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Preliminary mixed-methods analysis of disability prevalence and resource needs for persons with disabilities on Roatán, Honduras

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ABSTRACT Understanding the needs of people with disabilities (PWDs) is vital to improving targeted healthcare and resources. The project seeks to assess the prevalence of disabilities, resources used, and care and treatment needs for PWDs in Roatán, Honduras. There is little to no prior research about disabilities on the island of Roatán, and few disability studies available in the country of Honduras. We conducted a mixed-methods investigation, in which we surveyed 581 community members on the island of Roatán over a period of 6 weeks, to quantitatively estimate the prevalence of disability on Roatán and the resource needs for the identified PWDs. Qualitative interviews with physicians, *promotoras* (community health promoters), and staff at the local Rehabilitation Clinic (RBC) were thematically coded to assess the social experiences and resource needs of PWDs on the island. Of the 613 subjects obtained from our surveys, 258 (42%) had one or more disabilities. The most common disabilities were vision impairment, mobility impairment, and diabetes. 44.98% reported that the PWD did not visit any medical care facility to receive treatment. We found that there was a lack of disability-specific resources on Roatán, and no consistent definition of disability among community members and healthcare providers. Barriers to care include discrimination, caretaker burden, lack of medications, insufficient numbers of assistive devices, under-qualified specialists, and inaccessible transportation. Our research highlights the need for more education on disabilities within communities, as well as increasing the amount and depth of disability-specific resources accessible on the island. This study was conducted at the request of Clinica Esperanza to determine how it could better support PWDs in Roatán, and the potential benefit of developing a day home for PWDs.

KEY WORDS People with disabilities, disability-specific resources, barriers to care

INTRODUCTION

Evidence has shown that across both high-income countries (HICs) and low- and middle-income countries (LMICs), persons with disabilities (PWDs) face more barriers in accessing healthcare services than folks without disabilities [1]. This trend is enlarged in LMICs due to barriers in built environments and social attitudes. In Latin America and the Caribbean, there are approximately 85 million PWDs, which is about 14.7% of the regional population [2]. Furthermore, about 1 in 3 households have at least one person with a disability, with the most

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common disabilities being mobility difficulties and vision impairments [2].

Honduras remains one of the poorest countries in Latin America, with 52.4% of the population living below the poverty line in 2022 [3]. In 2013, PWDs constituted between 11-15% of the Honduran population, but only 17% of PWDs received any kind of rehabilitation [3, 4]. With a lack of robust legal frameworks that address the rights and needs of PWDs, they are among the most vulnerable groups in Honduras and face stigmatization and marginalization in their communities. Gaps in current literature exist in describing disabilities specifically in Roatán.

The island of Roatán is located in the Bay Islands of Honduras; it is about 40 miles long and at most 5 miles wide [5]. Roatán has a minimal healthcare landscape, including one public hospital, multiple private clinics with cost barriers, and three non-governmental clinics. There is a limited availability of adequate resources for PWDs in Roatán.

There is one public hospital that is not well-funded and multiple private clinics are on the island. These have a cost barrier to access, with the exception of three non-governmental (NGO) clinics located on the island. Among the NGO clinics is Clínica Esperanza (CE), a non-profit medical clinic whose mission is to provide low-cost, quality healthcare to the people of Roatán, including PWDs. In addition to services provided by their medical team of doctors, nurses, and dentists, the clinic hosts community outreach programs, including a child nutrition program in which the Community Health Worker (CHW) visits surrounding communities to weigh children ages 0-5 and provide nutritional resources. *Promotoras* (literally translates to “promoters” of health) are women who serve as a liaison between communities and CE. They work as educators, patient advocates, mentors, role models, and health monitors within their own communities, on behalf of CE, but are not required to have medical training.

There is also a limited availability of adequate disability-specific resources for PWDs across Honduras. Many children with disabilities are unable to receive an education because schools do not have the resources and schoolteachers do not have the skill sets to meet their needs [6]. Centers that provide special services such as physical, cognitive, and education rehabilitation are only available in major cities like Tegucigalpa, San Pedro Sula, Copan, Choluteca, and Catacamas [6]. In Roatán, the only centers providing care and therapies for PWDs are the Center for Community Based Rehabilitation Insular (RBC) and the Cattleya school for children with disabilities. RBC offers rehabilitation services, including “physical, language, learning, psychological, and audio visual therapies” [7]. Cattleya focuses on specialized education for children with physical and mental disabilities [8]. Further barriers to care include a lack of assistive facilities (ramps, handicap restrooms) [9], transportation fees, and costs to access care outside of the island (i.e. traveling to the mainland). The costs of transportation are compounded by the cost of care itself, making available resources difficult to reach for under-resourced patients who need them.

Defining disability is a continual and difficult process. Previous disability research by the Washington Group has created sets of questions that ask about difficulties in carrying out daily tasks such as “walking, seeing, hearing, cognition, communication, and self-care” based on guidelines by the WHO and CDC [10]. This research is a preliminary and non-systematic analysis of the prevalence of disability and disability needs in Roatán. Through quantitative and qualitative analysis, we sought to determine how community members and healthcare workers in Roatán define disability, the common disabilities present, and the major barriers to care for PWDs. There was no prior disability-specific information to be found on the island, therefore, this study can help lay the foundations for further investigations to better address the needs of PWDs in Roatán.

METHODS

Study Population

This study focused on five study populations: community members; a focus group of parents of children with disabilities located in the community of Flowers Bay; *promotoras* who volunteer with Clínica Esperanza (CE); physicians, nurses, and community health workers at CE; and health workers in the RBC insular rehabilitation center. Participants were recruited through a convenience sample, as there were no known PWDs to begin the sampling process. A convenience sample introduces bias into the study, however, it was the best method to study this population without prior knowledge or contact with this population. Our study is a preliminary analysis of disability in Roatán, and future studies should build off this knowledge to create a less-biased sample. Patients who were in the CE waiting area during our 6-week survey period were recruited and surveyed after they provided

consent. Mothers of children who participated in the Community Health Worker (CHW) visits by the clinic in the six-week collection period were also surveyed. Both groups were included regardless of their disability status. Each participant gave verbal informed consent and was given a number and a letter corresponding to the order in which they were surveyed (ex: 156) and the group who surveyed them (A or B), to preserve anonymity. Group A surveyed 339 participants, and group B surveyed 242. We also interviewed 10 *promotoras*; two nurses, one doctor, and a community health liaison at CE; and staff at the RBC, who all gave verbal informed consent. Patients were excluded if they did not speak either English or Spanish, or were below 18 years of age.

Survey Instruments

To study each of our target populations, we created specific surveys and interview questions, which are listed in the appendices. We based our survey questions off the CDC definitions of disability[11]. There were no current validated scales for this population, so we used these definitions to create our own survey tool. It was piloted during the first week of surveying and corrected for clarity. The translations were done by the team, and checked for accuracy, comprehension, and cultural appropriateness by the CHW at the clinic.

Our surveys included a series of 12 questions. We completed the entire survey with an individual if they responded ‘yes’ to “Do you or anyone in your household have a disability such as problems with seeing , hearing, walking, remembering , concentrating, or communicating?” The household of an individual was defined as the people who live in the same physical house as the participant, and each participant was allowed to provide information on more than one individual. The rest of the survey asked about the PWD’s age, sex, region of location, disability status, as well as clinic use, resource use, caretaker use, and if a disability care home would be beneficial to the mentioned PWD, in short-answer format. There were a total of n = 581 surveys, but there were n=613 PWDs identified in these surveys, the latter was the number used for analysis. The *promotora* surveys were open-ended and asked about disabilities specifically in the community that they serve. Focus group questions asked about how they feel disability has impacted their lives and what barriers exist in their ability to receive care. Healthcare worker surveys asked about their background and experiences working with PWDs, in addition to questions surrounding PWD discrimination, employment, and schooling.

Data Analysis

We conducted statistical analyses for the community survey data and thematic coding for interviews. For the statistical analysis of community data, collected descriptions of disabilities were used to create 12 disability categories: diabetes, vision impairment, vision loss, hearing loss, walking/mobility impairment, paralysis, memory/concentration, psychological, learning, communicating, chronic, and physical deformities. “Chronic” refers to such disabilities/illnesses as cancer, chronic kidney disease, and other illnesses described as long-term/since birth. We used the short answer questions on disability resources to develop three levels of resource use: ‘not using any resources,’ ‘ongoing need,’ and explicitly stated no additional treatment/care needed.

To analyze correlations, we conducted chi-square and Kruskal-Wallis tests, as well as created a correlation matrix between the twelve disabilities and the variables ‘resource use,’ ‘clinic use,’ ‘caretaker,’ and ‘benefit from day home.’ For all statistical association tests, $\alpha = 0.05$ was used to determine nominal statistical significance, adjusted if necessary by a Bonferroni correction. R Statistical Software (version 4.1.1) was used for statistical analyses[12]. All the *promotora* and physician interviews were coded thematically. The first interview was coded independently by each member of the team. The devised codes were compared with each other for compatibility in coding and then used to code the rest of the interviews. We also identified any major statements or sub-themes that diverged from other respondents. For the comparatively small data sets of the RBC interviews and the focus group, we summarized transcripts using common themes between interviews

RESULTS

Survey Analysis

	Number of respondents (n = 258)	Proportion of respondents
Age Range		
0-5	6	0.0233
6-16	23	0.0891
17-60	142	0.550
61+	71	0.275
Missing	16	0.0620

Sex		
Male	102	0.395
Female	156	0.605
Region		
1	128	0.496
2	41	0.159
3	23	0.089
4	52	0.202
5	7	0.027
Missing	7	0.027
Clinic Attended		
Clinica Esperanza	51	0.198
Public	13	0.050
Private	27	0.105
Multiple	22	0.085
Outside of Roatán	27	0.105
None	114	0.442
Missing	4	0.016
Treatment		
None	80	0.310
Yes (no further need)	27	0.105
Yes (ongoing need)	145	0.562
Missing	6	0.023

Table 1. Demographic and survey results of PWDs

Disability Category Percentages

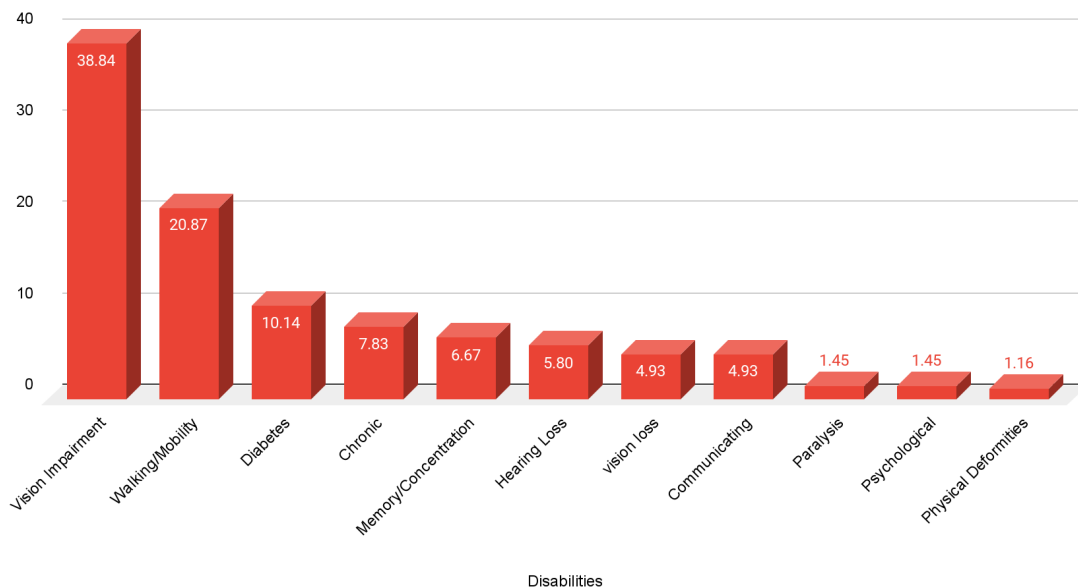


Figure 1. Percentage of PWDs in each of the created disability categories.

Complete survey responses were collected for 613 individuals through 581 surveys conducted in the 14 communities that Clinica Esperanza (CE) has community outreach programs in, as well as CE waiting areas. Of the five geographic regions in Roatán, over half of survey respondents lived in region 1 (53.5%). Out of the 613 individuals, 258 were reported to have one or more disabilities. Among people with disabilities (PWDs), the majority were aged 17-60 (55.0%), female (60.5%), and from region 1 (49.6%) (**Table 1**). In a categorization of

disabilities, the highest proportion of people had vision impairment (38.8%), followed by walking/mobility impairment (20.9%), and diabetes (10.1%). Chronic illnesses (7.8%), memory/concentration issues (6.7%), hearing loss (5.8%), vision loss (4.9%), communicating (4.9%), paralysis (1.4%), psychological (1.4%), physical deformities (1.2%), learning (0.58%) were also among the reported disabilities (**Figure 1**).

Resource Use by Disability

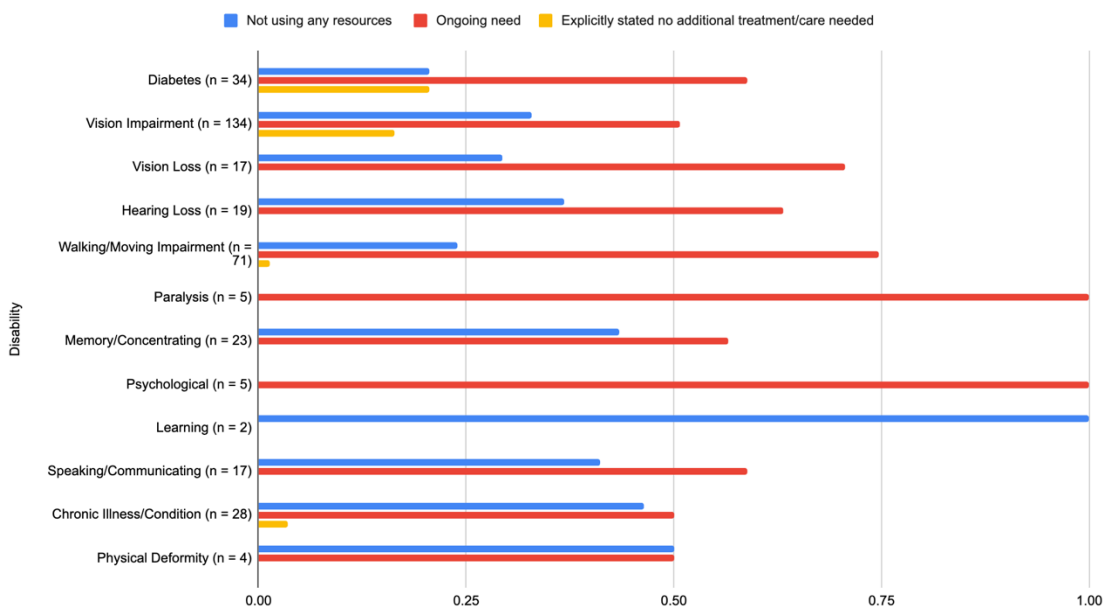


Figure 2. Resources used by disability.

	Proportion who reported benefit from day home	Proportion who reported would not benefit from day home	p-value ^a
Age			
0-5 (younger than school-age) (n = 5)	1.000	0.000	0.451
6-16 (school age) (n = 19)	0.895	0.105	
17-60 (adult) (n = 127)	0.780	0.220	
61+ (older adult) (n = 68)	0.809	0.191	
Sex			
Female (n = 142) Male (n = 89)	0.796	0.204	0.857
	0.809	0.191	
Clinic			
Clinica Esperanza (n = 49)	0.796	0.204	0.085
Public hospital/clinic/centros de salud (n = 10)	0.700	0.300	
Private hospital/clinic (n = 25)	0.680	0.320	
None (n = 98)	0.867	0.133	
Multiple (n = 22)	0.864	0.136	
Outside of Roatán (including brigades) (n = 26)	0.654	0.346	
Caretaker			
No (n = 130)	0.738	0.262	0.015
Yes (n = 97)	0.876	0.124	

^ap-value calculated via chi-square and Kruskal-Wallis tests

Table 2. Associations between Benefit from day home and demographic variables

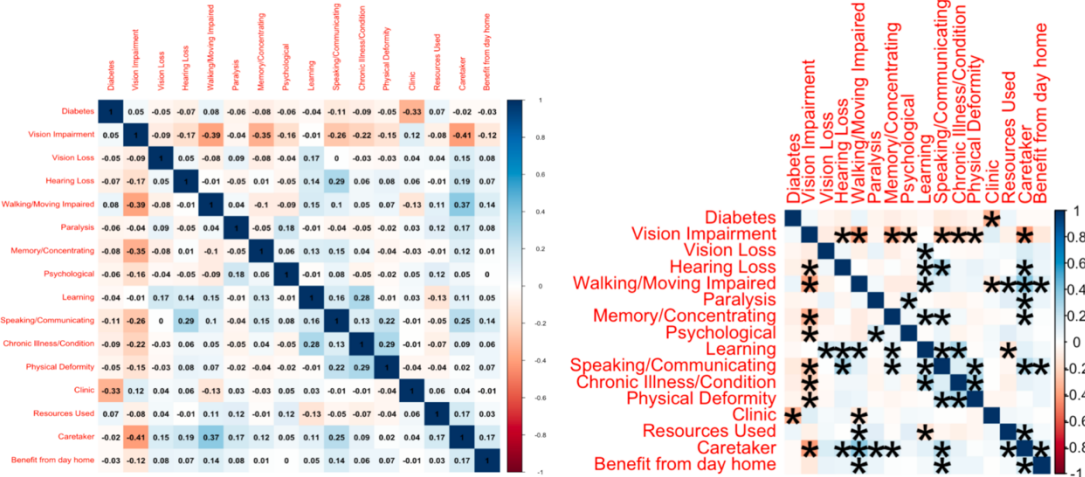


Figure 3. Correlation matrix between disability categories, clinic attendance, resources used, caretaker used, and reported benefit from a day home. Statistically significant correlation coefficients ($p \leq 0.05$) marked by an asterisk and non-significant values not shown.

Nearly half (44.2%) of subjects with disabilities did not visit a healthcare facility to treat their disability, while a combined 87.2% of subjects reported using no resources, or requiring ongoing resources to treat their disability (Table 1). In terms of resource use by disability, every disability had high proportions of ‘ongoing need’ or ‘not using any resources’ (Figure 2). Only the categories of diabetes, vision impairment, walking/moving impairment, and chronic illness/condition contained PWDs that ‘explicitly stated no additional treatment/care needed.’ Whether or not a day home was considered beneficial was found to be significantly associated with if the PWD had a caretaker ($p = 0.015$), but not age, sex, or type of clinic used (Table 2). Based on a correlation matrix and associated p-value plot created for the twelve disability categories, the variables of clinic use, use of a caretaker, and reported ‘benefit from day home’ were all significantly correlated with various disabilities (Figure 3). A Bonferroni correction was applied to a level of significance of 0.05 to give a corrected level of significance of 0.0002. Use of a clinic was significantly negatively correlated with diabetes ($r = -0.33$, $p = <0.0001$), meaning presence of diabetes was associated with a lack of clinic use. Use of a caretaker was significantly negatively correlated with vision impairment ($r = -0.41$, $p = <0.0001$) and positively correlated with walking/moving impairment ($r = 0.37$, $p = <0.0001$), and speaking/communicating ($r = 0.25$, $p = <0.0001$).

A higher number of disabilities (summed to create the variable Disability Sum) was found to be significantly associated with using a caretaker ($p = <0.0001$) and reporting benefit from a day home ($p = 0.0248$). Finally, when testing the effect of survey group on data results, a three-way chi-square to test the correlations between group, caretaker, and ‘benefit from day home’ found no significant three-way correlation ($p = 0.077$).

Interview Analysis

Interviews with RBC staff were conducted to analyze the perspectives of trained professionals who have worked with PWDs on the island. CE physicians, nurses, and healthcare workers were also interviewed to understand how the medical field interacts with disability. CE’s *promotoras* were also included as community members who were aware of community and medical needs.

Thematic analysis of topics such as definition of disability, availability of resources, barriers to care, and discrimination were used to examine disability on Roatán. Both RBC staff and *promotoras*’ definitions of disability included a limitation or a lack of ability, while RBC staff were more likely to specify their lack of ability to carry out tasks and describe the reasons as potentially physical or mental. Some *promotoras* only mentioned physical disabilities in their definitions, as opposed to mental or developmental disabilities. Both also commonly described the inability to live independently as a characteristic of being a PWD. Disabilities noted by *promotoras* in their communities include: physical disabilities, such as issues seeing, issues walking, issues hearing, amputations, paralysis, and dwarfism; trouble speaking; developmental disabilities, such as autism and Down Syndrome; and illnesses such as diabetes, epilepsy, and hydrocephalus.

In terms of CE's care provision for PWDs, when interviewing CE physicians, nurses, and healthcare workers, a common perception was that the clinic is a source of addressing medical issues through medicines and treatments, but not necessarily social support. When asked specifically about the care that the clinic provides to PWDs, the majority of health workers state that the clinic satisfies the PWD's medical needs due to the affordability and accessibility of medications and other assistive devices, such as crutches and wheelchairs. In conversation with parents of PWD, reasons mentioned for not attending CE include longer waiting times and the confined waiting spaces—this is especially the case for PWDs who make explosive movements. These points were echoed by a *promotora*, who stated that PWDs do not visit clinics due to the long walk from the main road to the clinic, and thus only receive care when the community health worker of CE visits their community.

Various aspects involved in the level of care PWDs received were mentioned by our interviewees. These were thematically coded as work-care conflict, the scarcity of specialists on the island, transportation and economic barriers, and the quality of care provided at home. The work-care conflict refers to the divide parents/guardians feel between the need to attend work, sometimes holding multiple jobs, and the need to care for their child. Healthcare workers and community members emphasized the fact that there is a lack of specialists on the island, and that the few available specialists are inaccessible due to costs in private clinics. It is thus common for parents of PWDs to take the PWD to mainland Honduras for services if they are able to pay for transportation and accommodations. However, in addition to cost, barriers to transportation include physical difficulties, discrimination, as some taxi drivers refuse to drive PWDs, and finding others to provide transport, such as firefighters to help transport PWDs with stretchers.

Promotoras shared that many PWDs receive care from family members, but there is also a reported reluctance in providing care, given the work-care conflict. This often results in unsatisfactory care, in addition to the fact that more medical assistance is needed in the home; yet family members often do not have the capacity or resources to aid in care. Community members can serve as a support to PWDs when family care cannot be provided. Families may not seek additional care due to believing there is not a cure for the disability or that the disability is not serious enough to warrant additional care. Additionally, families may leave persons with mental and developmental disabilities at home due to family members needing to attend work, or the PWD not being mobile enough to leave their home.

When asked about what care PWDs need outside of CE's services, *promotoras* mentioned further support, such as assistive devices, caretakers, or more familial care; medications; specialists; and non-medical concerns, such as material circumstances, socioeconomic needs, and transportation. When asked about whether PWDs face discrimination/stigma, some *promotoras* stated that PWDs face no stigma and are treated with love and respect, while others brought up bullying, discrimination in work, school, social and public settings, transportation services, and within families, and a lack of understanding leading to intolerance.

Another barrier to accessing care was the difficulty for family and community members to easily recognize certain disabilities, particularly among children or for those disabilities that are not physical. Furthermore, many PWDs do not attend school, due to such reasons as reading and learning issues, discrimination from classmates (teasing and bullying), and a lack of accessible features such as wide bathrooms, doors, or ramps. Educational opportunities for PWDs are limited on the island.

Finally, when asked if individuals would take advantage of a center with caretakers for individuals with disabilities, a majority of health workers stated that it would be helpful and that people would use its services. Recommendations for the day home include nurses and specialists, PWD-accessible facilities, spacious areas, economically-accessible costs, professionals/knowledgeable staff who can speak English and Spanish, educate families, and care for PWDs, transportation to the day home, and conversations with families to determine their willingness to use the services provided for their children. Those who did not think a day home would be beneficial already had caretakers or preferred to provide care in the home.

DISCUSSION

Data on disability prevalence, attitudes, and resource needs are scarce in Roatán, Honduras. This project addresses these topics through extensive surveys with community members; interviews with physicians and nurses at Clinica Esperanza (CE), *promotoras*, and with healthcare workers/staff at Roatán's Center for Community Based Rehabilitation Insular (RBC), as well as a focus group with parents of children with disabilities in one community.

The majority of the community survey data drew from patients residing near CE and the areas the clinic serves, between regions 1 and 2. The largest disability category overall was vision impairment, almost twice as large as the second largest category, walking/mobility impairment. Although diabetes, the third largest category, can cause both vision problems and loss of function or amputation of limbs, no significant association was found between diabetes and vision impairment or walking/moving impairment[13]. Diabetes was still included as a disability category due to its potential secondary effects in the form of other disabilities CE also has a large diabetes program and there is a high prevalence of diabetes in Roatán, as described by both CE workers and community members. Analyzing the disabilities related to diabetes can aid in future holistic care, as well as possibly identify patients or regions CE has not yet reached.

The majority of persons with disability (PWDs) were 17+, which is the societal age for adulthood on Roatán. While our community sample may be expected to report more disabilities in kids due to the child-centric outreach program, the mothers were asked about disabilities among anyone in their household. Stigma around disabilities is potentially greater for children as compared to the elderly, who are societally expected to have a loss of function due to their age. For example, a review of CWDs in LMICs found that children with disabilities in low-middle income countries may be 'hidden' in homes, preventing both knowledge of their disability and access to services[14]. One of the interviewed *promotoras* similarly noted that 'people with disabilities could be left by themselves if the family needed to work' [translated and paraphrased]. Such stigma may have resulted in decreased reporting of children with disabilities (CWDs). Additionally, many symptoms of disabilities in children may not be readily recognizable by parents and *promotoras*. Thus, we might suggest that the number of disabilities among the younger age groups is under-counted.

Thematic analysis of topics such as the definition of disability, availability of resources, barriers to care, and discrimination revealed varying perspectives of disability on Roatán. Interview and focus group data revealed that disability is defined in several ways, indicative of the social and collective consciousness towards PWDs in Roatán. Combining RBC staff responses, a collective definition of disability by the organization is defined as "a limitation or a lack of an ability, physical or mental, with which one is unable to carry out activities, without accompaniment, for a complete life." A few *promotoras* solely described visible limitation as their definition of disability, representing some lack of recognition of mental and developmental disabilities which are less visible.

According to a scoping review on provision of services for CWDs in LMIC, low parental health literacy and a limited availability of service providers with knowledge of developmental disabilities and rehabilitation strategies diminish the likelihood that children's delays will be identified or addressed[14,15]. This supported our finding that school teachers can serve as a key intermediary to reach parents of PWDs, as they may recognize a child's difficulties in school and thus detect a disability like vision impairment or other less visible disabilities. The 'key informant method'—training local volunteers to identify children with a suspected disability, so that they can then undergo assessments to confirm diagnosis via a team of medical officers, physiotherapists, occupational therapists, nutritionists, and psychologists—has been proposed in ongoing efforts to create a Latin American Cerebral Palsy Register, and could similarly be utilized in settings such as Roatán[16]. Organizations like RBC and Cattleya give talks to teachers in private and public schools about disability, and it would be beneficial to ensure this training is present in all schools, as well as extended to other community members. Education for PWDs also has several individual and societal benefits, including positive effects on individual well-being and long-term national social and economic development[17]. Thus, efforts must be made to address the need for PWDs to attend school.

The economic and social barriers to care reflected by our interviews are common in existing literature about disabilities in low-resource settings and highlight the pressing need for increased healthcare resources that address the specific circumstances that PWDs face on the island of Roatan. Literature on Children with Disabilities (CWDs) may be generalizable to PWDs. Common and major barriers for CWDs in accessing care are stigma, poverty and insufficient resources, inadequate policy implementations, physical inaccessibility, lack of transportation, lack of privacy, and inadequately trained healthcare professionals to deal with disability[18]. Emotional and social support, including peer support for CWDs and caregivers, were identified as facilitators for better access to health services[18]. Structural barriers include poverty, low education, inadequate healthcare systems, and shortage of healthcare professionals, while structural facilitators include policy development, improved physical accessibility, public disability awareness, and parental support[18].

Most LMICs have neither the financial resources nor infrastructure to support specialized, high-tech treatments for children with severe and multiple disabilities. Impoverished children experience disability more often due to higher risk of disease from poor sanitation and nutrition, as well as inadequate healthcare services for pregnant mothers and basic healthcare for young children[14,18]. This can have severe consequences, as missing out on essential treatments for basic illnesses such as fever, diarrhea, or vaccinations can become lifelong disabilities[18]. CWDs do not have equal access to healthcare services compared to children without disabilities, do not undergo treatment or receive disability-related services, and are overall excluded from everyday life activities[18,19].

There is a limited availability of experienced rehabilitation service providers, especially in rural areas in LMIC[15]. Many professionals in low-resource countries are unaware of more recent developments in interventions, so they operate under the assumption that there is little that can be done for children with severe and multiple disabilities[20]. In Roatán, RBC is the most specialized resource for PWDs which utilizes physical therapy. However, according to Groark et al, in areas including Latin America, children with disabilities are given specialized treatments and physical therapy exercises with limited evidence of effectiveness[20].

Results from our interviews also echo findings of care burdens in previous studies. With few facilities to care for children with disabilities in LMICs, the majority are cared for at home, which can lead to a physical burden on family members (especially older ones), in turn resulting in the child not being properly cared for and left to lie in the house[14]. Family members might have to give up job or education opportunities in order to care for the CWD or cover short-term costs, which can lead to long-term greater financial concerns[14].

Limitations

Our research was limited by having two different groups for administering surveys, accuracy risks in data, non-native Spanish speakers administering surveys, changes throughout the survey process, respondent bias, and a limited scope of investigation to clinic patients and communities reached by the clinic. As a pilot study, we hope to create a strong foundation for future continuation that will allow for more rigorous data. This sample utilized a convenience sampling method and further studies should include more thorough sampling methods that can provide more accurate estimations of disability prevalence and resource need. Further research should be conducted that addresses these limitations, taking particular care to standardize questioning methods, improve accuracy of recording through use of surveyors more fluent in Spanish and recording devices, and expand the scope of the research to include more communities in Roatán.

CONCLUSION

The establishment of an Adult Day Home would help alleviate the caretaker burden and work-care conflict, while providing the specific care that PWDs need to the majority older PWD population. Economic barriers for visiting both private and public clinics, lack of assistive devices, and lack of accessibility could be addressed through appropriate financing and design of the day home to minimize the costs for attendees. The high numbers of PWDs in our surveys who did not use clinics/hospitals or treatment, as well as transportation barriers reported in our interviews, indicate the importance of providing a central location to receive care. Intervention for disabilities in children would be better targeted around existing education infrastructure, with teachers as key intermediaries. The Adult Day Home, reduction of transportation fees, the installation of assistive facilities in public spaces, and a disability education initiative are all recommendations in progress to address the specific difficulties that PWDs face on Roatán. Future implementation studies may reveal whether these interventions are effective.

Our research also highlighted the importance of education on disabilities; accessibility to health services; and promoting collaboration between organizations dedicated to PWDs' care to ensure all spheres of well-being are addressed, such as RBC's rehabilitation services, Cattleya's educational services, and Clinica Esperanza's medical services. Future research should advance development, implementation, and evaluation of training programs for non-rehabilitation specialists such as doctors, nurses, teachers; non-specialist community members such as community health workers; and caregivers in the area of rehabilitation[15].

The day home would also increase awareness of different disabilities, which is critical as barriers in learning about disabilities are prevalent in LMICs[1]. Furthermore, the day home is a step towards meeting needs of older PWDs who may not be eligible for Cattleya's school-aged programs, and awareness must be spread regarding it to optimize reach for pre-registration and for volunteer sign-ups. Finally, in terms of government programs, a scoping review of community support for PWDs has highlighted the importance of PWDs being made aware of

the benefits available to them, as low uptake could hinder programs' reach and continued support[21]. Thus, Cattleya and CE's efforts to both advocate for government support of PWD transportation benefits, as well as raise awareness about the care they can provide for PWDs, is a vital first step in expanding access to care.

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