted to hospital. As a single mother, she depended on an older relative to care for her son while she worked.

Sometimes caring responsibilities extended to siblings, who provided support for routine checkups or when a child was taken ill and admitted to hospital. The latter involved the support of several household members, particularly if a heavy child needed carrying. Mothers also related having to take the other children with them which made the children lose days in school.

*We [mother, grandmother, and daughter] used to take [child with visual impairment] to Manila every week [for the checkup]. And then it was every two weeks and then every three weeks. We had to see two different doctors. One doctor was for his glaucoma and the other was his ophthalmologist. After his operation and when the checkup was only needed every three months, that's when we stopped going. [...] Travel there and back for all three of us was PHP 1,200 a trip.*

From the quantitative survey, we can look at some aspects of indirect costs: differences in the main activity of parents and carers, the main characteristics of carers of children with disabilities, and the percentage of adult family members who work part-time because of caring responsibilities for other household members.

As mentioned earlier, not all the households in the sample had both parents living in the household; fathers were present in about 75%, while it was 80% for mothers. The survey identified the caregiver of the sampled child with a disability card and, except for a few cases, the caregiver was identified in all these households.

The main activity of parents, fathers and mothers, and caregivers are reported in Table 36. As expected, there was a significant difference between fathers and mothers in terms of work and household responsibilities. Mothers took a significantly larger role in caring for children and doing household chores. Almost 90% of fathers' main activity was employment-related, for mothers, 33%. This was true for households with children with a disability card and other households with children. However, the percentage among mothers who said that their main activity was caring for other family members was higher for children with a disability card compared with other children (13% vs 8%).

**Table 36: Main activity of fathers and mothers by type of household**

Main activity	Father			Mother			Caregiver
	With Card	Other	All	With Card	Other	All	With card
Regular salaried job	37.2	38.1	38.0	13.2	11.9	11.9	9.2
Casual labour	30.2	31.8	31.7	7.5	8.4	8.4	8.4
Employer	2.0	2.6	2.6	1.4	1.0	1.0	0.8
Own account worker	16.5	16.0	16.0	9.1	9.7	9.7	10.9
Unpaid work (household)	2.4	1.9	1.9	1.5	1.9	1.9	1.5
Caring for family member	1.0	0.0	0.0	13.1	8.2	8.3	14.9
Unemployed	5.6	5.2	5.2	1.8	3.0	3.0	6.6
Housewife	0.0	0.0	0.0	48.8	50.8	50.8	42.8
Other, specify	5.2	4.6	4.6	3.7	5.2	5.2	4.9
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0

While information about caregivers was available only for children with a disability card, in 90% of cases, the caregivers were women. In 8% of cases, the main carer was the father of the child; in 72% of cases, the mother; and in the remaining 20%, another person. Among the 20% they were primarily grandmothers, but also siblings, and other relatives (for example, aunts).

Table 37 shows the distribution of employment type for household members aged 15 and over: not employed, looking for work, in part-time and full-time work. In households where one of the children has a disability card, some members were more likely to be not employed while a few were employed (either part-time or full time), but the differences were not large. All types of households had children and so there were caring responsibilities. In households with children with a disability card, looking after children or family members was reported by 34% as the reason for part-time work. For other households, this reason was given by 25% of members. Instead, the lack of jobs was the prevailing reason.

**Table 37: Distribution of employment type of household members aged 15 and over**

Employment	Type of household		Disability Card and Functional Difficulties			
			With Card		Others	
	With Card	Other	No FD	FD	FD	No FD
Not employed	57.1	54.8	64.2	55.9	52.4	55.2
Looking for work	1.7	1.7	1.3	1.8	1.7	1.7
Part-time	14.0	15.6	12.5	14.4	14.7	15.8
Full-time	27.2	27.9	21.9	28.0	31.2	27.3
Total	100.0	100.0	100.0	100.0	100.0	100.0

Note: FD stands for mild, moderate or severe functional difficulties.

Evidence from qualitative interviews and the survey suggest that household members often accompanied the child to school or were present in school to enable the child to attend classes. However, this could not be observed during the survey period because the coronavirus pandemic did not allow face-to-face teaching in schools.

Still, we find evidence that on average, caregivers spent several hours looking after children, especially when the household did not have someone helping the family. The median number of hours spent looking after children was 20 for households with children with a disability card and no external support, against 12 hours for other households with children.

Households with children with disabilities were more likely to receive external support to look after children than for other households (63% vs 54%). Support from others came primarily from other household members (60% of cases) and from relatives. External paid support was very rare (10 cases from households with children with a disability card and three cases from among other households).

## 6.4.2 Care and other indirect costs

Parents took turns in providing care while the spouse worked but qualitative interviews confirmed care was not always provided by parents. Primary or secondary care roles were also provided by siblings, including younger siblings, grandparents and other relatives.

Some reasons why other family members also provided care were: the parents had abandoned the child and the single mothers were working. Care duties taken on by relatives included a range of tasks beyond 'babysitting' or minding the child. Some family members had to take care of more than one child with disabilities in the household. As one grandmother explained:

*The mother gave birth to Angela [who has an intellectual disability] at 16. Aaron is eight years old. He's one year younger than Angela, but she's afraid of him. My husband, Angela's grandfather, experiences high blood pressure or stress whenever he takes care of Angela. [...] I'm planning to apply for a person with disabilities ID [identification card] for Adam also. [...] He has a visual impairment. [...]*

*I get time off whenever Angela's mother is off from work. [...] She is a salesperson at [a department store]. [...] But on a regular day, my only breaks are going to the market and doing other errands. [...] No, I don't rely on others because I'm afraid I might regret it. Even if I'm struggling and deprived of sleep, whenever Angela gets sick and her mother is not at home, I press on.*

*I can say that a grandmother's love is priceless. Whatever happens, I won't forsake her. I always put [Angela and Aaron] first. I prepare their food first, our food comes last. When their mother receives her pay check, I go to the drugstore to buy Angela medicine, milk, and other things she needs. [...] taking care of children with disabilities like them is so difficult. We're like this for the whole day. The only time I can rest is at night, but it's a struggle when she sleeps so late. My sleep is also delayed.*

Care provided by someone who is not a close relative of the child was not frequently reported. If a family has domestic help, there may be additional assistance for the child and/or carer. One parent, who is a teacher, hired a nanny to look after their child. This cost PHP4,000 a month and was paid by the mother's sister. The nanny also received food and occasional extra cash from the mother. Another parent paid PHP500 a week for additional support but had to stop as this was too expensive. The respondent's salary at the time was PHP250 a day.

There was occasional support from family members. For example, an eldest child would accompany her mother and sibling with disabilities when in Manila for medical consultations because the mother is not familiar in Manila. Families also relied on relatives for financial support to buy medicines, pay for routine health checkups or finance major operations. This support, however, was not always available:

*[...] there are times when I will ask my daughter if we have money for the bus fare and my daughter won't respond. That's when I know she doesn't have enough money.*

Others said they could not rely on family members for support when caring for a child with disabilities and the other children. Assistance was especially needed when moving or carrying older or bigger children while they maintain their basic hygiene and toilet needs. Even if the additional support was necessary, a small number of respondents would not trust anyone to look after their child with disabilities.

Caregivers did not receive emotional support or access to respite care. The impacts on the family as a unit were also evident. Some parents of children with disability abandoned the child at a young age; fathers left mothers; and one father needed to seek work abroad for an extended period. Respondents said they were tired and caring for their child could be difficult at times. However, respondents did not relate these challenges to impacts on mental health. It is reasonable to assume that the combined effects of limited information, negative attitudes, and uncertainty about the welfare of their child could negatively impact wellbeing over time.

The non-financial costs experienced by families of children with disabilities were varied. As indicated, these ranged from lower educational attainment through non-enrolment or withdrawal from school to potential health complications because of postponement of treatment and surgery. These costs are accumulative and a child with disabilities may experience multiple forgone opportunities.

07

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The Cost of Disability  
and Policy Implications

The report has provided quantitative evidence and estimates on the incidence of disability among children and on the various costs of raising children with disabilities in the Philippines.

Children with a disability card are a minority among those with moderate or severe functioning limitations (one out of five). Among those who have the card, those in the upper income bracket benefited from the discount and advantages provided by the card. This is a combination of the lack of services in certain areas and the nature of the card, which facilitates those who can spend more.

Therefore, even though the disability card as a discount card is one key policy that supports people with disabilities in the Philippines, the system is extremely unequal for children and essentially supports only those at the top of the income distribution. While there are financial and non-financial costs of disability (such as discrimination), the study focused on financial costs and, in particular, direct costs. The main source of these extra costs is health-related expenses.

The extra cost in raising children with disabilities require equivalence scales that range from 1.4 to 1.8. This implies children with functional difficulties need an expenditure that is from 40% to 80% higher than other children. Against an average extra cost at the household level of 10% to 20%, the support is only a fraction of what would be required even for those who have and use the disability card or receive cash transfers.

The study also found evidence of substantial unmet needs, which do not materialise in costs and would require service provision. These unmet needs include the failure to enrol in school, evidence of forgone health treatment and consultations, and lack of assistive devices.

The key policy implications from these findings concern the need to develop the following: 1.) a more comprehensive disability registration and detection system; 2.) the right to health insurance and tangible service provision of health packages, such as those relating to assistive devices; 3.) the improved implementation of inclusive education policies; and 4.) provision of financial support.

While the Philippines has a good architecture of inclusive policies, the main gap seems to come from implementation.

## **Disability registration and detection**

Given that only 20% of children with disabilities have a disability ID card, it is necessary to invest in better awareness campaigns about disability registration. There is also scope to create better guidance on the use of common definitions and standards for health professionals. Moreover, disability assessment should only be an entry point to a set of services and must be accompanied by the identification of comprehensive support needs beyond medical needs and an assessment of the severity of disability.

Currently, the database managed by the DOH appears to be limited in coverage and does not provide adequate information on needs. Overcoming these limitations would require a better design of the application form for the disability card and practical incentives for cities and municipalities to enter and upload information in the national database. The pressure should also come from an increase in demand for applications for the disability card and demand for recognition in the national database. A strong demand could materialize a concrete benefit such as attaching a disability allowance with the disability card. This will be discussed further.

A successful system of disability registration requires the flexibility of multiple entry points and referrals, which would need to be strengthened. Disability registration should be encouraged after health checkups, but also in day care centres, the first years of kindergarten and school when certain functioning limitations are identified, or when cases emerge from social work through local social welfare offices.

Information collected in the *Listahanan*, the Community-Based Poverty Monitoring and other potential registration processes promoted by the PSA that identify suspected cases of disability could also be used to start the verification process and issuance of a disability card. Awareness and early detection would go hand in hand in improving the system and the provision of a package of services that would increase children's participation and wellbeing.

The development of a comprehensive (including an assessment of the severity of disability) database in which all cities and municipalities provide their data would be the basis for better planning and costing of services for these children. Moreover, the card would allow contact with focal points and PDAO offices at the city and municipality level and provide families of children with disabilities information about available services.

## **Health and education service provision**

Health-related costs are the main source of extra expenditure for children with disabilities and their families. Concession cards are a way to reduce such costs, but still require people to pay the bulk of the costs. On the other hand, provision of free services through PhilHealth represents the best way to ensure that everyone with a disability can access these services.

However, this benefit does not materialise because people need to have a disability card, their details need to be registered in the national database, people need to be aware of their rights, PhilHealth needs to provide clear health packages, and these services must be close to where people live.

While some health packages have been developed, they predate the 2019 policy granting PhilHealth coverage for all persons with disabilities. Very few health facilities are accredited and provide these packages.

The current provision of assistive devices is still primarily based on a charity model. Packages from PhilHealth should not only provide access to assistive devices, but also ensure that there is a system in place to maintain and update the devices.

The percentage of children with disabilities who are out of school in the Philippines is very high. There is a need to step up the implementation of recent policies promoted by the Department of Education. Apart from inadequate funding, problems sometimes involve stigma and attitudinal barriers within schools. There is a need to intensify advocacy and information on available interventions as well as increase guidance counsellors and SPED teaching assistants. There is an urgent need to widen access to inclusive education.

## **Financial support**

The study has shown that extra costs are substantial and these increase if the household aims for higher living standards. Low-level estimates of the median amount of extra costs were PHP1,281 per month for 'some' functioning limitations and PHP2,256 PHP for more serious functioning limitations. These costs vary by type of disability and requirements of specific needs. A disability allowance could address the current unequal support of the concession card by meeting some of the costs of basic services and some of the unmet needs as well as stimulate demand for services.

The findings of this study indicate two directions for designing the disability allowance. Firstly, the costs are higher for families with children with moderate and severe functioning limitations. Secondly, the costs increase with the number of children with functioning limitations in the household. Therefore, a possible disability allowance would need to be given on an individual basis and based on the severity of functioning limitations.

One obstacle in developing the disability allowance is that the DOH's database has limited information on the coverage of municipalities and the degree of severity of disability. Within each type of disability, it is possible to have mild or more severe functioning limitations.

For this reason, the recommendation would be to start with a flat allowance for all children with disabilities at PHP1,000-2,000 per month. At the same time, it should be possible to build a system that assesses the severity of disability. When these data are included in the system, it would be possible to differentiate the amount of support. If there are concerns on the potential cost of the allowance and a requirement to balance the support received by the relatively better off through the concession card, it would be possible to introduce a filter to exclude the better off from the allowance. However, the administrative, social and political costs associated with excluding this group should be carefully assessed.

If the vehicle for a disability allowance would be the possession of a disability card, this would provide an incentive for registration and strengthen demand from citizens. This would require cities and municipalities to maintain registries and upload them in the national database. In any case, it is expected that the increase in children with a disability ID card will take time, and this should not be the reason for delaying the implementation of the allowance.

Further, given that the study quantified the extra costs faced by children with disabilities and their families, this should also be recognized in current programmes which are means tested, especially the 4Ps. The models that determine eligibility to the 4Ps should be adjusted. Accounting for the extra costs of disability involves reviewing the proxy means test to recognise the higher poverty levels of households with such children. There is also scope to increase the financial support for children with disabilities by factoring the extra costs of raising children with disabilities.

Therefore, adjustments in the 4Ps would involve increasing the number of children with disabilities in the programme as well as the amount of financial support provided to poor households with children with disabilities.

# Annex A

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## Sampling Approach

## **Sampling design**

The study aims to investigate the cost of raising children with disabilities in the Philippines. The main target population, and thus the sampling universe, are all households in the Philippines with at least one child with disabilities who is under the age of 18. To estimate the extra cost of raising children with disabilities compared with children without disabilities, the methodology used a comparative population of households with children without disabilities. The universe for the second subsample includes all the households in the Philippines with at least one child (a person under the age of 18). The main unit of observation, and of analysis, is the household.

The sampling design was primarily guided by the requirement that the population of households with children with disabilities should be nationally representative. Another requirement was to provide reliable results for the three geographical areas namely: Luzon, Visayas and Mindanao (although Visayas and Mindanao are two different explicit strata), and the NCR.

The proposed sampling design is a stratified multistage systematic random sampling. Selection was done in two stages.

### **Selection of localities to be included in the survey**

At the first stage, barangays were selected within each stratum using probability proportional to size (PPS) and using a fixed number: 80 for NCR; 80 for Luzon; and 40 each for Visayas and Mindanao. Using PPS implies that barangays with a larger population are more likely to be selected than the smaller barangays. Regions, provinces and LGUs were used as implicit strata. In the second stage, households were sampled from the selected barangays using a systematic random sampling method.

### **Selection of households in the sampled localities**

For the selection of households with children who have a disability ID card, the team of enumerators contacted LGUs from the selected barangays to obtain lists of all children with a disability ID card. Acquiring these lists proved to be more challenging than expected because data was decentralised and not networked, and in most cases could only be collected physically at the LGUs headquarters.

The databases were also not standardised. For example, municipalities used different classifications of disability. Although, every person with disabilities is entitled to have a disability ID card and benefit from the associated advantages, it was unclear whether all LGUs issued these cards, especially to children. To overcome this challenge as well as other potential problems, a replacement list was drawn. Overall, 13 barangays had to be replaced, mostly in the NCR. This was necessary because the LGUs did not provide the required information, or in some areas, the selected barangay could not be accessed due to security and other concerns.

The sampling frame for the control population of other households with children was constructed through a listing survey in the selected barangays. The sampled households with children with disabilities formed the seed coordinates for the definition of the listing segments within the barangay.

The listing segment is defined as an area surrounding the seed coordinate. This approach yielded a frame for drawing a sample that complements the sample of households with children with disability ID card in terms of similar living conditions. This is required in the proposed methodology for measuring the cost of raising children with disabilities. However, the proposed approach may not yield a sample that is nationally representative of the total population of households with children.

The listing survey was based on the systematic enumeration of all the structures and households living in these structures in the designated area around the seed coordinate. The data from the listing survey was used to construct the sampling frame for the final selection of the control households.

## **Sampling frame preparation**

The sampling frame for the sampling of clusters was constructed by combining two databases:

- the list of geographic administrative units and
- the 2010 Census Public Use File (PUF).

The list of geographical and administrative units is the primary frame. The unit of observation is the barangay. The barangay is also the primary sampling unit (PSU).

The selection of the appropriate PSU was guided by the two populations of interest being surveyed. The groups are very different in terms of prevalence in the overall total population of the Philippines. The main driver for determining the PSU was the main group of interest – families with at least one child with a disability ID card. The PSU must be of sufficient size to support drawing the sample of six households with children with disability ID card.

There are reasons to believe that, in most cases, the barangay would be a suitable primary cluster to satisfy this condition. However, barangays, in most cases, were too large to prepare the sampling frame for drawing the sample of the second group of interest – households with children without disability card, which is a very common population. Based on the 2015 Census, the average barangay was about 2,400 people or 550 households, but there was considerable variation. For example, there were 15 barangays with more than 100,000 people and one municipality with only 184 people.

The Census PUF is the secondary source to provide additional variables to inform the sampling in terms of strata. PUF features two separate data files with two distinct units of observation: the household and a member of the household. The PUF also supports administrative and geographical aggregation variables. The smallest administrative unit identifier included in the PUF is the municipality, which is one rank higher than the barangay. In order to inform the first-stage sampling and capture more information in the sampling frame, the PUF was used to generate municipality-level aggregated variables – i.e., any relevant household and individual indicators were aggregated and summarised at the municipality level.

One complication we faced was that the ID variables for identification across the two sources were not standardised and we had to develop a mapping table to merge the different codes from the two data sources.

The characteristics obtained from both sources could be used as possible stratification variables<sup>47</sup>. However, stratification should not have too many strata. The main stratification dimension was geographical to ensure proper geographic dispersion of the sample. In practice, apart from the geographic strata, indicators related to disability prevalence and to livelihoods were also produced, but for the sample selection, only the ranking of municipalities by economic status was used as implicit stratification. Within each geographical stratum, this was achieved before conducting a PPS selection.

## **The selection of primary sampling units**

The selected sample consisted of 240 barangays. In each explicit strata, the barangays/municipalities were first ranked by urban/rural areas and then by economic status. In each stratum, 25 potential replacement locations were selected and assigned a sequential number to be followed in case of replacement, separately for urban and rural areas. A replacement when needed could be issued in the prescribed order.

## **Sampling frame for children with disabilities**

For children with disability, the sampling frame was drawn from the list of children with a disability ID card. The list should be maintained by the municipality PDAO office or managed by the disability focal person.

For each selected barangay, the first step is to contact the municipality to which the barangay belongs and inquire about: 1) the existence of such a list, 2) the total number of children in the list 3) the number of children in the selected barangay.

The use of systematic random sampling as proposed in the survey design requires that the ideal minimum size of the sampling frame is three times the sample size and should not be smaller than twice the sample size. The target is to interview six children, but considering possible replacement, the protocol selected 12 children in urban areas and nine children in rural areas<sup>48</sup>. This meant that there should be at least 24 children in urban areas and no less than 18 children in rural areas<sup>49</sup> in the list.

In many barangays, there were few or even no children with a disability ID card. In such cases, sampling was extended to include the barangay located north of the selected area, and if the number reached was still insufficient, or there was no such barangay in the same municipality, other barangays were added in clockwise direction until the eligible frame size was equal or larger than the minimum required. Once a barangay was added, all children with disabilities in that barangay were included in the sample frame.

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<sup>47</sup> These could be relevant also at the analysis stage to compare children from municipalities with different characteristics and as control variables in some econometric analysis.

<sup>48</sup> Initially, the target was an extra two replacement children, but in some cases lists were not updated and it was common to find cases where the child was no longer living at the given address. This increased the replacement list.

<sup>49</sup> Systematic random sampling fails if sampling fractions are larger than 50%.

If the number of children with disability in the selected barangay (or the barangays included in the sample frame) were relatively few, available details were obtained. The list was sorted by the date of birth and names randomly extracted using systematic random sampling. However, when extracting lists with many names<sup>50</sup> and where the LGUs had privacy concerns, an anonymised list was used. The addresses and names were obtained only for the selected children, in some cases after the intermediation of the LGU officer or barangay captain who asked consent from the household to share their information for the possible interview.

With an electronic list, it was possible to quickly sort observations by date of birth and give a sequential number. In cases where selection was done in the field, the relevant information was entered in computer-assisted personal interviewing (CAPI) and the random selection occurred in automated fashion.

## **Sampling frame for other households with children**

As mentioned earlier, barangays or groupings of barangays as PSUs were mostly too large to be fully enumerated. To draw a systematic random sample of households, we compiled a frame or a list of households for sampling within each barangay.

It was necessary to develop an approach that was feasible and proportionate to the number of households we needed to sample in each barangay.

We considered two main alternatives:

- treat the selected children with disabilities as seeds for listing the secondary group
- enumerate only subsections of the barangay

After piloting, it was decided to opt for the first strategy.

### **Location of selected children with disabilities as geographical seeds**

We aimed at listing about 200-250 households, which implied that on average, we should list about 30-40 households around each selected child with disabilities ( $6 \times 40 = 240$ )<sup>51</sup>.

However, the rule for listing households around each seed should be based on a standardised criteria of a determined geo-fenced area – i.e., an area within a certain distance from the seed. The determination of distance should not be fixed but should be a simple function of the density of the population in each barangay – i.e., in more densely populated barangays the size of the area should be smaller than in the more sparsely populated barangays.

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<sup>50</sup> According to chapter VII of the data privacy act (<https://www.privacy.gov.ph/data-privacy-act/>) access to such data might need approval and no more than 1,000 records at a time can be extracted. However, the act also says that these limitations do not apply in case personal information is processed for research purposes (Chapter 1, sec. 4d).

<sup>51</sup> Listing will use as seeds the first six selected children with disabilities, regardless of whether some of them might be replaced.

Once the listing is completed in all the seed areas, the lists should be aggregated to form a PSU common list, which should be stratified geographically, and the sample should then be selected using systematic random sampling.

One of the findings of the pilot activities was lists of children with disabilities, especially in urban areas, were not always up to date. It was often not possible to find the household (the household moved to live somewhere else). For this reason, to have six interviews of children with disabilities in urban areas, we selected six more households as potential replacement households in each cluster. In rural areas, the replacements were three. (The reason is that mobility is higher in urban areas compared with rural areas and lists are less up to date in urban locations).

The fact that lists were not always up to date and that some households refused to be interviewed meant a high number of unsuccessful interviews. This is the result of both 'sampling imperfections'<sup>52</sup> and 'non-response'.

Overall, 368 interviews were unsuccessful, where 82 consisted of non-response (70 refusals and 12 non-contacts), and others due to problems with the sampling frame. Information was outdated for the following reasons: child is dead, household could not be located or it changed address. The distinction is important because while sampling imperfections only result in increased cost of conducting fieldwork, non-response can produce a potential bias in the survey results.

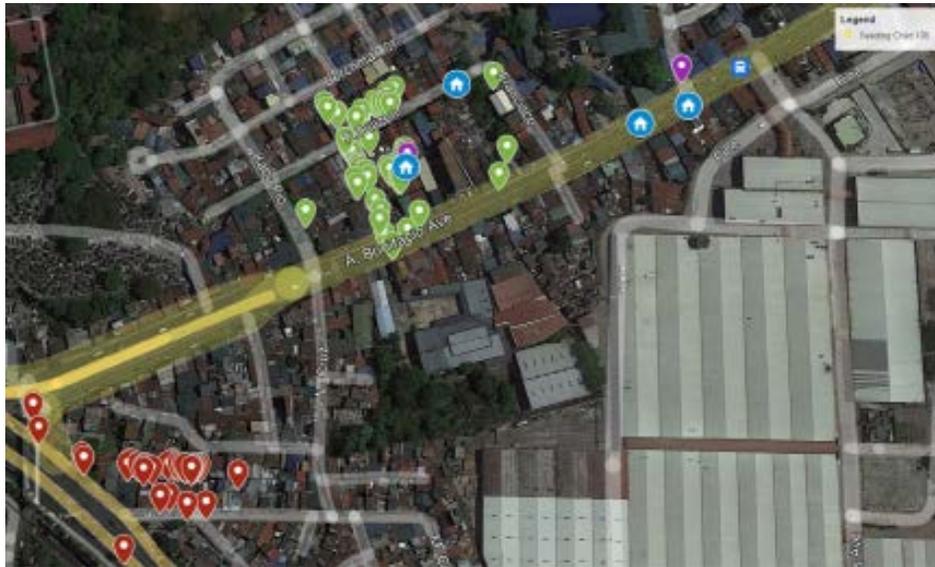
All households living in the same block of the 'seed' household should be listed and identified if they have at least one child under 18. This list forms the basis for the selection of the comparison group. Using GPS coordinates of the devices used to conduct the interviews and the actual listing we could track the work of enumerators.

Figure 16 shows one example of how this is captured in practice. Each listed household is marked with a sign of the same colour and the households selected for interview are marked with a little house. The listed households for each seed child are clustered together and belong to the same block. The accuracy of the GPS coordinates is not always perfect, but we can see a good coverage of the listing operations, which are automatically captured by the software as enumerators walk around the block and record the dwellings where people live and mark those eligible for selection if they have at least one member under 18.

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<sup>52</sup> Sampling imperfections are defined by having incorrect information in the sampling frame, such as a child who no longer lives at the registered address or a child who is registered as being under 18, but actually is already an adult. These cases should not have been sampled in the first place.

Figure 16: Example of maps showing the listing operations



# Annex B

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Welfare Aggregates'  
Construction

## Consumption aggregate

When constructing the consumption aggregate, it is most important to identify its main purpose since this affects the methodological approach to follow. In this context, the consumption aggregate is constructed for welfare analysis (making inter-household comparisons) and for understanding the expenditures incurred by households.

This measure is different from constructing household expenditure for national accounts. For example, to strengthen inter-household comparison, certain consumption items can be excluded if they are lumpy and purchased infrequently. There are also expenditure items that do not directly contribute to welfare but affect people's budget and could limit what people can spend on other items.

Health expenditure, a contested item, is one example. People should be able to address their health needs when these arise, but health expenditure should not be considered as improving people's welfare when compared with other people who do not have health expenditure because they don't need it (the exception is preventative healthcare). Therefore, the general recommendation is to exclude health expenditure from the consumption aggregate for welfare analysis (see Deaton and Zaidi 2002).

However, for the focus groups of this study, accounting for health expenditure is important to understand budgetary needs. Therefore, we retained health expenditure in the welfare aggregate. This is necessary to estimate disability-related costs and equivalence scale adjustments.

The design of the consumption modules of the questionnaire was based on the analysis of 2018 FIES tables and questionnaires. Indeed, even though it would have been impossible to replicate the FIES approach, its results were used to identify the most important items to develop a short questionnaire. To strengthen accuracy, different consumption items were asked with suitable recall periods (for example, last seven days for food, one month for utilities and transport, six months for clothing/footwear, one year for education).

However, when constructing the welfare indicator, adjustments were made to report an average expenditure in the same reference period of one month. Food was scaled up and expenditures with a recall period longer than one month were divided and adjusted as monthly expenditures.

Although the PSA includes imputed rents for dwelling owners, it was decided to exclude this calculation and for comparability purposes, actual rents were also excluded from the aggregate. Similarly, for large durable items and for welfare analysis, it would be inappropriate to include their expenditure. Instead, a consumption flow from their use was adopted. However, given the complexity of this estimate, this was also excluded from the consumption aggregate.

Specific to the population being analysed, it is important to note the subsidies received by households who have a disability ID card, in relation to the use of the card and type of items consumed. The interest is not in the expenditure itself, but in consumption expenditure, i.e., the value of items consumed. Therefore, the subsidy must be added to the overall household expenditure.

The disability ID card provides two main types of discounts:

- 5% discount on a list of essential items, but capped at a maximum expenditure value of PHP1,300 per week (i.e., a maximum benefit of PHP65 per week);
- exemption from VAT and 20% discount on transport, restaurants, medicines, medical fees, and some recreational activities.

However, such discounts can only be obtained in formal businesses with a minimum capitalization of PHP100,000. The questionnaire asked how people used the card and specifically whether it was used for restaurants, groceries and basic commodities, medicines, medical fees, recreational activities, and school supplies. Whenever the answer was positive, the subsidy was calculated based on their declared level of expenditure in the corresponding items. However, since not all expenditure might be eligible for discounts, only 90% of the declared expenditure was used to compute the subsidy, and in the case of medical fees and medicines, only 80%.

Not all households with a child with disabilities used the card to obtain discounts, and for those who did, the average subsidy on the overall household consumption expenditure amounted to 2.5%. Its importance is significant especially with health expenses and for some households, and during certain periods, the subsidy can be quite substantial.

Mean and median monthly household consumption expenditure as well as the consumption patterns are reported in Table 38 (values are nominal for the period of the survey). The table compares data from the FIES 2018 with the preliminary results for the first semester of 2021. While the FIES data provide information for the overall population, the CRCWD survey focuses only on households with children (about 73% of all households). The expectation is not to find a perfect match between the two sources, but to compare the broad level of expenditures and the general patterns. Overall, estimates obtained in the survey were in line with those of the FIES.

Amounts reported above represent nominal expenditures, but to make proper inter-household comparisons, it was necessary to adjust values for inflation and regional price differences. This was achieved by estimating a Paasche price index using data collected in the survey as well as information from the official consumer price index. Information on prices was taken from the community price questionnaire on a selected number of items and budget shares were derived from the household interviews. Monthly inflation (the consumer price index) disaggregated for the 13 COICOP (Classification of Individual Consumption According to Purpose) groups was used to adjust prices and expenditures to prices of May 2022. The index was constructed for the four strata, correcting for price differences over time and across regions.

**Table 38: Household consumption levels and patterns in the survey and FIES**

	CRCWD	FIES	
	Nov 2021-Jun 2022	2018	Jan-Jun 2021
<b>Family monthly consumption expenditure</b>			
Mean (PHP)	13412	15343	14405
Median (PHP)	11731	10663	10011
<b>Consumption patterns</b>			
Food	62.2	56.0	56.5
Alcohol and Tobacco	2.2	2.3	2.2
Education	4.2	3.9	1.9
Health	3.9	4.2	4.3
Clothes	1.3	3.1	1.9
Utilities	11.0	9.6	11.9
Transport	4.7	8.6	7.4
Communication	4.1	2.8	3.0
Personal care	3.5	5.5	6.3
Maintenance	2.1	2.9	2.5
Recreation	0.9	1.2	2.0
Total	100.00	100.00	100.00

Source: FIES 2018, preliminary results of first semester of FIES 2021, and Cost of Raising Children with Disabilities (CRCWD).

Notes: FIES consumption aggregate have been adjusted to match the same definition used in the CRCWD. In particular, the following expenditure were excluded: actual rent paid, imputed rental for housing, repair of the dwelling, durable furniture and equipment, special family occasions, financial services and other expenditure.

Since median values for FIES 2021 were not available, this has been calculated by indirectly applying to the mean value the ratio between median and mean of 2018.

## Income aggregate

As in consumption, the income aggregate can be constructed differently depending on its purpose. For welfare measurement, the specific aggregate of interest is disposable income in which voluntary remittances paid out, compulsory taxes and social security contributions are deducted from gross income. Disposable income is often disaggregated for its main sub-components: wage income, income from self-employment, income derived from transfers, property income, and other income. Income is also disaggregated to single out some important sources of income in the Philippines, in particular, foreign remittances.

Income from owner-occupied dwelling was excluded, as was the case in the consumption aggregate. However, in this case, income from renting out dwelling was included in property income (together with bank interest and dividends from bonds and shares).

A detailed breakdown of the income patterns across various income categories is provided in Table 39. On average, wages made up the largest source of income, followed by government transfers and non-agricultural income.

**Table 39: Income patterns**

Income group/category	CRCWD
	Nov 2021-June 2022
	Income share
Wages	53.6
Employer earnings	5.3
Non-agricultural employer earnings	11.0
Self-employed earnings	1.0
Secondary wage	4.5
Income from crops	0.9
Income from livestock	0.4
Income from fish and fish products	0.8
Non-farm income	0.6
Government transfers	14.0
Domestic transfers	1.5
Transfers from abroad	4.6
Other transfers	0.3
Income from savings and investments	0.2
Card subsidy	0.1
Own production	1.3
Total	100.00

Table 40 compares aggregate income patterns with FIES 2018 and FIES 2021 figures, where the definition of the income aggregate was made comparable across the two surveys. The comparison showed that the income patterns observed in the survey were in line with the official figures from FIES 2018 and FIES 2021, and that these patterns were stable during the period.

**Table 40: Comparison of income share with FIES 2018 and 2021**

Income group/category	CRCWD	FIES 2018	FIES 2021
	Nov 2021-June 2022		
Wages/Salaries	60.5	56.6	51.4
Entrepreneurial Activities	18.9	19.9	17.3
Other Sources of Income	20.6	23.6	31.3

Table 41 provides a comparison of mean and median monthly income figures from this survey with annual data from FIES 2018 and preliminary results of the first six months of 2021 (FIES 2021). This comparison showed that aggregate income reported in the survey was much lower than the official aggregate income reported in FIES 2018 and FIES 2021. The lack of consistency between this survey and the official reported income figures could be due to several reasons:

- *Income aggregation method.* The design of the income modules of the questionnaire was based on the questionnaire design of FIES and Labour Force Survey, with the goal of replicating the FIES approach as much as possible. But the survey excluded the imputed value of dwellings, which comprised 10% of the reported income in FIES 2018.
- *Different samples.* As mentioned earlier in the report, this survey targeted a relatively small group of the overall population, and the sampling frame was based on the list of children with disabilities with a disability ID card. Therefore, the point estimates across PSA surveys and this survey were not directly comparable.
- The income module of the survey is a complicated questionnaire section and more prone to data collection errors, despite scrutiny and training. The variations in data collection quality may have also contributed to inconsistencies in reported income.

The correlation between income and consumption was also found to be weak (0.4) which further pointed to gaps in the reliability of income data.

Keeping in view the limitations of the data, the poverty estimates were calculated based on consumption data.

**Table 41: Comparison of monthly mean and median household income with FIES 2018 and FIES 2021 results**

Statistic	CRCWD	FIES 2018	FIES 2021
	Nov 2021-June 2022		
Mean	13,222	26,083	24,997
Median	10,000	16,917	16,212

Note: Since median values for FIES 2021 were not available, this were calculated by indirectly applying the mean value the ratio between median and mean of 2018. Annual figures from 2018 and semi-annual figures were converted into monthly figures for the above comparison.

# Annex C

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Adults' Experimental  
Disability Module

As part of this study, we tested a new approach to asking questions about functional limitations. In the short set traditional approach, six questions were asked for each of the household members listed in the roster. In the new approach, for household members aged 18 and over, the enumerator first asked a filter question before asking the relevant Washington Group question to narrow down the list of household members to only those who have a functional difficulty.

For instance, in the case of limitations related to seeing, the enumerator asked:

*Does anybody in your household, including yourself have difficulty seeing, even if wearing glasses? (Yes/No)*

If the answer to the above question was "Yes," then the enumerator asked the respondent to list the household member who has the specific limitation.

With this information, the enumerator then asked the Washington group question about the specific functional limitation (e.g., seeing) for the household members listed as having this specific difficulty.

*You mentioned [NAME] has difficulty seeing even when wearing glasses. Would you say [NAME] has: some difficulty, a lot of difficulty or cannot do at all?*

If the answer to the first filter question is "No," then the question related to a specific limitation (e.g., seeing) is not asked to any of the household members.

The main difference between the two approaches is that in the traditional approach all household members are asked questions about each functional limitation. In the new approach, only household members who are listed as having a specific difficulty are asked questions about a specific difficulty or limitation.

The new approach reduces the time spent on the functional limitations' module; it also reduces respondent fatigue. Asking the full set of Washington Group questions to all household members can irritate the respondents and can result in low-quality responses.

This experimental approach was tested to 20% of the households in the survey<sup>53</sup>. It enabled us to compare the time spent and the responses received in each approach.

Figure 17 shows that the experimental approach reduced the survey time by half, from 155 seconds to 59 seconds (when administered to households with an average of 2.7 adult members per household).

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<sup>53</sup> In the initial phase of the survey, the type of module was randomly assigned to households with a probability of 60% for the new approach. Initial results suggested large variations in the results which prompted the study team to remove the new approach. However, the final analysis showed that results were very similar across both modules which validated the use of this new approach.

**Figure 17: Duration of two modules for adult functional limitations**

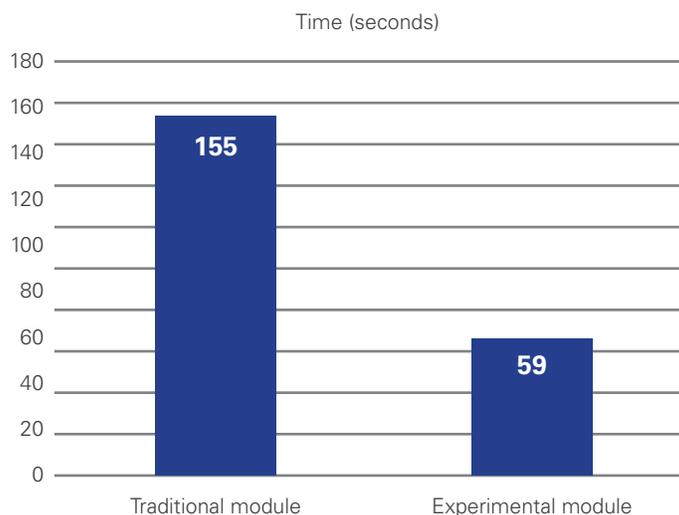


Table 42 shows the comparison of results, in terms of functional difficulties across both modules, for different age groups. The table shows similar results across both modules, with the experimental module indicating a slightly higher incidence of functional limitations across the three age groups. Adults aged above 60 showed the highest variation. Across households that were administered the traditional module, 11% of the adults were reported to have at least one type of functional limitation while the proportion was slightly higher (13.2%) in the experimental group.

**Table 42: Functional limitations by measurement method and age**

	Measurement method	
	Traditional	Experimental
<b>Age 18-29 (obvs)</b>	<b>1777</b>	<b>407</b>
Functional Difficulty	1.4	1.8
<b>Age 30-59 (obvs)</b>	<b>3583</b>	<b>857</b>
Functional Difficulty	2.0	2.4
<b>Age 60+ (obvs)</b>	<b>583</b>	<b>137</b>
Functional Difficulty	11.0	13.2

Table 43 shows the results of adults reporting 'some difficulty' across both modules. These results were found to be similar, albeit with relatively larger variations compared with the table above. The proportion of adults reporting 'some difficulty' was found to be slightly higher in the experimental module.

**Table 43: Adults reporting some difficulty, by measurement method and age**

	Measurement method	
	Traditional	Experimental
<b>Age 18-29 (obvs)</b>	<b>1777</b>	<b>407</b>
Adults reporting some difficulty	5.3	4.0
<b>Age 30-59 (obvs)</b>	<b>3583</b>	<b>857</b>
Adults reporting some difficulty	15.6	11.3
<b>Age 60+ (obvs)</b>	<b>583</b>	<b>137</b>
Adults reporting some difficulty	44.6	46.8

# Annex D

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## Confidence Intervals

In this section, we present the estimates of key variables along with their standard errors (SE); a comparison of estimates across various analytical groups, and the statistical significance of differences across these groups.

**Table 44: Estimates, standard errors, comparison of estimates, by type of household and disability**

Indicator	Type of household				Difference	
	With Card		Other		Without Card	Other
	Estimate	SE	Estimate	SE		
<i>Household level</i>						
% of HHs with at least one HH member with health insurance	74.7	1.9	66.7	1.8		8.1***
% of HH with books suitable for children	34.6	2.0	33.5	1.8		1.1
% of HHs having no one for practical help	25.8	1.7	27.6	1.7		-1.8
<i>Individual level</i>						
Total per capita consumption, adjusted for price differences	3228.4	115.7	2761.3	61.9		467.1***
% poor after accounting for different needs	38.3	2.4	33.5	1.8		4.8*
% of MPI poor people	35.4	2.2	28.3	1.6		7.2***
<i>Child level</i>						
% of children not enrolled (aged 5-17)	31	2.2	4.1	0.7		27.0***
% of children (aged 5-17) who had forgone health expenditure	25.2	1.8	15.9	1.5		9.2***

**Table 45: Estimates, standard errors, comparison of estimates, by type of household and disability**

Indicator	With Card				Difference	Without Card				Difference
	No FD		FD			FD		Others		
	Estimate	SE	Estimate	SE	FD – No FD	Estimate	SE	Estimate	SE	Others – FD
<i>Household level</i>										
% of HHs with at least one HH member with health insurance	77.4	4.4	74	2.1	-3.5	65.7	4.2	66.8	1.8	-1.1
% of HH with books suitable for children	36.9	4.6	34.4	2.2	-2.5	36.6	4.3	33	1.8	3.5
% of HHs having no one for practical help	22.4	3.8	26.3	1.9	3.9	37.5	3.9	25.9	1.8	11.6
<i>Individual level</i>										
Total per capita consumption, adjusted for price differences	3266.7	220.1	3210.9	123.2	-55.8	2511.1	118.2	2804.1	65.6	-293.1
Poverty after accounting for different needs	28.5	5.3	40.1	2.6	11.6**	46.4	4.2	31.3	1.9	15.1**
% of MPI poor people	24.1	4.0	37.8	2.4	13.7***	31.4	4.0	27.7	1.7	3.7***
<i>Disability Card Use</i>										
Food discount	62.1	5.3	52.8	2.9	-9.3*					
Purchase of groceries	41.4	4.8	34.5	2.4	-6.9					
Medicine discount	76.2	4.6	72.4	2.3	-3.9					
Medical fees	50.4	4.8	34.5	2.1	-15.8***					
Never used	3.9	2.8	12.2	2.0	8.2**					
<i>Child level</i>										
% of children not enrolled (aged 5-17)	16	3.5	33.9	2.5	18.0***	7.8	2.0	3.9	0.6	3.9***
% of children (aged 5-17) who had forgone health expenditure	28.7	6.0	24.6	1.8	-4.0	23.6	3.4	13.6	1.5	10

**Table 46: Estimates, standard errors, and comparison of disability card use, by the richest and poorest quintiles**

Indicator	Poorest		Richest		Difference	
	Estimate	SE	Estimate	SE	Richest	Poorest
<i>Disability Card use</i>						
Food discount	38.4	5.5	65.7	3.0		27.3***
Purchase of groceries	15.5	3.3	50.8	3.3		35.3***
Medicine discount	57.0	6.2	81.8	2.5		24.8***
Medical fees	20.7	3.7	50.3	3.0		29.7***
Never used	19.4	6.0	4.0	1.3		-15.4

**Table 47: Estimates, standard errors, and comparison of key estimates, by rural/urban location**

Indicator	Rural		Urban		Difference
	Estimate	SE	Estimate	SE	Urban - Rural
Child with disability and with ID card	0.9	0.1	0.7	0.0	-0.2**
% of children with functional difficulty (moderate and severe)	6.3	1.3	2.4	0.6	-3.9***
% of children with at least some difficulty (mild, moderate and severe)	11.4	1.4	7.6	0.9	-3.8**

**Table 48: Estimates, standard errors, and comparison of key estimates, by strata**

Indicator	Strata						Difference		
	Luzon		Visayas/Mind		NCR		Difference	Difference	Difference
	Estimate	SE	Estimate	SE	Estimate	SE	Luzon-Visayas/Mindanao	Luzon-NCR	Visayas/Mindanao-NCR
<i>Child Level</i>									
% of children with disability card with ID card	0.8	0.1	0.9	0.1	0.8	0.1	-0.1	0.0	0.1
% of children with functional difficulty (moderate and severe)	2.4	0.4	6.3	1.4	2.1	0.4	-4.0***	0.2	4.2***
% of children with at least some difficulty (mild, moderate and severe)	9.5	1.1	9.4	1.5	7.4	1.0	0.2	2.1	1.9

# Annex E

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Additional Statistical  
Tables

**Table 49: Full regression results for nuclear families**

	(1) Position in society	(2) Asset index	(3) Non deprivations
<i>Consumption (logarithm)</i>	0.697*** (0.0993)	1.210*** (0.0429)	1.527*** (0.0948)
<i>Only mild FD (in at least one child)</i>	-0.156 (0.151)	-0.122* (0.0673)	-0.334** (0.134)
<i>With moderate/severe FD (in at least one child)</i>	-0.315*** (0.120)	-0.207*** (0.0546)	-0.758*** (0.106)
<i>Proportion of children aged up to 5</i>	0.0723 (0.163)	-0.407*** (0.0729)	-0.321** (0.143)
<i>Proportion of girls among children</i>	-0.0279 (0.142)	-0.0236 (0.0634)	0.135 (0.125)
<i>Couple with one child</i>	-0.0876 (0.167)	0.172** (0.0743)	0.270* (0.148)
<i>Couple with three children</i>	-0.170 (0.153)	-0.185*** (0.0675)	-0.354*** (0.132)
<i>Couple with four or more children</i>	-0.387** (0.157)	-0.435*** (0.0708)	-0.712*** (0.138)
<i>Single parent with children</i>	-0.438** (0.175)	0.0118 (0.0799)	-0.0483 (0.157)
<i>Lives in NCR</i>	0.837*** (0.142)	0.215*** (0.0607)	0.130 (0.121)
<i>Lives in Visayas</i>	0.226 (0.150)	-0.592*** (0.0701)	-0.298** (0.136)
<i>Lives in Mindanao</i>	-0.232 (0.143)	-0.479*** (0.0690)	-0.573*** (0.132)
<i>/cut1</i>			10.90*** (0.872)
<i>/cut2</i>			12.17*** (0.880)
<i>/cut3</i>			13.88*** (0.896)
<i>Constant</i>	-5.721*** (0.941)	-10.90*** (0.409)	
<i>Observations</i>	1,773	1,775	1,775
<i>R-squared</i>		0.422	

Standard errors in parentheses  
 \*\*\* p<0.01, \*\* p<0.05, \* p<0.1

# Annex F

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Comparison of Disability  
Prevalence in Other Countries

**Table 50: Comparison of functional limitations, by indicator and country**

Indicator	Fiji	Pakistan (AJ&K)	Vietnam	Kosovo	Malawi
<i>% of children aged 2-17 reported functional difficulty in at least one domain</i>	8.8	28.7	1.8	7.9	12.4
<i>% of children aged 2-4 with functional difficulty in at least one domain</i>		15.3	1.2	3.5	5.3
<i>% of children aged 5-17 with functional difficulty in at least one domain</i>		32.2	1.9	8.7	14

Indicator	Samoa	Palestine	Bangladesh	Nepal	Pakistan (KP)	Tonga
<i>% of children aged 2-17 reported functional difficulty in at least one domain</i>	19.4	12.3	7.3	10.6	16.6	9.3
<i>% of children aged 2-4 with functional difficulty in at least one domain</i>	6.9	2.4	2.8	1.7	6.4	7.1
<i>% of children aged 5-17 with functional difficulty in at least one domain</i>	22.6	14.9	8.3	13.2	19.1	9.8

Kosovo survey footnotes: Functional difficulty for children aged 2–4 years are defined as having responded ‘A lot of difficulty’ or ‘Cannot at all’ to questions within all listed domains, except the last domain of controlling behaviour, for which the response category ‘A lot more’ is considered a functional difficulty.

A functional difficulty for children aged 5–17 is defined as having responded ‘A lot of difficulty’ or ‘Cannot at all’ to questions within all listed domains, except the last domains of anxiety and depression, for which the response category ‘Daily’ is considered a functional difficulty.

Pakistan (KP) footnote: Functional difficulty for household members aged 18 years and above are defined as having responded “A lot of difficulty” or “ Cannot at All” to questions within all listed domains.

# Annex G

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Profile of Children in  
Households Included  
in Follow-up Interviews

**Annex G: Profile of Children in Households Included in Follow-up Interviews**  
 Cost of Raising Children with Disabilities in the Philippines

Note: The disability type in the following table is based on the disability ID card.

#	Gender	Age	Disability Type
1	Male	16	Speech and language impairment
2	Male	11	Physical disability
3	Female	16	Physical disability
4	Male	8	Physical disability (upper/lower extremity paralysis)
5	Female	17	Physical disability
6	Male	16	Physical disability (chronic kidney disease)
7	Male	2	Psychosocial disability (cerebral palsy)
8	Male	11	Physical disability
9	Female	13	Learning disability
10	Female	15	Physical disability
11	Male	13	Speech impairment (cleft lip)
12	Female	6	Speech impairment
13	Female	6	Vision impairment (cataracts)
14	Male	8	Learning disability (acute lymphoblastic leukaemia)
15	Male	11	Intellectual disability
16	Male	8	Intellectual disability (autism)
17	Male	6	Learning disability
18	Female	12	Learning disability / hearing impairment
19	Female	17	Speech impairment (cleft lip)
20	Female	15	Physical impairment
21	Female	13	Visual impairment
22	Female	12	Mental disability (epilepsy)
23	Male	15	Intellectual disability (down syndrome)
24	Female	4	Visual disability
25	Male	7	Psychosocial disability (cerebral palsy)
26	Female	7	Learning disability
27	Male	16	Learning disability (dyslexia)
28	Female	10	Visual disability
29	Male	11	Physical disability (hydrocephalus)

# Annex H

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Interviews with  
Health Professionals:  
Health Cost Scenarios

Estimating the costs of health services could be challenging for families. This could be due to a lack of available and/or accessible services; low awareness of what services exist and are available; or a family's experiences of accessing services, and related costs being less than what was actually needed. This extended to assistive devices with families having low awareness of what type of assistive devices may be available and benefit their child. It is also notable that the Philippines has no standardised list of assistive devices that can be referenced.

To better understand the hypothetical costs that a family of a child with disabilities may face, interviews with a small sample of health professionals were conducted. In these interviews, the health professionals were asked to consider the ideal treatment, including assistive technology, they would recommend for common disability-related health conditions and impairments.

Eight participants representing the following professions were interviewed:

- Audiologist
- Neurologist
- Occupational therapist
- Orthotist
- Physiotherapist
- Speech therapist/pathologist
- Psychiatrist (physical medicine and rehabilitation physician)

This resulted in a range of cost estimates with variations among professionals. While costs borne by families were often low and did not reflect the full range of services a child might need, the estimates from health professionals were often high and possibly tended towards overprescribing in some cases. To better illustrate the costs of health services a child with disabilities may need, illustrative costs are presented in three scenarios. The scenarios are based on costs reported by the health professionals.

The following scenarios should be considered to be on the higher end of a spectrum that ranges from zero costs for a family that does not access any required health services to high costs for a family that accesses the full suite of health services available for their child. At the same time, the costs in the scenarios below should not be taken to mean the highest costs that a family could bear. The following scenarios assume the family pays the full costs for all services described without concession or financial support.<sup>55</sup>

### **Scenario 1. Child with spina bifida**

*Christine (5 years old) was born with spina bifida and has limited mobility in her lower body. She lives at home with her parents who pay for all health service costs associated with her disability.*

*Christine sees an occupational therapist once a week, who charges PHP800 (USD15) per consultation. Christine also goes to the local public hospital twice a year to see a psychiatrist at PHP500 (USD9) per consultation. She uses a wheelchair, which costs PHP 40,000 (USD727) and a walking aid costing PHP2,000 (USD36) to assist her mobility. She also uses splints for leg support costing PHP3,000 (USD55).*

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<sup>55</sup> In these scenarios, the exchange rate of USD1 to PHP55 on 1 July 2022 was used.

*Christine sees an orthotist twice a year to review and adjust her splints. He charges PHP500 (USD9) per consultation. Her assistive products need replacing at least every two years until she is 12 years old and twice more before she turns 18.*

*By the time Christine is 18 years old, her parents would have paid PHP502,500 (USD 9,136) to maintain and replace assistive products, as well as PHP600,000 (USD10,909) for surgery and PHP300,000 (USD5,454) for pain relief medication.*

*The total amount Christine's parents would have paid for all health services and needs associated with her disability before she reaches adulthood is PHP2,053,500 (USD39,290).*

### **Scenario 2. Child with an intellectual disability, autism, and hearing impairment**

*James (7 years old) has an intellectual disability, autism, and a hearing impairment. He lives at home with his mother who pays for all health service costs associated with his disability.*

*James has weekly consultations with a speech therapist for communication and language development that cost PHP500 (USD9) per session. He also sees an occupational therapist a week at PHP500 (USD9) per session to be apprised on independent self-care and executive functioning (mental skills, including those associated with memory and self-control).*

*Since he started school, James has been studying picture exchange communication and uses a communication board, which cost PHP10,000 (USD182). James also uses an assistive listening device that cost PHP25,000 (USD455) so he can hear his teacher speak clearly.*

*James also sees an audiologist twice a year for assessments and checkups related to his hearing impairment at PHP2,225 (USD40) per consultation. He has cochlear implants which, including surgery, cost PHP1,200,000 (USD21,818) to install. These implants will require maintenance and replacement twice before he turns 18 years old. These will cost PHP412,000 (USD7,491).*

*The total amount James's mother would have paid for all health services and needs associated with his disability before he reaches adulthood is PHP2,433,750 (USD46,565).*

### **Scenario 3. Child with cerebral palsy and epilepsy**

*Angela (13 years old) has cerebral palsy and epilepsy. She lives with her grandparents who pay for all health service costs associated with her disability.*

*Angela has weekly consultations with a physiotherapist that cost PHP800 (USD15) per session and weekly home-based therapy sessions with an occupational therapist at PHP 1,200 (USD22) per session. Angela also sees a psychiatrist at the local public hospital twice a year at PHP500 (USD9) per consultation. Angela also sees a neurologist four times a year at PHP1,500 (USD27) per consultation. He prescribes medication, which costs PHP60,000 (USD1,091) a year to help manage her seizures.*

*Angela sees an orthotist four times a year for assessments and checkups. The orthotist provides procurement and fitting services for assistive products that Angela uses to assist her mobility. These include leg braces at PHP162,000 (USD2,945); foot braces at PHP46,000 (USD836); spinal orthosis at PHP50,000 (USD909); and hand splints at PHP8,000 (USD145). Angela also uses a wheelchair that costs PHP20,000 (USD364); and a walking aid that costs PHP1,500 (USD27).*

*These assistive products had to be replaced every two years since Angela was five years old which cost PHP2,587,500 (USD47,045) in total. Angela's grandparents may also need to pay for home modifications, including ramps, modified doorways, equipment to assist with washing and toileting, and adaptive switches to use household equipment and technology.*

*The total amount Angela's grandparents would have paid for all health services and needs associated with her disability before she reaches adulthood is PHP4,698,000 (USD89,887).*

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