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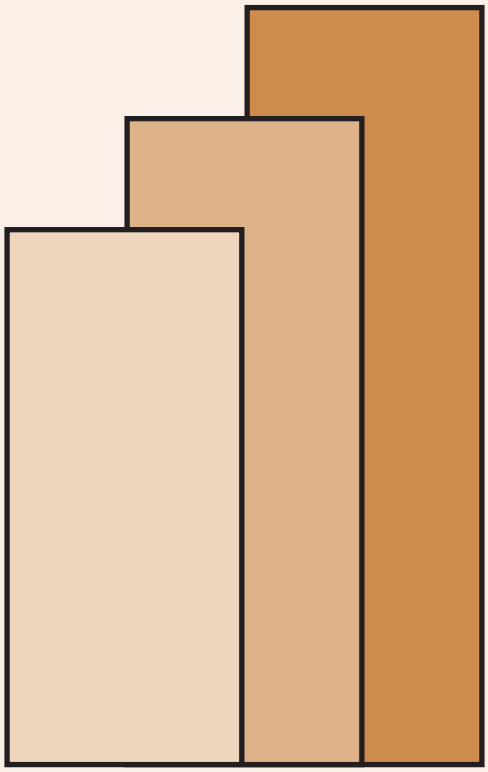

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Health Practices of Children and Women with Disabilities[1]

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Abstract

Persons with disabilities (PWDs) in the Philippines generally face several difficulties in getting hold of a much needed medical attention, including transportation and other barriers to access, and financial difficulties, among others.

This study is an offshoot of the joint project of the Philippine Institute for Development Studies and the Institute of Developing Economies that focuses on the health conditions of PWDs, both adult women and children, in Mandaue City and San Remigio, Cebu, Philippines. Using primary data collected through survey and key informant interviews with various stakeholders, the study highlights the lack of access to appropriate services for PWDs and that out-of-pocket expenditures on health covers a significant portion of their income. Some recommendations include the provision of early detection and intervention, and routine monitoring programs, the expanded utilization of medical and nursing students in the communities in providing preventive care services, the expanded coverage for medications and nursing/caregiver support, and the increased training on health care providers and personnel, particularly in the communities.

Keywords: Philippines, health, health practices, access to health care, person with disability, PWD, San Remigio, Mandaue City, Cebu

[1] This paper will be part of an upcoming PWD book

1. Introduction

The World Health Organization (WHO) estimates that over a billion people or about 15% of the world's population lives with some form of disability; between 110 million (2.2%) and 190 million (3.8%) of which have significant difficulties in functioning (World Health Organization, 2011). In the Asia and the Pacific region, the United Nations Economic and Social Commission for Asia and the Pacific (ESCAP) estimates that one in every six persons in the region have some form of disability (United Nations Economic and Social Commission for Asia and the Pacific (ESCAP), n.d.). Both WHO and UNESCAP expect these numbers to increase due to factors, which include an aging population, increase in chronic health conditions, improved detection and increased incidence of disasters.

In the Philippines, based on the 2010 Census of Population and Housing (CPH), of the 92.1 million household population in the country, 1,443 thousand persons (1.57%) were identified as having a disability (National Statistics Office, 2010). As a result of physical, cognitive and/or psychological limitations, persons with disabilities (PWDs) have been found to have an increased risk of illness compared to those without a disability and a shorter life expectancy. This is particularly evident in those whose disability affects activities of daily (ADLs) such as feeding, dressing and washing oneself, and their mobility (Majer, Nusselder, Mackenbach, Klijs, & Baal, 2011). PWDs have also been found to have lower school enrollment rates. The increased risk of illness and subsequent need for frequent medical follow up and hospitalizations result in reduced time spent being educated in school setting or maintaining meaningful employment. In 2005, the International Disability Rights Monitor (IDRM) reported that 1 in 5 children with disabilities have never attended school, which is four times higher than children without disabilities. In addition, only one third of PWDs have received education beyond the elementary school level (International Disability Rights Monitor, 2005). The lack of educational opportunities for PWDs contributes to higher unemployment rates. IDRM estimated that 43% of PWDs in the Philippines were unemployed (International Disability Rights Monitor, 2005). For those who are employed however, they generally receive earnings below their counterparts without disabilities (Yin, Shaewitz, & Megra, 2014).

Women with disabilities who are unable to obtain appropriate diagnostic and treatment services may experience persistent or worsening impairment in their daily functioning and affect their ability to care for their children. Lack of adequate treatment can result in less opportunities to participate in education and obtain gainful employment, and can negatively impact the overall quality of life.

In recognition of these issues, the Philippine Institute for Development Studies has collaborated again with the Institute of Developing Economies (IDE), a semi-governmental agency in Japan engaged in social science research, to undertake a survey on children and woman with disabilities in Mandaue City and in the municipality of San Remigio in Cebu, which include their health practices.

This study aims to examine the health practices of women and children with disabilities in Mandaue City and San Remigio in Cebu. In particular, the paper examines the access of these women and children to health facilities and the expenses incurred with seeking medical treatment. The issue of timely detection of disabilities among children is also discussed in this paper.

2. Methodology

This study uses a household-level survey data set containing information of sample PWDs and their households. Structured questionnaires encoded in tablets using Open Data Kit (ODK) were administered through face-to-face interviews with the respondents. Each survey team was composed of PWDs as enumerator and a companion (e.g. member of the PIDS research team or local persons recommended by the LGU focal persons) as recorder. There were also validation workshops attended by various stakeholders including the enumerators and recorders, and key informant interviews to substantiate the initial findings.

2.1. Sampling design

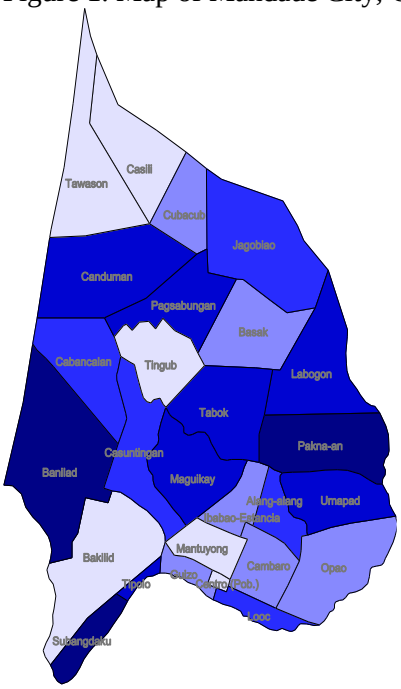
Study sites

The study population was limited to two areas in Cebu province – one rural and one urban. The selection of study sites was done in coordination with the Office of the Provincial Social Welfare and Development. Based on meetings with the focal persons from the said office, the City of Mandaue and Municipality of San Remigio were selected as the study areas for the survey. The criteria used for selection were: (a) distribution of women and children with disabilities; (b) cooperativeness of the local government; (c) availability of PWD enumerators, and; (d) accessibility and safety of the area.

Mandaue City

Mandaue is one of the three highly urbanized cities in Cebu province that forms the Cebu Metropolitan area. It is located in the central-eastern region of the province and is bounded on the north by the municipality of Consolacion, on the east by the Mactan Channel, and on the west by Cebu City, and on the south by the Cebu North Reclamation.

Figure 1. Map of Mandaue City, Cebu



Source: PIDS (http://gis.pids.gov.ph)

The city has 27 barangays with a land area of 3,487 hectares and a population of 362,654 as of the 2015 census. Mandaue City's total revenue in 2014 was PHP 1.35 billion, which was higher than the previous year's figure of PHP 1.25 billion. The City also posted an increase in its regular income from PHP 977 million in 2012 to PHP 1.23 billion in 2014. On the other hand, the total expenditures of the City in 2014 was around PHP 995 million, with the local development fund amounted to PHP 70.9 million. The biggest expenditure item in 2014 was the maintenance and other operating expenses (MOOE), which amounted to PHP 675.5 million. This was followed by economic services, which amounted to PHP 523.6 million, followed by general public services, with PHP 307.9 million. Expenditure on social services and social welfare only amounted to PHP 20.4 million. Meanwhile, the City's real property tax accomplishment for 2014 was 83 percent and its total expenditures per capita amounted to PHP 3,003.49.

In terms of health facilities, Mandaue City has 27 Barangay Health Stations (BHS), 1 Rural Health Unit (RHU) located in Barangay Centro (Poblacion), and 9 hospitals, 2 of which are government-owned. In addition, there are 16 and 3 hospitals in the adjacent cities of Cebu and Lapu-Lapu, respectively.

Table 1. Financial performance and other indicators, Mandaue City

Indicator	Value
Income Class	First
Number of Barangays	27
Population (2015)	362,654
Financial performance, 2014	
Total Revenue	PHP 1,359,792,470.75
Revenue Growth	9%
Annual Regular Income	PHP 1,229,098,709.63
% Annual Regular Income to Total Revenue	90%

Total Expenditures	PHP 995,116,743.26
20% Local Development Fund	PHP 70,964,190.18
Actual MOOE	PHP 675,529,131.87
General Public Services	PHP 307,921,078.37
Education, Culture and Sports/Manpower Development	PHP 54,912,493.25
Health, Nutrition and Population Control	PHP 15,768,717.15
Housing and Community Development	PHP 22,766,545.13
Social Services and Social Welfare	PHP 20,391,301.42
Social Services Expenditures	PHP 113,839,056.95
Economic Services	PHP 523,608,778.57
Real Property Tax Accomplishment (RPTAR)	83%
Total Expenditures per Capita	PHP 3,003.49
Health facilities	
Number of Barangay Health Stations (BHS)	27 (one per barangay)
Number of Hospitals	9 (2 public, 8 private)
Number of Rural Health Units (RHU)	1

Sources: 2015 Census of Population and Housing, Philippine Statistics Authority (population); Bureau of Local Government Finance, Department of Finance (financial indicators), and; National Health Facility Registry, Department of Health (health facilities)

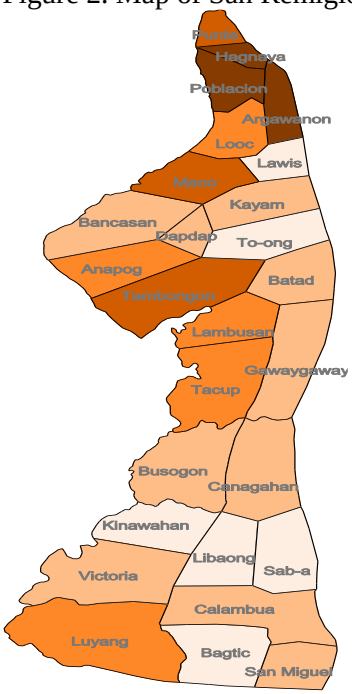
Municipality of San Remigio

San Remigio is a third class municipality located in the northwestern part of mainland Cebu province. (See Figure 2 for municipal map.) It is bounded on the northwest by Bogo City, on the southwest by the municipality of Tabogon, and on the south by the municipality of Tabuelan. It has 27 barangays with a population of 57,557 as of the 2015 census.

In 2014, its total revenue amounted to PHP 100.2 million while its total expenditure per capita was estimated to be around PHP 2,000.63 (Table 2). Aside from the MOEE, which amounted to PHP 60.5 million, other big expenditure items of San Remigio include the following: general public (PHP 55.8 million); social services (PHP 34.7 million); health, nutrition and population control (PHP 13.5 million).

In terms of health facilities, the municipality has 27 BHS (one for each barangay), and 2 RHUs. The nearest hospital was located in the adjacent City of Bogo.

Figure 2. Map of San Remigio, Cebu



Source: PIDS (http://gis.pids.gov.ph)

Table 2. Financial performance and other indicators, San Remigio

Indicator	Value
Income Class	Third
Number of Barangays	27
Population (2010)	51,370
Financial performance, 2014	
Total Revenue	PHP 100,289,793.12
Revenue Growth	16%
Annual Regular Income	PHP 93,866,934.25
% Annual Regular Income to Total Revenue	94%

Total Expenditures	PHP 102,820,597.66
20% Local Development Fund	PHP 24,034,662.02
Actual MOOE Amount	PHP 60,592,368.56
Actual CO Amount	PHP 3,219,933.00
General Public Services	PHP 55,837,143.08
Education, Culture and Sports/Manpower Development	PHP 4,571,227.17
Health, Nutrition and Population Control	PHP 13,560,324.94
Housing and Community Development	PHP 12,375,310.00
Social Services and Social Welfare	PHP 4,274,062.47
Social Services Expenditures	PHP 34,780,924.58
Economic Services	PHP 11,024,544.00
Real Property Tax Accomplishment (RPTAR)	5%
Total Expenditures per Capita	PHP 2,000.63
Health facilities	
Number of Barangay Health Stations (BHS)	27 (one per barangay)
Number of Rural Health Units (RHU)	2

Sources: 2015 Census of Population and Housing, Philippine Statistics Authority (population); Bureau of Local Government Finance, Department of Finance (financial indicators), and; National Health Facility Registry, Department of Health (health facilities)

Sampling frame

The sampling frames used in this study are the PWD lists provided by the Office of the Mayor of San Remigio and the Office of the Social Services of Mandaue City. The lists contain 1,289 and 2,889 PWDs as of 2015 in San Remigio and Mandaue City, respectively. Both lists contain basic information, including the complete name, sex, address, date of birth, marital status, and type of disability. The PWD list in Mandaue City contains basic information such as complete name of the PWD, type of disability, date of birth, complete address, sex, and PWD identification number. The PIDS research team also sought the assistance of the Provincial Social Welfare Office in validating the PWDs listed in Mandaue City and San Remigio. The following additional information were asked during the validation visits: employment, livelihood, membership in organization(s), highest educational attainment as well as information on whether the PWD is currently in school or not.

The study population refers to all adult women and children with disabilities in San Remigio and Mandaue City who are included in the PWD lists (i.e. those who are registered and have a PWD ID, and/or those who have become beneficiaries of government programs at least once). Ideally, the study population should have been all the adult women and children with disabilities in the said areas, including those who did not receive any assistance from the government. Unfortunately, such registry has not been available. The 2015 Census of Population could have been a good sampling frame, both in terms of comprehensiveness and timeliness, but has not been publicly available as of this writing.

Sampling scheme

The study adopted a (single-stage) stratified random sampling scheme in selecting the sampling units, which are adult women and children with disabilities.[2] A sample size of 200 was equally divided into two study domains (i.e. Mandaue City and San Remigio each has a total of 100 samples).

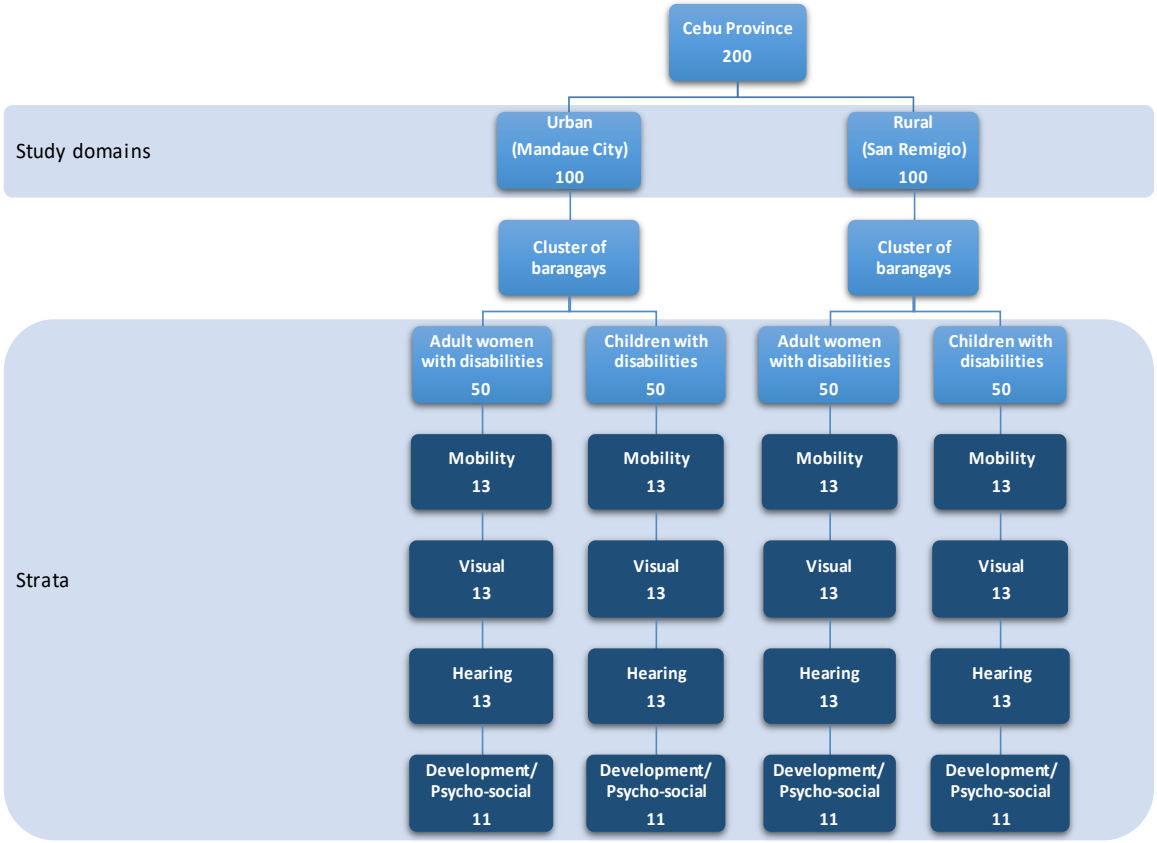
Each study was divided into clusters of barangays based on geographical location and total number of eligible PWD population (adult women and children). The selected cluster in Mandaue City, which accounts for 25% of the total eligible population, covers barangays in the southeastern part, namely: Cambaro, Looc, Opao, Umapad and Paknaan. All these barangays are classified as urban. On the other hand, the selected cluster in San Remigio, which accounts for 50.7% of the total eligible population, covers barangays in the northern/central part, namely: Argawanon, Lambusan, Lawis, Maño, Sab-a,

[2] Since the study would also conduct a household-level analysis, each PWD sample should represent only a single household.

San Miguel, Tambongon, Toong, and Victoria, all of which are rural barangays. However, three barangays in the selected cluster in San Remigio (Sab-a, San Miguel and Victoria) were not covered and replaced based on the advice of the LGU focal person.

In order to ensure that there are enough number of samples of adult women and children with disabilities in the analysis, the sample requirements of 100 were equally divided into adult women and children (i.e. 50 adult women and 50 children per domain). The sample size requirements per type of PWD were further allocated among the four types of impairment considered in this study, namely: mobility, visual, hearing, and development/psychosocial. In order to make sure that each type of impairment (particularly the mobility, visual and hearing) would be well represented, the equal allocation scheme was used instead of proportional allocation. The three major types of impairment—mobility, visual and hearing—had 13 samples each, while the remaining 11 were allocated to development and psychosocial disabilities. Thus, there were three stratification variables used in the sampling scheme, namely: study domains (Mandaue City and San Remigio), type of respondent (adult women and children) and type of impairment (mobility, visual, hearing, and development/psychosocial), resulting in a total of 8 (= 2 x 4) strata. The figure below shows the number of required samples per stratum by domain.

Figure 3. Study domains, strata, and the required sample size per level



Within each stratum, simple random sampling was employed to select the sample households, taking into account the required sample size per stratum. Moreover, the planned number of samples differ from the actual number of interviewed respondents due to several reasons like incorrect classification of impairment, and unavailability even after repeated visits. Replacements were done but the study team made sure of the similarity of the replacements to those being replaced.

2.2 Statistical analysis

Descriptive analysis was used in profiling and examining the difference between respondents belonging in different groups in terms of study area and type of impairment. This paper focuses on the health module of the survey questionnaire. The study will mainly look on the access of PWDs to PhilHealth (particularly for adult women), illnesses experienced during the past 12 months, frequency of visit and distance to the nearest health facility, type of health facility visited, reasons for visiting/not visiting a health facility, and health-related expenses, among others.

3. Key findings from the survey

The study covered a total of 1,031 adult women and 823 children with disabilities.[3] In Mandaue City, around half of the respondents were from Barangays Paknaan and Umapad. In San Remigio, majority of the respondents (65.5%) were located in Barangays Argawanon, Maño, and Tambongon. Of the total respondents, majority are mobility-impaired (39.7%) followed by those with development/psychosocial impairment (28.7%). There are survey respondents with multiple disabilities; however, only the impairment listed in the sampling frame is considered in the discussion. The distribution by type (adult women or children), disability, and location is shown below.

Table 3. Distribution of PWD respondents, by study area and type of impairment

Respondent Type	Mandaue City				
	Mobility	Visual	Hearing	Development/ Psychosocial	Total
Adult Women	372	140	104	140	756
Children	208	60	88	288	644
Total	580	200	192	428	1,400
	San Remigio				
	Mobility	Visual	Hearing	Development/ Psychosocial	Total
Adult Women	98	73	50	54	275
Children	59	40	31	50	179
Total	157	113	81	104	454
	All Sites				
	Mobility	Visual	Hearing	Development/ Psychosocial	Total
Adult Women	470	213	154	194	1,031
Children	267	100	119	338	823
Total	737	313	273	532	1,854

Source of basic data: PIDS-IDE PWD Survey, July 2016

3.1. Children with Disabilities

In Mandaue City, almost half of children respondents (44.7%) belong to the development/psychosocial group. On the other hand, the mobility group comprises 32.8% of the total children respondents in San Remigio.

In terms of specific medical conditions, the leading conditions among the mobility-impaired were cerebral palsy (23.1% in Mandaue City; 13.3% in San Remigio) and congenital lower limb defect (23.1% in Mandaue City; 26.7% in San Remigio). Majority of children with cerebral palsy in Mandaue City have the spastic type (66.7%) while the remaining 33.3% have the ataxic type. Those in San Remigio, on the other hand, do not know the specific type of cerebral palsy that they have. Meanwhile, most of those with congenital lower limb defect have affected lower leg (either one or both foot). Only 12.3% of the total respondents, all from San Remigio, have both of their legs (above the knee) affected.

[3] This is equivalent to a total of 206 samples – 103 adult women and 103 children with disabilities.

There are also significant proportion of respondents who have polio (15.4% in Mandaue City; 6.7% in San Remigio). Almost all of them (50% in Mandaue City; 100% in San Remigio) have experienced paralysis and/or muscle weakness, commonly on the legs and right arm. Moreover, none of the children have experienced post-polio syndrome. Other conditions specified among the mobility impaired were upper limb defects, dislocated joints, and scoliosis.

For the visually impaired, majority are only partially blind. The most common cause for visual impairment is lens disease (41.7% in Mandaue City; 12.5% in San Remigio). On the other hand, majority of the hearing impaired were partially deaf.

For those with development/psychosocial impairment, 59.3% have intellectual disability, 21.3% have psychosocial disability, and 19.4% suffer from other conditions. The three most common conditions, on the average, are learning disabilities (i.e. slow learners), epilepsy, and toxic psychosis.

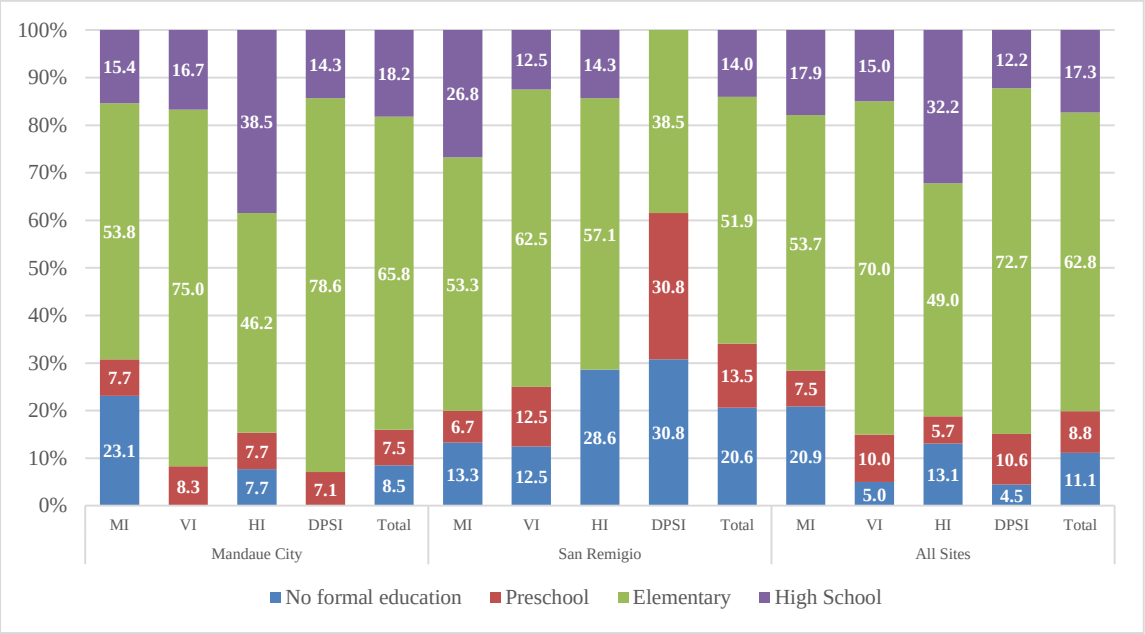
Table 4. Distribution of PWD children respondents, by study area, type of impairment and specific conditions

Impairment/Condition	Mandaue City		San Remigio		All Sites	
	N	%	N	%	N	%
Mobility						
Spinal cord injury	0	0.0	8	13.3	8	2.9
Cerebral palsy	48	23.1	8	13.3	56	20.9
Polio	32	15.4	4	6.7	36	13.5
Lower limb amputation	16	7.7	4	6.7	20	7.5
Congenital lower limb defect	48	23.1	16	26.7	64	23.9
Stroke	0	0.0	4	6.7	4	1.5
Other conditions	96	46.2	20	33.3	116	43.3
Visual						
Partially blind	55	91.7	37	93.8	92	92.5
Totally blind	5	8.3	2	6.3	7	7.5
Hearing						
Partially deaf	54	61.5	18	57.1	72	60.4
Totally deaf	34	38.5	13	42.9	47	39.6
Development/Psychosocial						
Intellectual disability	185	64.3	15	30.8	200	59.3
Mental retardation	41	14.3	0	0.0	41	12.2
Down syndrome	0	0.0	8	15.4	8	2.3
Learning disabilities	103	35.7	8	15.4	111	32.7
ADHD	21	7.1	0	0.0	21	6.1
Other conditions	62	21.4	0	0.0	62	18.3
Psychosocial disability	82	28.6	34	69.2	117	34.6
Disordered mood	21	7.1	4	7.7	24	7.2
Epilepsy	41	14.3	11	23.1	53	15.6
Organic mental disorders	0	0.0	4	7.7	4	1.1
Toxic psychosis	21	7.1	8	15.4	28	8.4
Other conditions	0	0.0	8	15.4	8	2.3
Other conditions	21	7.1	0	0.0	21	6.1

Source of basic data: PIDS-IDE PWD Survey, July 2016

In terms of educational attainment, there are more children with disabilities who are at school in Mandaue City (91.5%) compared to San Remigio (79.4%). In Mandaue City, all children with visual impairment and development/psychosocial disabilities have attained at least preschool education while almost one-fourth (23.1%) of the mobility impaired have no formal education. On the other hand, children with mobility and visual impairments in San Remigio have attained higher levels of education compared to the other two disabilities.

Figure 4. Percentage distribution of PWD children, by educational attainment, study area and type of impairment

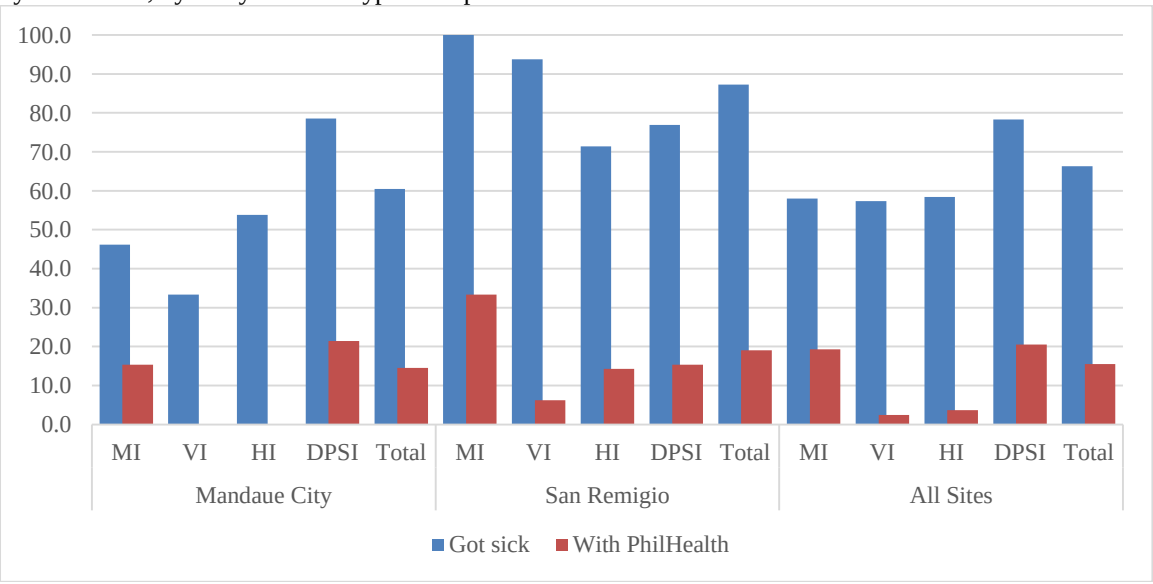


Source of basic data: PIDS-IDE PWD Survey, July 2016

Access to health services

Almost all of the children with disabilities got sick during the past 12 months from the date of interview (June to July 2017), with San Remigio having a higher proportion of children who got sick (87.3%) than Mandaue City (60.5%). Also, children with development/psychosocial disabilities have the highest proportion of getting sick among the four types of impairment. However, only a small percentage of those who got sick (an average of 15.5% out of the 66.3% who got sick) have access to PhilHealth.

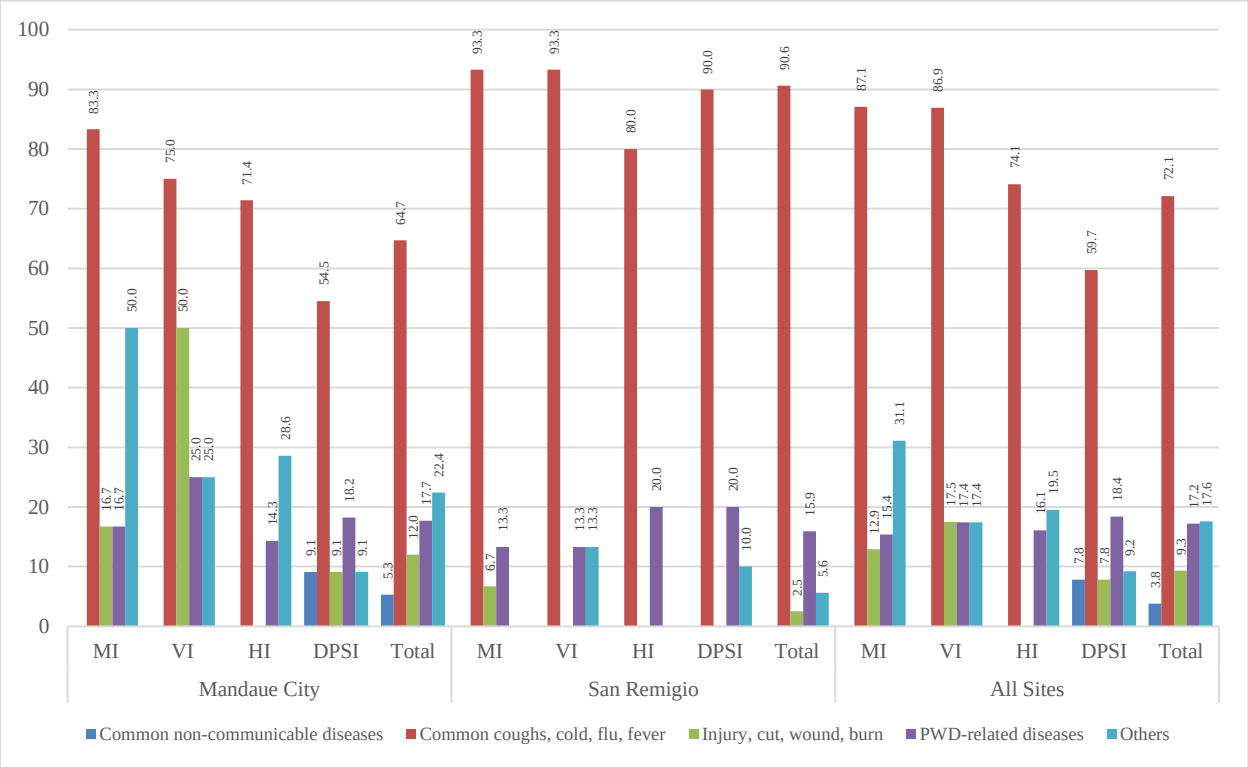
Figure 5. Percentage distribution of PWD children who got sick within the past 12 months and who are covered by PhilHealth, by study area and type of impairment



Source of basic data: PIDS-IDE PWD Survey, July 2016

The most common cause of sickness are common cough, colds, flu and/or fever. In both study sites, around 20% of children have experienced PWD-related diseases. Other illnesses specified by the respondents were hyperacidity, sore eyes, loose bowel movement, and skin diseases, among others.

Figure 6. Percentage distribution of PWD children who got sick during the past 12 months, by type of illness, study area and type of impairment



Source of basic data: PIDS-IDE PWD Survey, July 2016

Of those who got sick, an average of 63.2% of children have visited a health facility, with Mandaue City having a higher proportion (68.2%) compared to San Remigio (50.8%). This is mainly due to the greater presence of health facilities in the cities compared to the rural municipalities. Among the types of disability, those with development/psychosocial impairment usually visit a health facility when they got sick.

Table 5. Percentage distribution of PWD children who got sick during the past 12 months and have visited a health facility, by study area and type of impairment

Disability	Mandaue City	San Remigio	Total
Mobility	66.7	26.7	51.5
Visual	50.0	53.3	52.2
Hearing	57.1	60.0	58.0
Development/Psychosocial	72.7	80.0	73.8
Total	68.2	50.8	63.2

Source of basic data: PIDS-IDE PWD Survey, July 2016

Private hospitals (43.8%) and clinics (29.3%) were the most common types of health facility visited by children who got sick in Mandaue City. On the other hand, PWD children in San Remigio who got sick often visited Barangay Health Centers or the lone RHU/Health Center/City Health Office located in the Poblacion. There are also a significant proportion of respondents who visited private hospitals and clinics which are located in the nearest city/municipality (i.e. Bogo City); some even went to provincial public hospital/s located in Metro Cebu.

Table 6. Percentage distribution of PWD children respondents who got sick during the past 12 months, by type of health facility visited, study area and type of impairment

Type of Health Facility Visited	Mandaue City				
	Mobility	Visual	Hearing	Development/ Psychosocial	Total
Municipal Hospital/City Hospital	0.0	0.0	0.0	12.5	7.7
RHU/Health Center/City Health Office	25.0	50.0	75.0	12.5	23.3
Barangay Health Center	25.0	100.0	0.0	25.0	25.3
Private Hospital	75.0	0.0	25.0	37.5	43.8
Private Clinic	25.0	0.0	0.0	37.5	29.3
	San Remigio				
	Mobility	Visual	Hearing	Development/ Psychosocial	Total
Public Provincial Hospital	25.0	12.5	33.3	12.5	18.4
Public District Hospital	0.0	12.5	0.0	0.0	3.1
Municipal Hospital/City Hospital	0.0	37.5	0.0	0.0	9.4
RHU/Health Center/City Health Office	50.0	37.5	33.3	50.0	44.1
Barangay Health Center	0.0	50.0	33.3	50.0	37.4
Private Hospital	0.0	12.5	0.0	25.0	12.8
Private Clinic	25.0	12.5	33.3	12.5	18.4
Others	0.0	0.0	33.3	0.0	5.5
	All Sites				
	Mobility	Visual	Hearing	Development/ Psychosocial	Total
Public Provincial Hospital	4.9	8.3	10.9	2.0	4.2
Public District Hospital	0.0	8.3	0.0	0.0	0.7
Municipal Hospital/City Hospital	0.0	24.9	0.0	10.5	8.1
RHU/Health Center/City Health Office	29.9	41.7	61.4	18.4	28.1
Barangay Health Center	20.1	66.8	10.9	28.9	28.1
Private Hospital	60.3	8.3	16.8	35.5	36.7
Private Clinic	25.0	8.3	10.9	33.6	26.8
Others	0.0	0.0	10.9	0.0	1.3

Source of basic data: PIDS-IDE PWD Survey, July 2016

Children with disabilities in San Remigio travel significantly longer distances compared to those in Mandaue City due to the lack of facilities and personnel (i.e. nurses, doctors) and the absence of higher level health facilities within the municipality. They often go to Vicente Sotto Memorial Medical Center (VSMMC) located in Cebu City, which is around 108 kilometers or 3.5 hours from the municipal hall. According to the respondents, VSMMC has the facilities and specialized personnel who can cater to the specific needs of PWDs (e.g. rehabilitation center, doctors who can prescribe specialized medicines). Another most commonly visited health facility by respondents in San Remigio is the provincial hospital in Bogo City (around 8 kilometers or 15 minutes from San Remigio Municipal Hall).

By type of disability, those with visual impairment in San Remigio travel the farthest to visit a health facility (generally either to a public provincial hospital, private hospital or private clinic) mainly due to PWD-related diseases. On the other hand, the farthest that children with development/psychosocial impairment travel is to visit a private hospital due to common coughs/cold/flu/fever and [excessive] vomiting.

Table 7. Distance of the nearest health facility visited by PWD children who got sick during the past 12 months, by study area and type of impairment (in kilometers)

Disability	Mandaue City	San Remigio	Total
Mobility	6.38	4.50	6.01
Visual	0.93	31.79	21.42
Hearing	6.38	19.34	10.62
Development/Psychosocial	2.27	12.13	3.82
Total	3.63	16.73	6.64

Source of basic data: PIDS-IDE PWD Survey, July 2016

Despite longer distances, PWD children in San Remigio go to health facilities more frequently compared to those in Mandaue City. Among the four disabilities, respondents with mobility impairment (particularly those with polio) in Mandaue City and children with development/psychosocial disabilities (particularly those with epilepsy and toxic psychosis) mostly visited a health facility.

Table 8. Frequency of visit to a health facility by PWD children who got sick during the past 12 months, by study area and type of impairment

Impairment	Mandaue City	San Remigio	Total
Mobility	4.5	2.3	4.1
Visual	3.0	4.4	3.9
Hearing	2.5	4.7	3.2
Development/Psychosocial	1.9	9.5	3.1
Total	2.6	6.0	3.4

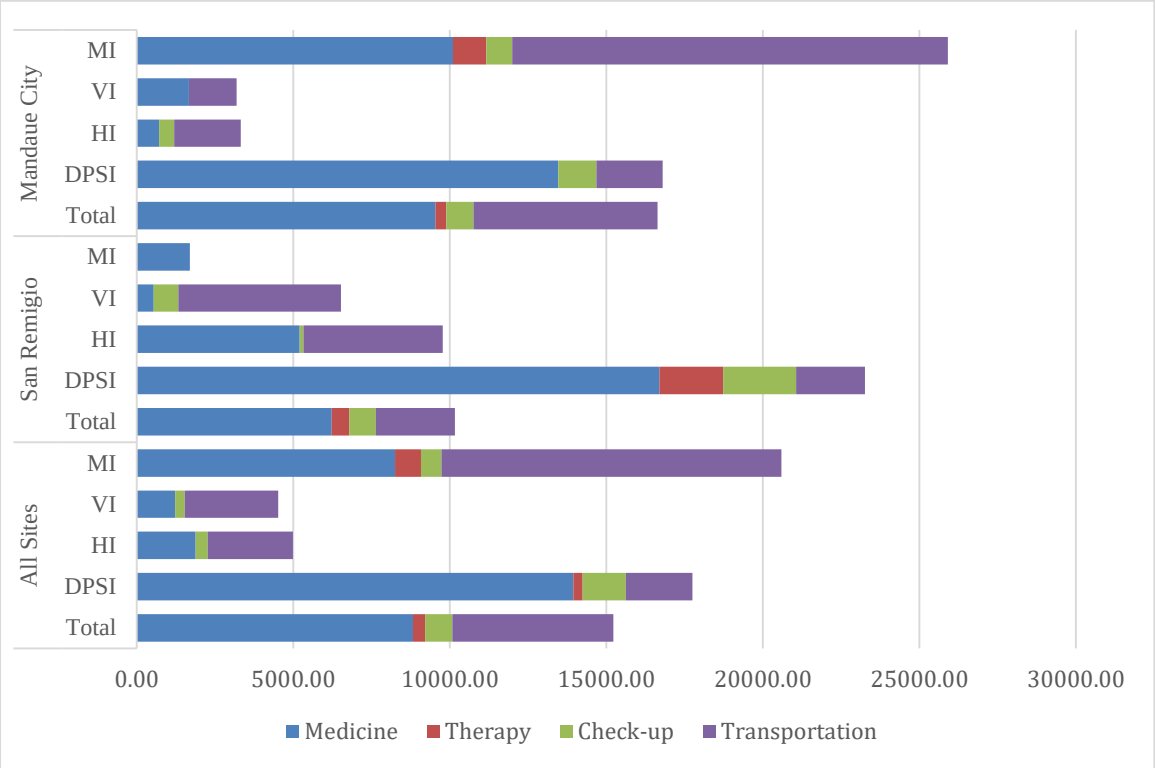
Source of basic data: PIDS-IDE PWD Survey, July 2016

Regardless of the type of illness experienced within the reference period, medicines took up the bulk (around 60%) of medical expenses incurred by children with disabilities in both study areas. This is true especially for development/psychosocial impairments who requires maintenance mind drug medicines.

Another significant health expense is transportation. In Mandaue City, the mobility-impaired have the highest average cost incurred for travel. Although health facilities are within the city, barriers to transportation, particularly for the mobility-impaired, incur additional costs (e.g. tips given to the driver for accompanying the PWD in going in and out of the vehicle, or in loading wheelchairs and other assistive devices in the vehicle). In San Remigio, aside from the aforementioned barriers to transportation, distance to the health facility incur additional costs to the PWDs.

Cost for therapy and check-up is quite low in both study areas. This is because PWD children typically go to public health facilities such as Barangay Health Stations and Rural Health Units (as shown in Table 6) wherein services are offered for free up to a minimal amount.

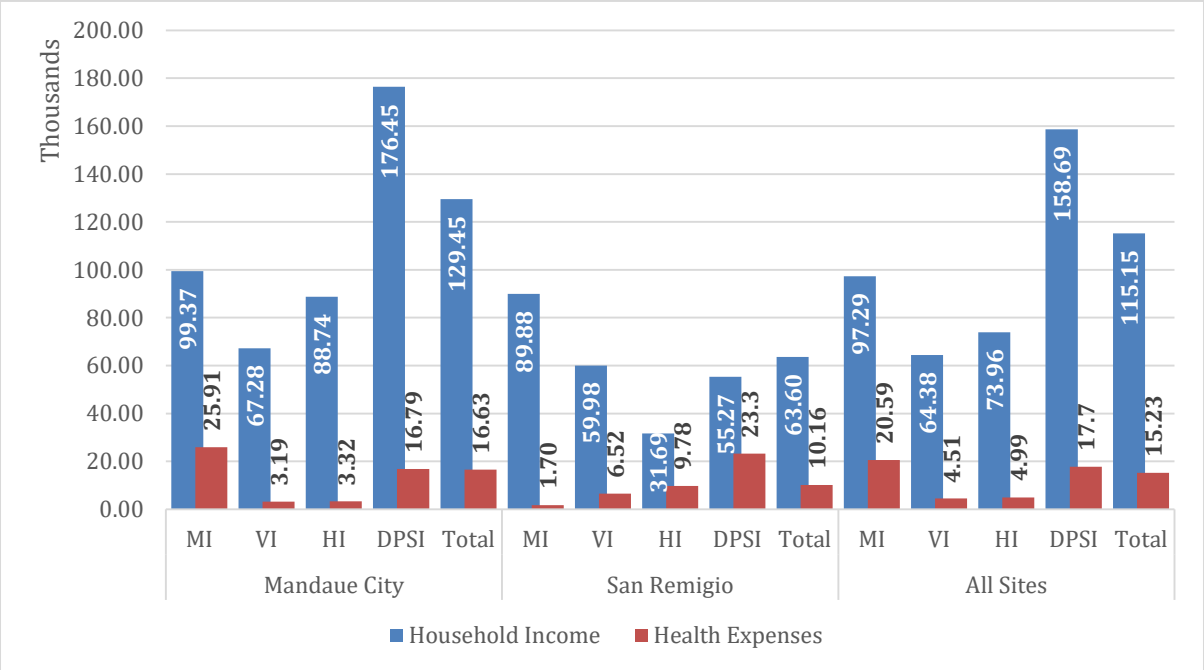
Figure 7. Health expenses of PWD children during the past 12 months, by study area and type of impairment



Source of basic data: PIDS-IDE PWD Survey, July 2016

Since many were going to public health facilities, the average out-of-pocket expenditure for healthcare of PWD children in both study areas is quite low; therefore, it does not capture the true cost of health care (i.e. cost compared to private health care facilities). Although low, it is still a significant portion of their household income, at an average of around 15%. Among the types of disability, the mobility-impaired in Mandaue City and development/psychosocial group in San Remigio have the highest percentage share.

Figure 8. Average household income and health expenses of PWD children, by study area and type of impairment



Source of basic data: PIDS-IDE PWD Survey, July 2016

In relation to the average cost of health care shown above, the lack of money is one of the major reasons of PWD children who got sick for not visiting a health facility. An average annual healthcare expenditure of PWD children of PHP 15,225.66 is a significantly huge burden for some of the PWD households, particularly those who fall below the poverty line. [Poor] households often resort to self-medication, especially if the illness experienced is just fever/common cold/cough. Some often prefer traditional medications (e.g. herbal supplements, traditional healers), particularly in San Remigio.

Table 9. Percentage distribution of PWD children who got sick during the past 12 months, by reasons for not going to a health facility, study area and type of impairment

Reasons for NOT visiting health facility	Mandaue City				
	Mobility	Visual	Hearing	Development/ Psychosocial	Total
No money	0.0	0.0	33.3	33.3	22.0
Worried about the cost of medication	0.0	0.0	33.3	0.0	5.5
Home remedy is available	100.0	0.0	100.0	33.3	58.8
No need/regular check only	0.0	0.0	33.3	0.0	5.5
Others	50.0	0.0	0.0	0.0	12.9
	San Remigio				
	Mobility	Visual	Hearing	Development/ Psychosocial	Total
Facility is far	9.1	0.0	0.0	0.0	5.1
No money	36.4	42.9	0.0	0.0	30.0
Does not want to be absent from work	9.1	0.0	0.0	0.0	5.1
Home remedy is available	27.3	14.3	50.0	50.0	29.2
No need/regular check only	18.2	14.3	0.0	0.0	13.4
No companion to go to the facility	9.1	0.0	0.0	0.0	5.1
Preference to traditional healers	9.1	14.3	0.0	0.0	8.3
Others	18.2	14.3	50.0	0.0	19.1
	All Sites				
	Mobility	Visual	Hearing	Development/ Psychosocial	Total
Facility is far	5.2	0.0	0.0	0.0	1.9
No money	20.8	27.2	23.3	29.7	25.1
Worried about the cost of medication	0.0	0.0	23.3	0.0	3.4
Does not want to be absent from work	5.2	0.0	0.0	0.0	1.9
Home remedy is available	58.3	9.1	84.9	35.2	47.5
No need/regular check only	10.4	9.1	23.3	0.0	8.5
No companion to go to the facility	5.2	0.0	0.0	0.0	1.9
Preference to traditional healers	5.2	9.1	0.0	0.0	3.2
Others	31.8	9.1	15.1	0.0	15.3

Source of basic data: PIDS-IDE PWD Survey, July 2016

3.2 Adult Women with Disabilities

Majority of adult women respondents in both study areas belong to the mobility group (49.2% in Mandaue City; 35.6% in San Remigio). In terms of specific medical conditions, the leading conditions among the mobility impaired are polio (38.5% in Mandaue City; 25.0% in San Remigio) and stroke (23.1% in Mandaue City; 18.7% in San Remigio). Almost all of those with polio had paralysis and/or muscle weakness, mostly on the legs (right leg in Mandaue City and left leg in San Remigio). There

were also respondents who have experienced post-polio syndrome (20% in Mandaue City; 50% in San Remigio). Meanwhile, all respondents with stroke have their legs affected by the condition; some of which also have affected arms/hands. Moreover, all of those with stroke in Mandaue City had difficulties in movement with some also experiencing speech difficulties. In San Remigio, many had difficulty in either thinking (e.g. memory), emotions and/or speech.

There were also a significant proportion of respondents with lower limb defects, either congenital or amputated. Among those with congenital lower limb defect in Mandaue City, either a leg (below the knee) or both lower legs were affected while in San Remigio, either a leg (above the knee) or both feet were affected. Meanwhile, most of the respondents with lower limb amputation had an affected leg, mostly below the knee in Mandaue City and above the knee in San Remigio.

For the visually impaired, majority are partially blind with optic nerve disease (in Manduae City and San Remigio) and lens disease (in San Remigio) as the most common causes of visual impairment. On the other hand, majority of the hearing impaired were partially deaf.

For those with development/psychosocial impairment, 57.5% have intellectual disability, 32.3% have psychosocial disability, and 10.1% suffer from other conditions. The three most common causes, on the average, are learning disabilities (i.e. slow learners), mental retardation, and toxic psychosis.

Table 10. Distribution of PWD adult women, by study area, type of impairment and specific conditions

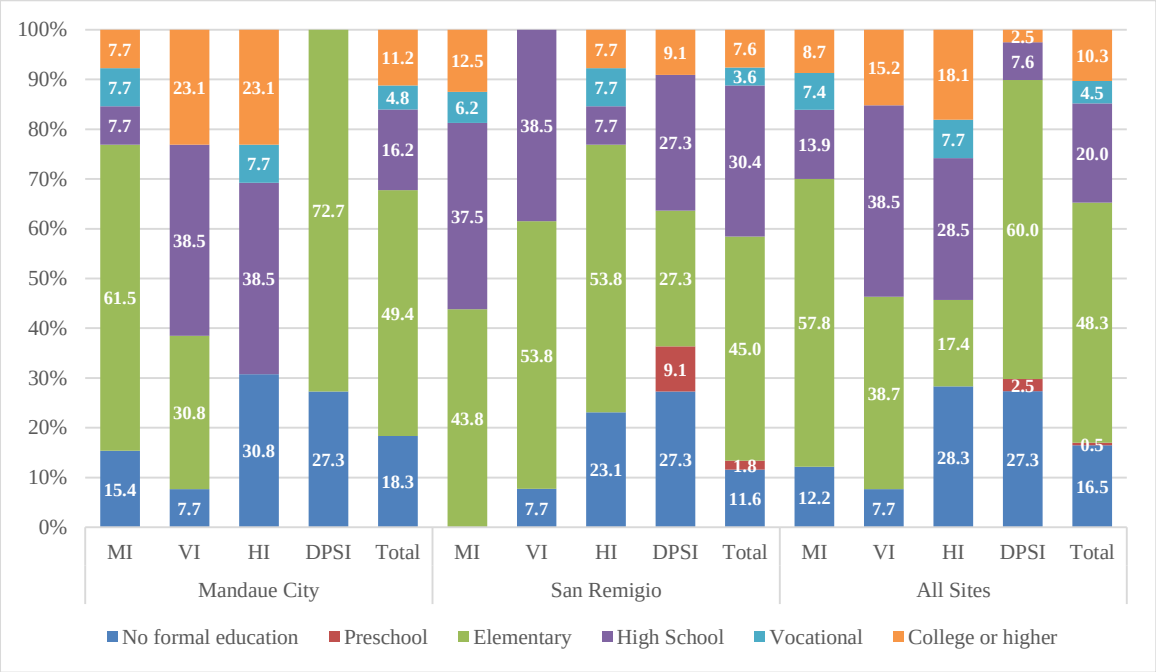
Impairment/Condition	Mandaue City		San Remigio		All Sites	
	N	%	N	%	N	%
Mobility						
Spinal cord injury	0	0.0	6	6.2	6	1.3
Cerebral palsy	29	7.7	0	0.0	29	6.1
Polio	143	38.5	25	25.0	168	35.7
Lower limb amputation	29	7.7	25	25.0	53	11.3
Congenital lower limb defect	57	15.4	12	12.5	69	14.8
Stroke	86	23.1	18	18.7	104	22.2
Other conditions	57	15.4	12	12.5	69	14.8
Visual						
Partially blind	108	76.9	68	92.3	175	82.2
Totally blind	32	23.1	6	7.7	38	17.8
Hearing						
Partially deaf	64	61.5	19	38.5	83	54.1
Totally deaf	40	38.5	31	61.5	71	45.9
Development/Psychosocial						
Intellectual disability	102	72.7	10	18.2	112	57.5
Mental retardation	51	36.4	0	0.0	51	26.2
Down syndrome	0	0.0	5	9.1	5	2.5
Learning disabilities	64	45.5	0	0.0	64	32.8
Psychosocial disability	38	27.3	25	45.5	63	32.3
Schizophrenia	0	0.0	5	9.1	5	2.5
Disordered mood	25	18.2	5	9.1	30	15.6
Toxic psychosis	13	9.1	25	45.5	37	19.2
Neurotic/somatoform disorders	0	0.0	5	9.1	5	2.5
Other conditions	13	9.1	5	9.1	18	9.1
Other conditions	0	0.0	20	36.4	20	10.1

Source of basic data: PIDS-IDE PWD Survey, July 2016

In terms of highest educational attainment, majority of adult women respondents in both study areas have attained at least elementary level of education. There is, unsurprisingly, a greater proportion of respondents with post-secondary level of education (i.e. vocational, college or higher) in Mandaue City (16%) than in San Remigio (11.2%). In terms of type of impairment, the hearing-impaired in Mandaue City and the mobility-impaired in San Remigio have the largest proportion of respondents who have

attained high-school level or higher. It is interesting to note that 9.1% of the development/psychosocial group in San Remigio have attained a tertiary level of education. Those respondents were on their 30s, and probably were already in college, before the impairment (schizophrenia) was observed.

Figure 9. Percentage distribution of PWD adult women, by educational attainment, study area and type of impairment



Source of basic data: PIDS-IDE PWD Survey, July 2016

In terms of employment status, about 29.3% of adult women respondents were engaged in an income generating activity. In both study areas, those with hearing or mobility impairment have higher proportions compared to those with visual or development/psychosocial disabilities. Common income generating activities in both study areas are running a store and street vending. Other cited jobs are farming (particularly in San Remigio), and working at a factory or a household (particularly in Mandaue City).

Table 11. Percentage distribution of PWD adult women who are engaged in an income generating activity, by study area and type of impairment

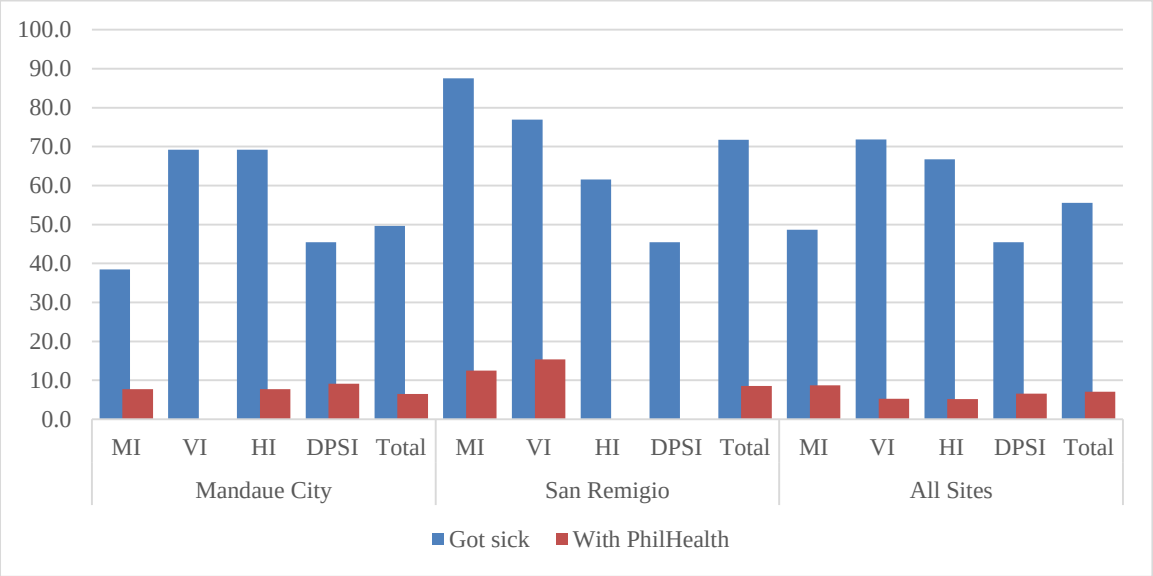
Impairment	Mandaue City	San Remigio	Total
Mobility	23.1	43.8	27.4
Visual	15.4	30.8	20.7
Hearing	61.5	76.9	66.5
Development/Psychosocial	9.1	27.3	14.2
Total	24.4	43.1	29.3

Source of basic data: PIDS-IDE PWD Survey, July 2016

Access to health services

Around three-fourths of adult women with disabilities in San Remigio got sick during the past 12 months from the date of interview. This is significantly higher compared to Mandaue City's 49.7%. Also, adult women with visual impairment have the highest proportion of getting sick among the four types of impairment. However, only a small percentage of those who got sick (an average of 7.1%) have access to PhilHealth.

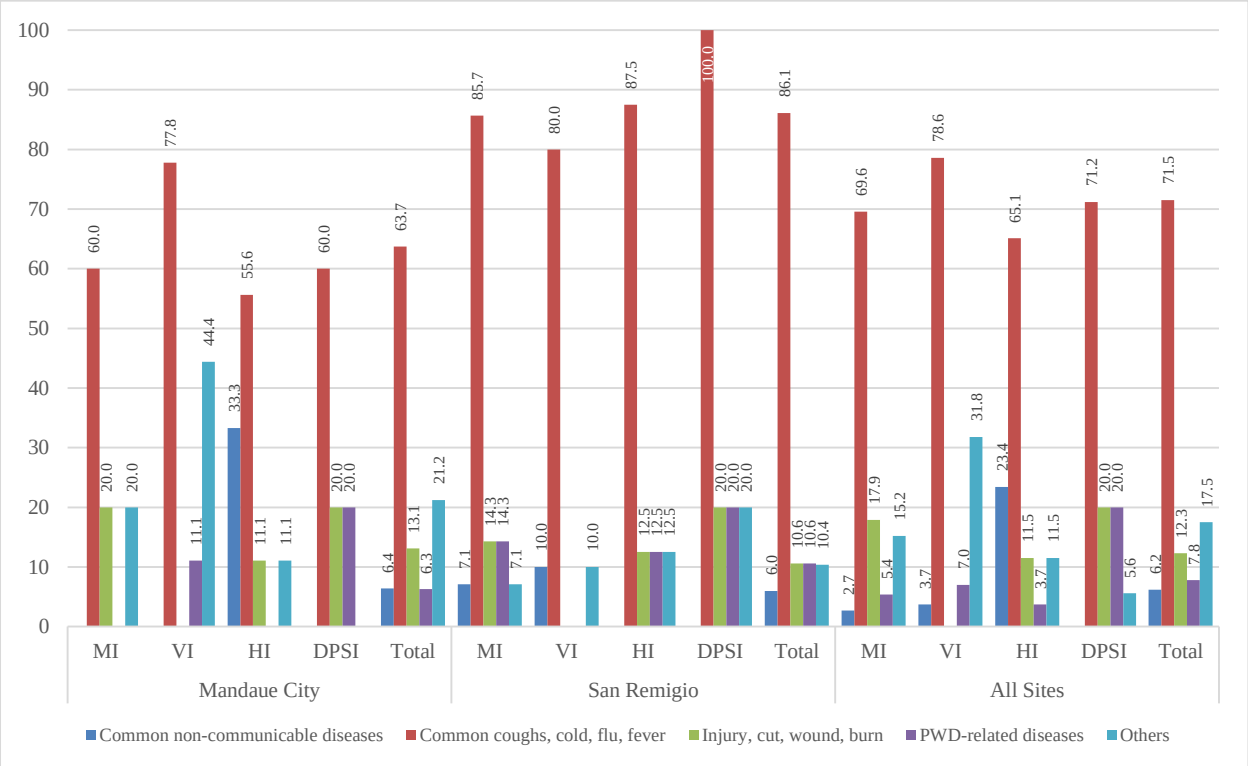
Figure 10. Percentage distribution of PWD adult women who got sick within the past 12 months and who are covered by PhilHealth, by study area and type of impairment



Source of basic data: PIDS-IDE PWD Survey, July 2016

Common coughs, cold, flu, and fever are the most common cause of sickness among adult women who got sick in both study areas. It is also worth noting that there are adult women who have experienced PWD-related diseases (6.3% in Mandaue City; 10.6% in San Remigio). Other illnesses and medical conditions mentioned by the respondents were hyperacidity, miscarriage, chest pains, and urinary tract infection, among others.

Figure 11. Percentage distribution of PWD adult women who got sick during the past 12 months, by type of illness, study area and type of impairment



Source of basic data: PIDS-IDE PWD Survey, July 2016

Both study areas have an average of 3 out of 5 adult women who got sick have visited a health facility. This is unlike the case of PWD children wherein there is a higher proportion of respondents in Mandaue

City who went to a health facility within a year. By type of impairment, the hearing-impaired in Mandaue City and the mobility-impaired in San Remigio mostly visited a health facility.

Table 11. Percentage distribution of PWD adult women who got sick during the past 12 months and have visited a health facility, by study area and type of impairment

Disability	Mandaue City	San Remigio	Total
Mobility	60.0	71.4	64.3
Visual	44.4	40.0	42.8
Hearing	66.7	62.5	65.4
Development/Psychosocial	60.0	40.0	54.4
Total	57.3	57.2	57.2

Source of basic data: PIDS-IDE PWD Survey, July 2016

Rural Health Units (RHUs) and municipal health centers (37.9%) were the most common types of health facility visited by adult women in both study areas. In Mandaue City, respondents have a wide variety of choices of health facilities. This is evident by the relatively equal proportions of respondents per type of health facility. On the other hand, in San Remigio, there is a greater proportion of respondents going to RHUs and barangay health centers, signifying a lack of options and/or a greater preference to health facilities within their physical accessibility.

Table 12. Percentage distribution of PWD children respondents who got sick during the past 12 months, by type of health facility visited, study area and type of impairment

Type of Health Facility Visited	Mandaue City				
	Mobility	Visual	Hearing	Development/ Psychosocial	Total
Public District Hospital	66.7	25.0	0.0	0.0	31.6
Municipal/City Hospital	33.3	0.0	16.7	0.0	17.0
RHU/Health Center	33.3	0.0	33.3	0.0	20.7
Barangay Health Center	0.0	0.0	33.3	66.7	19.3
Private Hospital	0.0	25.0	33.3	0.0	12.4
Private Clinic	0.0	25.0	16.7	33.3	14.6
Others	0.0	50.0	0.0	0.0	10.0
	San Remigio				
	Mobility	Visual	Hearing	Development/ Psychosocial	Total
Public Provincial Hospital	10.0	0.0	0.0	0.0	5.4
Municipal/City Hospital	10.0	0.0	0.0	0.0	5.4
RHU/Health Center	60.0	100.0	80.0	50.0	70.5
Barangay Health Center	50.0	50.0	0.0	100.0	45.9
Private Hospital	0.0	0.0	20.0	50.0	7.8
	All Sites				
	Mobility	Visual	Hearing	Development/ Psychosocial	Total
Public Provincial Hospital	4.2	0.0	0.0	0.0	1.9
Public District Hospital	38.9	16.4	0.0	0.0	20.7
Municipal/City Hospital	23.6	0.0	11.9	0.0	13.0
RHU/Health Center	44.4	34.3	46.6	10.3	37.9
Barangay Health Center	20.8	17.2	23.8	73.5	28.4
Private Hospital	0.0	16.4	29.5	10.3	10.8
Private Clinic	0.0	16.4	11.9	26.5	9.6
Others	0.0	32.8	0.0	0.0	6.6

Source of basic data: PIDS-IDE PWD Survey, July 2016

On the average, adult women in San Remigio travel longer distances compared to those in Mandaue City. This is again due to the greater concentration of health facilities in the city. By type of disability, those with mobility impairment in both study areas travel the farthest to visit a health facility (public provincial hospital) mainly due to PWD-related diseases.

Table 13. Distance of the nearest health facility visited by PWD adult women who got sick during the past 12 months, by study area and type of impairment (in kilometers)

Disability	Mandaue City	San Remigio	Total
Mobility	6.07	10.23	7.80
Visual	5.38	4.58	5.10
Hearing	1.23	5.06	2.32
Development/Psychosocial	0.38	1.05	0.52
Total	3.84	7.42	5.07

Source of basic data: PIDS-IDE PWD Survey, July 2016

Despite longer distances, adult women in San Remigio went to health facilities more frequently than those in Mandaue City. Among the four disabilities, respondents with hearing impairment in Mandaue City and adult women with development/psychosocial mostly visited a health facility. The high average of visit for the development/psychosocial group in San Remigio is due to a respondent with arteriosclerosis who visits a barangay health center every week to monitor her blood pressure and for maintenance medicines.[4]

Table 14. Frequency of visit to a health facility by PWD adult women who got sick during the past 12 months, by study area and type of impairment

Disability	Mandaue City	San Remigio	Total
Mobility	1.3	2.7	1.9
Visual	2.3	5.0	3.2
Hearing	4.7	6.8	5.3
Development/Psychosocial	2.0	28.5	7.4
Total	2.4	6.1	3.7

Source of basic data: PIDS-IDE PWD Survey, July 2016

Similar to the case of PWD children, medicines took up the largest share of medical expenses incurred by adult women with disabilities in both study areas. Regardless of the type of illness experienced within the reference period, cost of medicines is on the average at 70% of the total healthcare expenditure. Among the types of disability, those with development/psychosocial disability (in San Remigio) and mobility impairment (in both study areas) incur the highest cost on medicine. It is worth noting that the development/psychosocial group in Mandaue City has incurred zero cost on medicines. This is probably because none of them are taking maintenance medication (i.e. mind drugs). Meanwhile, transportation takes up around 25%, on the average, of the total healthcare expenditure. Costs for therapy and check-up is minimal, at less than 10%, since majority of the respondents go to public health facilities. Overall, healthcare expenditure of adult women, on the average, is equivalent to around 50% of the average personal income of the PWD adult women or about 10% of the total household income.

[4] Excluding the outlier, the average frequency of visit of respondents with development/psychosocial impairment in San Remigio will be 5.0.

Figure 12. Health expenses of PWD adult women during the past 12 months, by study area and type of impairment (in pesos)

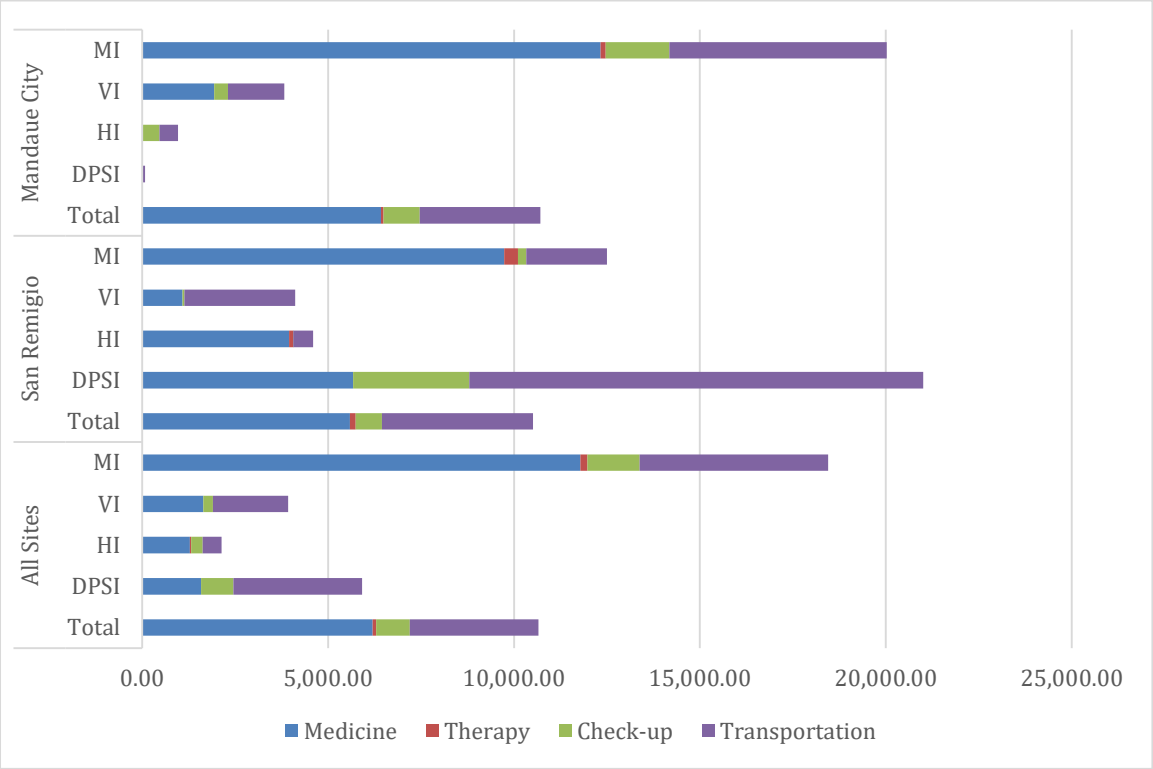
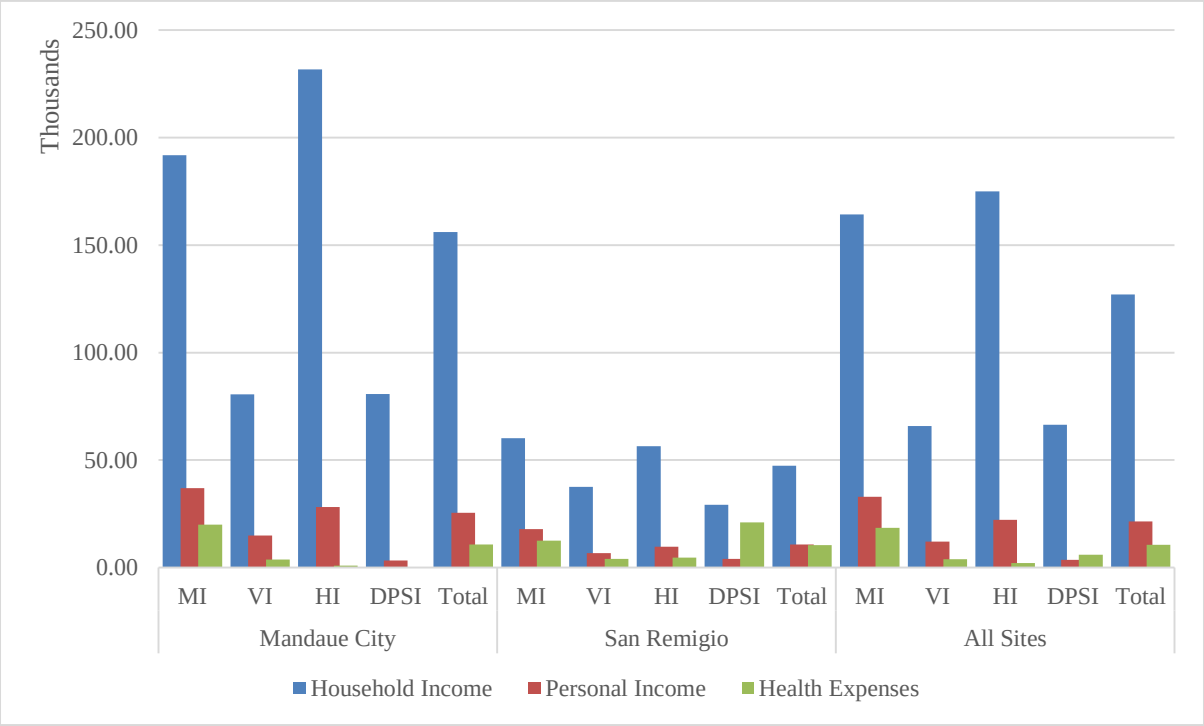


Figure 13. Average household income, personal income and health expenses of PWD adult women, by study area and type of impairment



Source of basic data: PIDS-IDE PWD Survey, July 2016

For those who did not visit a health facility, majority of adult women in both study areas rely on home remedies. This is particularly true for those who only had common colds, cough, flu, fever, and, in some instances, hyperacidity and UTI. There is also a case in San Remigio that a respondent does not go to a

health facility because she was frequently visited by their Barangay Health Worker (BHW). Other reasons mentioned by the respondents were shyness and not comfortable in going to a health facility.

Table 15. Percentage distribution of PWD children who got sick during the past 12 months, by reasons for not going to a health facility, study area and type of impairment

Reasons for NOT visiting health facility	Mandaue City				
	Mobility	Visual	Hearing	Development/ Psychosocial	Total
Facility is far	50.0	0.0	0.0	0.0	17.8
No money	0.0	20.0	0.0	0.0	6.7
Home remedy is available	50.0	40.0	66.7	50.0	49.1
Preference to traditional healers	0.0	0.0	33.3	0.0	5.0
Others	50.0	0.0	33.3	0.0	22.8
	San Remigio				
	Mobility	Visual	Hearing	Development/ Psychosocial	Total
No money	0.0	16.7	0.0	0.0	6.7
Worried about the cost of medication	0.0	16.7	0.0	0.0	6.7
Home remedy is available	50.0	50.0	33.3	100.0	56.5
No need/regular check only	0.0	16.7	0.0	33.3	12.5
Not comfortable going to a health facility	0.0	0.0	33.3	0.0	4.5
Others	50.0	16.7	66.7	0.0	30.2
	All Sites				
	Mobility	Visual	Hearing	Development/ Psychosocial	Total
Facility is far	35.0	0.0	0.0	0.0	11.7
No money	0.0	18.7	0.0	0.0	6.7
Worried about the cost of medication	0.0	6.4	0.0	0.0	2.3
Home remedy is available	50.0	43.9	55.9	68.4	51.7
No need/regular check only	0.0	6.4	0.0	12.2	4.3
Not comfortable going to a health facility	0.0	0.0	10.8	0.0	1.6
Preference to traditional healers	0.0	0.0	22.5	0.0	3.3
Others	50.0	6.4	44.1	0.0	25.4

Source of basic data: PIDS-IDE PWD Survey, July 2016

4. Summary and Conclusion

Findings from this study highlight the lack of access to appropriate services for individuals with disabilities. Needed services for individuals with disabilities include evaluation and diagnostic testing, treatment and pharmacologic management, availability of trained health care providers and specialists, and access to clinic facilities within a reasonable distance.

Delays in development, which includes a child's language, motor, cognitive and social skills, should ideally be monitored during routine child health examinations with their pediatrician, with the focus of assessing whether the child is meeting his/ her developmental milestones. Early identification of a disability can lead to early intervention services. Studies have supported improved language and communication skills in those who are deaf and hard of hearing that received early intervention services (Moeller, 2000). Similarly, early intervention services in those with autism demonstrated improvement in their cognitive, language and social development including gains in their functional skills (Remington et al., 2007), (Eikeseth, Klintwall, Jahr, & Karlsson, 2012). While the cost of early detection and intervention programs can be expensive, studies have found an overall positive economic return over the span of individual's life (Cidav et al., 2017).

Unfortunately, many children are brought to medical attention for urgent or sick consultations wherein the focus would be on the presenting illness such as a cough or ear infection, rather than their overall

development. Routine assessment of the child's developmental milestones allows the medical provider to identify delays early on and make appropriate treatment recommendations. Early intervention during childhood leads to immediate and sustained benefits for both the child and the family (Karoly, Kilburn, & Cannon, 2005). Continued efforts to promote routine monitoring of development and early detection is needed.

PhilHealth presently provides coverage for newborn screening, which detects certain genetic, metabolic and endocrine related disorders that can potentially result in death and disability if not addressed early on during the infancy period. PhilHealth also covers the newborn hearing screen to allow for early detection and intervention services for those who are hearing impaired. However, the hearing tests conducted in the newborn period only detects congenital hearing loss (i.e. hearing loss present at birth). Periodic routine hearing and vision screens during the early childhood period are recommended so as to detect conditions not present at the time of birth, such as hearing loss resulting from frequent ear infections. A strategy that allows for a large proportion of children to be evaluated is to embed these screenings in the school setting, such as when children enter the first grade. This strategy is strongly deployed in the US, where a majority of states have implemented these routine screenings. Presently, San Remigio receives auxiliary medical services through their affiliation with a local medical school. This is beneficial to the community as they are able to access increased medical services in their area while simultaneously providing the medical students with increased clinical exposure and experience in a community setting. Expanded utilization of the medical and nursing students in these communities in providing preventive care services can be accomplished through conducting routine vision and hearing screenings in the school setting.

Healthcare, transportation and housing have been found to contribute to the additional costs of those with disabilities (Dumais, Prohet, & Ducharme, 2015). The proposed PhilHealth expansion for children with disabilities aims to provide coverage for habilitative/rehabilitative therapy services. Despite increased coverage, the physical access to therapy services in regards to distance to the facility and cost and availability of transportation, as well as access to therapy providers (physical therapists, speech therapists and occupational therapists) remain barriers to care and treatment. Strengthening and broadening the relationship with academic health institutions by extending beyond medical and nursing students to reach the allied health tracks may allow for auxiliary therapy services to be provided by students in the fields of physical therapy, speech therapy and occupational therapy.

In addition to access to therapists, access to physicians trained in the complex care of PWDs continues to be a significant barrier to care. It is estimated that 40–50% of individuals with autism in the US receive at least one psychotropic medication (Weeden, Ehrhardt, & Poling, 2010). With the significant number of individuals who require medications for their disability, it is important to provide training for local medical providers on the pharmacologic interventions for various disabilities as well as support in the management of behavioral and mental health conditions. During the survey, one of the physicians reported that he is unable to prescribe certain medications due to the cost-prohibitive nature of acquiring and maintaining an S2 license. The S2 license allows a doctor to prescribe certain narcotics and psychotropic medications, some of which are required in the care of PWDs. Included in this list are medications such as diazepam, which can be administered when the patient has a breakthrough seizure lasting several minutes. Increased training on the use of psychotropic medications and improved coverage for licensures/ prescription coverage is needed. Furthermore, when PWDs are prescribed medications, these medications are generally taken as a chronic/ maintenance medication. The daily cost of medications, which are often more than one medication being prescribed, leads to increased health care related expenditures for these individuals. PWDs may also have limitations with their activities of daily living, and the need for an aide or full-time caregiver to assist with their needs poses even greater costs. Expanded coverage to cover for medications as well as nursing/ caregiver support would be beneficial for PWDs, particularly for those who have more significant limitations.

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