

Women with Disabilities Living in Poverty: The Case of Uruguay

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Abstract: The goal of this study was to determine health and disability status among people living in poor urban areas of Uruguay's capital and surrounding areas, with a focus on women. Despite living in the same locations, women reported worse health status than men and more limitations across all disability domains.

Keywords: disability, women, poverty, Uruguay

The World Health Organization (WHO) estimated that 650 million people in the world have a disability, representing 10% of the world population, and approximately 80% live in countries with weak economies (WHO, 2010a). Demographic trends and social indicators, such as health and poverty, indicate that the number of people with disabilities and the impact of disability on individuals, families, and communities are growing. Numerous factors determine this tendency: increased life expectancy, advances in applied science and technology, the aging process, consequences of violence, and vehicle accidents, to mention a few. More studies to characterize people with disabilities living in poverty areas are needed in order to determine their health, educational, work, and recreational needs. Population studies are vital to increase our understanding of disability issues and to influence disability public policy.

The interactions between disability and poverty have long been the object of research interest in public health, social medicine, and rehabilitation (Burkhauser, Houtenville, & Rovba, 2005; Lustig, & Strauser, 2007; Reyes-Ortiz, 1999; Wolff, 2004). Numerous international studies relate poverty to certain types of disability. For instance, among the elderly Brazilian population, higher income is strongly correlated with reduced disability prevalence (Parahyba, Stevens, Henley, Lang, & Melzer, 2009). Hernández-Jaramillo and Hernández-Umaña (2005) concluded after conducting a secondary analysis of three national databases that people with disability in Colombia typically belong to the lowest socioeconomic strata and had low levels of education. The inverse relationship between socioeconomic status and disability holds true also in affluent societies. For example, European and American comparative population studies found health problems and disability are more prevalent among the poorest groups (Avendano, Glymour, Banks, & Machenbach, 2009; Schoenborn, & Heyman, 2009). There is an international consensus that disability is both a cause and consequence of poverty (WHO, 2010a, 2004).

Women with disabilities are especially at a disadvantage, as they face not only disability-based but also gender-based discrimination (Lewis, Brubaker, & Armstrong, 2009; O'Hara,

2004). They are more likely to be poor than the rest of the population (Parish, Rose, & Andrews, 2009), and they have lower employment rates than females without disabilities and males with disabilities (Erickson, Lee, & von Schrader, 2008).

Disability in Uruguay

Uruguay has only recently devoted research resources to disability studies. The collection of disability data in the past was not done at regular intervals. The latest available data are the 2003-2004 First National Survey on People with Disabilities (Instituto Nacional de Estadística [INE], 2004a) and the 2006 Health Supplement of the National Household Survey (Encuesta Nacional de Hogares Ampliada, Modulo Salud) (Trylesinski, 2007).

According to the First National Survey on People with Disabilities, 7.6% of Uruguayans had a disability, approximately 210,400 individuals (INE, 2004a). Overall, the prevalence of disability among females was found to be higher than for males (8.2% versus. 7%, respectively). However, among individuals who were younger than 30 years of age, males reported higher disability frequencies than females; and the opposite occurred for individuals older than 50. Between 30 and 49 years of age, males and females reported similar disability percentages (INE, 2004a). The 2006 survey estimated a population prevalence of disability of 9.2% (Trylesinski, 2007). In addition, the Ministry of Social Development published a comparative report on Disability and Extreme Poverty, and approximated 5.4% of people with disabilities were living in extreme poverty (Ministerio de Desarrollo Social, 2008). Although the percentage of reported disability increases with age, it remained similar for males and females. However, frequencies peaked markedly for females after age 50, probably due to the fact that females live longer than males (Ministerio de Desarrollo Social, 2008).

Regarding health status and morbidity, the household survey of 2006 (Trylesinski, 2007) found that 5.5% of the general population in Uruguay had reported feeling sick in the past 30 days, and 79% of these had seen a doctor. Five percent of the national sample conveyed permanent visual limitations (that cannot be corrected with glasses), with females having slightly higher rates (5.5% vs. 4% for males). Permanent hearing limitations were present in 1.7% of the sample, approximately equally distributed by gender. Permanent walking difficulties (mobility limitations) were reported by 1.8% of males and 2.6% of females. Relationship difficulties due to permanent mental limitations affected 1.1% of the surveyed population, and 2.1% reported learning difficulties secondary to the same origin. Learning and relationship difficulties were more frequent among children and the elderly (Trylesinski, 2007). However, data on Uruguayans with disabilities, especially among vulnerable groups, are still very limited.

The present study is part of a larger ongoing research effort to gain information on disability prevalence among Uruguay's most vulnerable population, and collect data on their quality of life, and perception of the quality of health and social services received. This study presents preliminary data on health status and disability among residents of five poor urban areas of Uruguay's capital (Montevideo) and its surrounding areas (Canelones). It is of particular importance to study the situation of women in relation to disability, as they make up the majority of our sample. Women with disabilities living in poverty are of special interest due to the

relationships among gender, income gap, and disability, which may place Uruguayan women at more risk for disability and health problems.

The goal of this study was to determine health and disability status among people aged 14 and older living in high poverty urban areas in Montevideo and Canelones (Uruguay), with a focus on women. To accomplish this goal, (a) information on health status in the past 30 days was obtained using the Spanish version of the WHO Disability Assessment Schedule II (WHO DAS II), and (b) the relationship between gender and health status was examined using scores on WHO DAS II disability domains that were analyzed to determine if gender differences existed.

Methods

The current study was exploratory. It is the first attempt at conducting a systematic, ongoing descriptive investigation of people with disability living in poverty, their quality of life, and perceptions of services in Uruguay.

All residents of selected poor urban neighborhoods in the “Cerro Norte” area of Montevideo (“19 de Junio”, “33 Orientales”, and “Amanecer”) and in the “Barros Blancos” area of Canelones (“Villa Carmen” and “Villa Manuela”) aged 14 or more were targeted as participants in this study. According to information provided by the “Programa de Integración de Asentamientos Irregulares” (Integration of Irregular Housing Program) of the Uruguayan Department of Organization of Territory and Environment it was estimated that there were 740 households with a population of 1,700 people, including persons under 14 years of age living in the “Cerro Norte” neighborhoods mentioned above. Data on the population of Barros Blancos, Canelones were not available.

Various preparatory activities preceded the door-to-door interview process. Interviewers received training and information on ethical aspects of research, disability concepts, communication, and assessment tools (e.g., WHO DAS II interview). Because many of the residences built in the neighborhoods to be surveyed were illegally built and not registered in official documents, interviewers did a thorough mapping of the neighborhoods to identify the number and location of residences in each block before data collection. Finally, the interview was advertised with the help of the neighborhood organizations and local radio stations.

Neighborhood residents who were younger than 14, those who declined to participate, or were not at home on the day the interviewers visited them were excluded from this study. Interviewers obtained informed consent from each participant, or their representatives for cases with severe communication limitations. Door-to-door interviews were performed by 120 trained university students (Medicine, Psychology, and Social Work majors, among others), and volunteer neighbors, who worked in teams with a supervisor.

Participants’ characteristics

The demographic characteristics of the sample of 731 individuals are summarized in Table 1. The participants in this sample were primarily females (64.2%) with low educational

attainment (89.1 % had some secondary school or less); approximately half of them were married or cohabiting with a partner and 47.1% were gainfully employed.

Table 1: Demographic Characteristics of the Sample

Characteristic	Mean Females (SD)	Mean Males (SD)	Mean Overall (SD)
Age	40.26 (17.97)	37.96 (17.95)	39.32 (17.98)
Education Level			
Some primary school	17.7	13.1	16.0
Primary school completed	35.4	33.0	34.9
Some secondary school	34.9	44.5	38.2
Secondary school completed	6.9	6.3	6.6
College	2.9	1.0	2.3
Illiterate	1.9	1.6	1.7
Special education	0.3	0.5	0.3
Marital Status			
Never married	30.5	34.6	32.2
Married/ cohabiting	46.7	49.4	47.6
Divorced	12.9	9.8	11.7
Widowed	9.9	6.2	8.5
Employment Status			
Employed	38.4	62.4	47.1
Unemployed (for health reasons)	5.9	2.7	4.7
Unemployed (all other reasons)	6.9	5.9	6.5
Student	5.9	10.6	7.6
Retired	6.3	9.4	7.3
Homemaker	25.3	0.4	16.6
Other	11.3	8.6	10.2

Measures

This study utilizes the concept of disability consistent with the International Classification of Functioning, Disability and Health (ICF) (WHO, 2001), that defines disability

as a global concept involving the health status of an individual in interaction with his context (personal and environmental factors). From this viewpoint, disability is a negative product of the person-environment interaction. It is not only a consequence of a physical or mental dysfunction, it also includes contextual factors to take into consideration the impact of the environment on the functioning of the individual (WHO, 2001).

The WHODAS II Spanish version (WHO, 2000) was used to assess disability and health status. WHO DAS II is an internationally validated disability assessment instrument based on the ICF, and is available in Spanish (WHO, 2010b). It is a generic measure of functioning and disability with well-established psychometric properties. Construct validity was determined through correlations between the global scores on the WHO DAS II 36 items Spanish version and two disability scales, the “London Handicap Scale” (LHS), and “Escala de Evaluación de Discapacidad según el Entrevistador” (-.61 and .71, respectively) (Vázquez-Barquero, Herrera Castanedo, Vázquez Bourgón, & Gaité Pintado, 2006, p. 78). In addition, convergent and discriminant validity for the WHO DAS II domains was studied using the SF-36, and WHOQOL-BREF, as well as specific domains of the LHS and “Escala de Evaluación de Discapacidad según el Entrevistador.” Reliability measures such as test retest correlations ranged between .83 to -.96 for both global scores and domain scores (Vázquez-Barquero et al., 2006, p. 71).

WHO DAS II provides demographic and background information as well as health status. It reviews difficulties in six domains of individual functioning (WHO, 2000): (1) understanding and communicating with the world (cognition), (2) mobility, (3) self-care, (4) getting along with people (interpersonal interactions), (5) life activities, and (6) participation in society (WHO, 2010b). WHO DAS II provides a global disability score (scores range between 0-100; higher scores indicate more severe disability) and six domain scores which correspond to the functional domains mentioned above (Vazquez-Barquero et al., 2006). The present study only analyzed WHO DAS II domains of functioning.

Participants were asked whether they had physical or mental health problems, and rated separately their overall physical and mental health in the past 30 days on a five-point scale ranging from “very good” (score of 1) to “very bad” (score of 5). In addition, respondents reported their degree of difficulty (none, mild, moderate, severe, extreme/cannot do) in performing activities in each of the six domains. Answers to the items on the different disability domains were coded, and scores for each domain were calculated following the criteria indicated in the WHO DAS II manual (Vazquez-Barnero et al., 2006). In addition, this research team defined three cut-off criteria (based on statistical and clinical considerations) to determine four disability categories: (1) no limitations, (2) mild limitations (people at risk of developing more serious limitations), (3) moderate limitations, (4) and severe/ extreme limitations. Mild limitations were considered health problems in this study, given that respondents with mild limitations may be at risk of deteriorating health, or disability. The last two categories were considered to be indicative of presence of disability.

Statistical Analyses

All statistical analyses were performed using SPSS version 15.0. Descriptive statistics (e.g., percentages, means) were used to characterize participant demographics, as well as health and disability status. In order to determine whether there was a relationship between gender and health status, Chi-square tests were used. Differences between male and female mean WHO DAS II domain scores (disability domains) were examined with T-tests.

Results

The majority of participants (71.9%) did not report any physical problems and described their physical health as “very good” or “good.” 21.6% reported “moderate” health, 3.3% “bad” health, and 0.8% “very bad” health. In terms of mental health, 78.6% of participants stated they did not have any mental health problems. Of the 21.4% who had mental health problems, 78.3% stated they had “very good” and “good” mental health, 18.2 % “average”, and 3.5% reported “bad” or “very bad” mental health. Furthermore, females reported significantly more physical health problems (31.8% vs. 21.4%, respectively, $\chi^2=8.87$, $p=0.003$) and mental health problems (24.1% vs.15.6%, respectively, $\chi^2=7.15$, $p=0.007$) when compared to males.

Table 2 provides information (across all WHO DAS II domains) on the percentages of the overall sample that reported no limitations of functioning, those who reported mild limitations, moderate limitations, and severe/extreme limitations. Moderate and severe/extreme limitations were considered to be indicative of a disability.

Table 2: Disability-related categories by WHO DAS II domain as percentage of the sample

WHO DAS II Domains	Disability-related Categories				Totals
	No Limitations Reported	Mild Limitations	Moderate Limitations	Severe and Extreme Limitations	
Understanding and Communicating	76.2	15.0	5.4	3.3	100
Getting Around	78.9	10.8	3.4	6.9	100
Self Care	93.7	3.1	1.3	2.0	100
Getting Along with People	86.8	8.7	2.1	2.5	100
Life Activities: Household	91.1	—	3.7	5.2	100
Life Activities:	90.8	3.2	2.7	3.2	100

Work					
Participation in Society	75.4	12.7	5.1	6.8	100

Regarding differences between males and females across disability domains, females scored higher than males across all six WHO DAS II domains, indicating that there are more severe limitations among females than males. More specifically, females differed significantly from males in understanding and communicating (domain 1), getting around (domain 2), life activities (household and work, domain 5), and participation in society (domain 6). Please refer to Table 3.

Table 3: Mean Scores for Males and Females on WHO DAS II Domains

WHO DAS II Domains	Mean		T-statistic	P-value
	Males	Females		
Understanding and Communicating	6.14	8.54	2.701	0.007**
Getting Around	5.37	10.15	3.562	0.000**
Self Care	2.16	3.72	1.840	0.066
Getting Along with People	4.22	5.27	1.070	0.260
Life Activities: Household	3.33	8.74	4.060	0.000**
Life Activities: Work	2.47	5.26	2.100	0.036*
Participation in Society	6.60	10.08	2.722	0.007**

* $p \leq .05$; ** $p \leq .01$

The items indicating the more severe limitations were “remembering to do important things” ($p=0.0008$), and “learning a new task, for example, learning how to get to a new place” ($p=0.0006$) within the “understanding and communicating” domain.

Significant gender differences were found across all items in domain 2 (mobility): “standing for long periods such as 30 minutes” ($p=0.014$), “standing up from sitting down” ($p=0.001$); “moving around inside the home” ($p=0.000$); “getting out of the house” ($p=0.004$); “walking a long distance such as a kilometer” ($p=0.001$).

Within the life activities domain, female mean scores on items related to household tasks were significantly higher than males: “taking care of your household responsibilities” ($p=0.000$), “doing most important household tasks well” ($p=0.000$), “getting all the household work done that you needed to do” ($p=0.001$), and “getting your household work done as quickly as needed” ($p=0.001$). Regarding work related life activities, the only significant gender difference was “getting all the work done that you need to do” ($p=0.041$).

In the participation in society domain, women obtained significantly higher scores than men on the items; “How much have you been emotionally affected by your health condition?” ($p=0.001$) and “How much has your health been a drain on the financial resources of you or your family?” ($p=0.004$).

Discussion

Among the demographic characteristics of the overall sample, we focused on educational attainment and employment because of their strong connection to socioeconomic status. With educational level, it is important to note the disconnection from the educational system: 16% did not complete the lowest level of education. Although 38% started secondary school, only 6.6% completed it. Because only individuals 14 years and older were surveyed, it is unlikely that the educational situation will improve. It should be noted that females seem to be at higher risk of abandoning formal education at an earlier age than males. While males reported accessing secondary school more frequently than females, they have a slightly lower percentage of completion.

The First National Survey of People with Disabilities of 2003-2004 reported large educational attainment gaps between adults with disabilities and adults without disabilities: 37.7% of the former received no instruction or did not complete their primary education, compared to 12.6% of the latter; and only 13.7% of adults with disabilities had a secondary school degree or higher, compared to 32.5% of people without disabilities (INE, 2004a). These data reveal low levels of educational attainment, which happens to be one of the factors that contributes to understanding negative health outcomes in the person-environment interaction, and may perpetuate the poverty-disability-poverty cycle. People with disabilities are more likely to remain poor because they have barriers to accessing the labor market, engaging and influencing decision-making political processes in their communities. Although we did not analyze educational attainment among people with disabilities in this population, an educational gap with respect to people without disabilities is likely.

In the employment arena, 47.1% of the population interviewed was working, and 4.7% were pursuing a course of study. Among males, 62.4% were working at the time of the interview, compared to only 38.4% of females. These figures are in accord with national general population occupational data (INE, 2004b, 2009). The occupational data have consistently shown lower labor force participation of females than males in Uruguay. In addition, a high percentage of women exclusively engage in domestic activities (25%), which include taking care of the home, children, people with disabilities, and aging relatives. However, another characteristic of

Uruguayan females is that those who work also frequently take over domestic responsibilities (Monge, 2010). Employment data (INE, 2004a) on working-age Uruguayans with disabilities reveal an important employment gap when compared to people without disabilities (16.5% vs. 53.4%, respectively), and the gender differences are pronounced (22.4% for males, and 12.3% for females with disabilities reporting being employed in 2003) (INE, 2004a).

The majority of the 731 people interviewed reported their overall physical and mental health status as “good” or “very good” and reported no problems in these areas (74.3% and 78.6%, respectively). However, there were significant gender differences in this study’s sample, with females reporting significantly more physical and mental health problems. There is a small difference between data from the household survey of 2006 (Trylesinski, 2007), with 5.5% of the national sample reporting health problems in the past 30 days, compared to 4.1% of our sample reporting bad or very bad physical health in the past 30 days (3.5% for mental health). Mental problems among males in the general population tend to be diagnosed during school age years and increase frequency later in life, probably due to neurological disorders (Trylesinski, 2007). Our sample excluded individuals younger than 14 years old, so this may have lowered males’ reported health problems. National population figures (Trylesinski, 2007) revealed that females do seek psychological treatment more frequently than males (4.2% vs. 3.0%, respectively), which supports our findings.

The percentages of people who reported having moderate to extreme limitations in cognition, mobility, self care, interpersonal interactions, life activities (domestic and work), and participation in society (indicative of disability) ranged from a low of 3.3% (self-care) to 11.9% (participation in society).

Because of the differences in assessing functioning and disability, only a limited number of WHO DAS II domains of functioning are comparable to information from the First National Survey on People with Disabilities (INE, 2004a) and the Health Supplement of the National Household Survey of 2006 (Trylesinski, 2007). Nevertheless, the domain that can be compared shows an important difference between the population surveyed and the national data. The prevalence of disability in the mobility domain (“Getting Around”) for our sample was 10.3%. National estimates are approximately 7-8 percentage points lower than our figures, 1.8% of males and 2.6% of females in the general population reported permanent walking difficulties (mobility limitations) (Trylesinski, 2007). Further research is needed to understand the reason for higher mobility disability in the sample under study. Mobility difficulties and lack of available help in turn may affect community participation.

We consider that the relationship of the person with his/her environment is a determining factor in order to achieve full social inclusion; the health condition of an individual can deteriorate due to his/her environment. Mobility is closely linked to personal or technological supports that may or may not be available to the person, as well as environmental conditions, such as unpaved streets or long distances to get to the public transport system. Social participation is related to social opportunities, attitudes of others, and economic resources.

Another domain amenable to analysis is interpersonal relationships. In the present sample, 4.6% of the respondents reported disability in the “getting along with people” WHO

DAS II domain. Relationship difficulties due to permanent mental limitations were present in only 1.1% of the 2006 national survey (Trylesinski, 2007). WHO DAS “understanding and communicating” domain is related to the ability to speak. Data on speaking limitations were included in both the First National Survey on People with Disabilities (INE, 2004a) and the National Household Survey of 2006 (Trylesinski, 2007). The former survey also collected information on mental limitations that limit relationships with others. It seems that comparisons might not be meaningful because of the number and differences in concepts.

Females have significantly more limitations across most of the WHO-DAS II domains in this sample (all except “self-care”, and “getting along with people”). Two items within the “understanding and communicating” domain, “remembering to do important things”, and “learning a new task, for example, learning how to get to a new place” may be related to cognitive difficulties due to aging.

In our sample we found significant differences between males and females in all the items that assess mobility, with females reporting more mobility limitations. National data also reveal gender differences in mobility with more females reporting ambulation problems than males, which have been linked to a higher number of women in older age, when walking becomes more difficult (Trylesinski, 2007). Limited functioning in this particular domain is related to physical problems, which worsen without the necessary supports to reduce their impact. Mobility disabilities are among the most frequently reported among people with disabilities. According to the 2006 national survey, 31.3% of people with disabilities manifested difficulties walking; of these 40% required assistance to move about or out of their home (INE, 2004a). It is unclear if age is the determining factor for this type of disability or if it could be related to health-illness conditions and barriers to access rehabilitation services, technological aids, or transportation, that is, limitations imposed by the living conditions and the environment.

The significant differences found in the items in the “life activities” domain invite an analysis of the social role of women, because domestic activities are usually performed by females. In addition, women with disabilities may perceive household activities as an area affected the most because they may engage in this type of tasks more frequently than males.

Conclusions and Future Prospects

This study presents some limitations, such as the limited number of neighborhoods screened, thus preventing generalization of results. However, it provides valuable data for the residents of those neighborhoods, and it is consistent with information of studies from around the world, as we mentioned in the previous section. Another limitation is that the present study is one of the few scientific studies on disability in Uruguay, so we cannot draw parallels; comparisons with national survey data are limited. The variability of national survey data emphasizes the importance of using adequate assessment instruments to obtain information on people with disabilities, such as the WHO DAS II. Despite these limitations, we arrive at conclusions that are relevant both for the scientific study of disability, and as input for disability related public policy.

The ICF defines disability as a negative product of the individual-environment interaction; the WHO DAS II was designed to assess disability from the ICF framework and to provide a wealth of information. First of all, it establishes clearly defined health domains. Secondly, it allows identification of health limitations and the extent of these limitations (no limitations mild, moderate and extreme limitations). Therefore, it supplies relevant information on health status as well as limitations in activities and participation of individuals with or without a disability, allowing researchers to identify population needs. In this manner, it delivers valuable information to streamline resources required to offer prevention and health care services. WHO DAS II data is also useful from a primary health care perspective, as well as to determine population needs for mental and physical rehabilitation services. For example, by analyzing data on the various WHO DAS II domains we were able to identify those health domains reported as negatively affected by the majority of the population assessed.

In this study, health problems were considered mild limitations, whereas moderate and more severe limitations were considered disability. Respondents who reported mild limitations may be at risk of developing a disability, so a follow up of people at risk seems relevant to prevent a negative outcome. Given limited access to educational and health resources and scarce employment opportunities in high poverty areas, a minor health problem may over time lead to restrictions of activities and social participation. Study participants frequently reported working unskilled, heavy, low paying jobs, such as brick making and construction, which can cause and aggravate health problems such as back pain. This information is important to underscore the need for comprehensive rehabilitation services accessible to all Uruguayans, including vocational assessment and job placement regardless of the educational level of the person seeking services.

In the present study, the areas where most people, regardless of gender, reported moderate and severe or extreme limitations were participation in society (approximately 12%), mobility (10.3%), household activities (8.9%) and understanding and communicating (8.7%). These percentages are higher than the Uruguayan estimated disability prevalence (7.6%), but they are consistent with international estimates of prevalence of disability. Given that the WHO DAS II, as the WHO points out, is an assessment instrument that adequately distinguishes between health conditions and disability, it may provide better information on disability than census questions and other Uruguayan government survey disability data.

If we consider the high percentage of reported limitations in this sample, it is possible to posit a link between the living conditions in high poverty areas and disability. For example, difficulties in understanding and communicating may be due to learning problems in individuals who did not receive adequate educational supports which in turn can limit their educational and work opportunities. This information is relevant to plan for interventions, which may involve environmental modifications such as removal of physical, attitudinal, and communication barriers.

Finally, it should be stressed that finding a larger number of female residents than males in the poor neighborhoods included in this study is not surprising, as it is a common situation of Uruguayan families living in poverty. The majority of these women were heads of their households, with the added burden of responsibility for children and older adults, which may

lead to neglect of their own health care needs. This study showed that females reported more health limitations and described the types and extent of these limitations. Thus, despite the present study's limitations the information it provides is valuable in order to raise awareness about the need to break the invisible circle that generates poverty and disability. Determinants of disability are produced in the environment and living conditions, so disability can be prevented once these aspects of reality are known.

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