

# Restrictions on persons with disabilities for participating in family and community activities

## Restricciones en personas con discapacidad para su participación en actividades familiares y comunitarias

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### ABSTRACT

**Objective** To identify the influence of functional impairments and limitations activities for persons with disabilities to participate in family and community activities.

**Methods** This is a cross-sectional study with 4 044 persons with disabilities, selected using probabilistic sampling and a door-to-door active search model in 5 towns in the District of Barranquilla. The data were processed with univariate analysis and bivariate analysis to determine the relationship between the study variables.

**Results** 55.9% of the population were males, 41.6% were between 15 and 44 years of age, and 92.9% belonged to the lower socioeconomic stratum. 82.9% reported mobility limitations and 99% reported barriers to access non-formal learning activities, 98.6% to access public activities, and 97.5% to access productive activities. Individuals with that a lower limitation in exercising the power of reason, particularly thinking, can increase participation in activities with family and friends (OR, 0.8; 95% CI, 0.6-0.9), with the community (OR, 0.7; 95% CI, 0.6-0.9), religious or spiritual activities (OR, 0.8; 95% CI, 0.7-0.9).

**Conclusions** There is a directly proportional relationship between structural impairment with the development of dependency and limited family, social, and work participation in the persons with disabilities.

**Key Words:** Disabled persons; disability evaluation; mobility limitation; social participation (source: MeSH, NLM).

### RESUMEN

**Objetivo** Identificar la influencia de las limitaciones funcionales de las personas con discapacidad sobre su participación en actividades familiares y comunitarias.

**Método** Estudio transversal en 4 044 personas con discapacidad, seleccionadas mediante muestreo probabilístico y búsqueda activa casa a casa en 5 municipios del distrito de barranquilla. Se realizó análisis univariado y bivariado para determinar la relación entre las variables estudiadas.

**Resultados** El 55.9% de la población fue de sexo masculino, 41.6% tenían entre 15 y 44 años de edad, y 92.9% pertenecían al estrato socioeconómico bajo. El 82.9% reportó limitaciones de movilidad; 99% reportó barreras para acceder a actividades de aprendizaje no formal, 98.6% para acceder a actividades públicas y 97.5% para acceder a actividades productivas. Las personas con menor limitación cognitiva pueden aumentar su participación en actividades con familiares, amigos (OR, 0.8; ic 95%, 0.6-0.9), con la comunidad (OR, 0.7; IC 95%, 0.6-0.9) y en actividades religiosas (OR, 0.8; IC DEL 95%, 0.7-0.9).

**Conclusiones** Existe una relación directamente proporcional entre el deterioro estructural, la dependencia y la limitada participación familiar, social y laboral en personas con discapacidad.

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**Palabras Clave:** Personas con discapacidad; evaluación de la discapacidad; limitación de la movilidad; participación social (*fuente: DeCS, BIREME*).

Disability is considered a biopsychosocial condition that affects people in terms of social participation and full enjoyment of rights (1,2). The World Health Organization (WHO) has announced that over one billion people around the globe have some kind of disability, which accounts for 15% of the total world population. This prevalence is higher in low-income countries, populations in the poorest quintile, people with little academic education, low income or unemployed people, and women (3). In addition, the World Health Survey showed that at least 785 million people over 15 years of age (15.6%) are disabled, and around 110 million (2.2%) have significant difficulties functioning (3). Moreover, the Global Burden of Disease Study estimates that there are at least 975 million people over 15 years of age (19.4%) in the world with a disability, and 190 million (3.8%) with a severe disability (4).

In Latin America, the prevalence of disability varies among countries. According to the Economic Commission for Latin America and the Caribbean, Brazil has a prevalence of 23.9%, followed by Ecuador, 5.6%; Uruguay, 16.35%; Costa Rica, 10.5%; Mexico, 5.0%; and Panama, 8.3% (5). Colombia has an intermediate prevalence of 6.3%, which corresponds to approximately 2,624,898 Colombians with some type of disability. Their main limitations are to seeing, walking or moving, hearing, using arms and hands, interacting with other people, or carrying out self-care activities (6). In addition to that, the Atlántico Department in Colombia record went from 24,925 people with severe deficiencies to 106,623 people with permanent limitations, according to the information provided by Integral Information System de la Social Protection in 2013 (7). Barranquilla, the capital city of this department, had a total of 12,503 people with disabilities in 2010, according to the RLCPD.

Disability is considered a phenomenon associated with several social and political factors, and the increased disability index from developing countries is mainly due to the incidence of physical and psychological trauma caused by violence, displacement, and armed conflict. These events result in lack of opportunities for equal access to health services, education, and income generation projects, and access to areas for leisure and entertainment for this population group (8). These aspects are related to the environmental factors in the International Classification of Functioning, Disability and Health (ICF), which establishes that the physical, social, and attitudinal environment has a strong impact on the lives of persons with disabilities. The concept of participation, defined as a person's involvement in a life situation, is included in

the ICF' disability analysis. This means taking part in activities at home, at workplace, and in the community (3).

Other authors have demonstrated that the degree of functional limitation of people with disabilities decreases their possibilities of participating in family and social activities, including leisure (9). These restrictions are present at all ages. It has been reported that children and young people with disabilities have difficulties participating in activities at home and in the community and school when compared with their non-disabled peers, and that the physical and social environment and the general population's attitudes may explain these difficulties in participating (9-11). However, it is true that the type of disability, the degree of structural impairment, and the level of functional limitation will determine the probability of restricted participation by this population. The higher the structural impairment, the higher is the functional limitation that the persons with disabilities will have within his or her environment (12,13).

It has been confirmed that there a positive relationship between the level of structural impairment and global disability, and the educational level and work participation and inclusion of people with a spinal cord injury (14). Therefore, it is evident that different types of disabilities have different consequences, which impact the independence and quality of life of persons with disabilities (15,16).

Although it is important to recognize the significant role that contextual factors play in persons with disabilities possibilities to participate within family and society, which has been sufficiently substantiated by ICF (17), it is also important to accept the influence that each person's structural impairments have in this sense. These will ultimately define the degree of functionality that can be recovered, and therefore, the physiological possibilities that each subject can rely on to place him or herself in the dynamic relationship with the context. However, academic and scientific communities around the world nowadays acknowledge that strengthening persons with disabilities social participation, regardless of their degree of physical dependency, contributes to their quality of life, and therefore, to their personal, family, and social development (18). The objective of this study was to determine the restrictions on a group of persons with disabilities for participating in family and community activities.

## METHODS

A cross-sectional descriptive study was performed with 4044 persons with disabilities living in Barranquilla, Colombia. A probabilistic technique was used to choose the

neighborhoods of the five (5) locality, basic geostatistical areas administratively and politically dividing the city of Barranquilla (metropolitan, Southeast, Southwest, Historic North, and Riomar) as the observation unit, and a door-to-door active search model was adopted. During the visit, researchers requested that the people with disabilities, caregivers, and/or relatives identify other people with disabilities who were living in Barranquilla. We also had the support of community leaders, community action councils, community participation committees, and persons with disabilities organizations.

The persons with disabilities, caregiver, and/or relative previously signed an informed consent form. The study was approved by the Ethics Committee from the University. Data was collected using the Registration for the Location and Characterization of Persons with Disabilities (RLCPD in Spanish) from the National Administrative Department of Statistics (DANE in Spanish). It was used by researchers and healthcare professionals from the district, after they were trained for its utilization, under guidance and supervision of the Ministry of Health and Social Protection of Colombia.

RLCPD has seven components, and for the purpose of this study, the information of the following components was used: Location and housing; Personal identification; Characterization and origin of disability; and Participation in family or community activities. From the Location and housing component, the socioeconomic stratum variable was taken into account, characterized as Stratum 1, Stratum 2, Stratum 3, and Stratum 4; Stratum 1 represented the lower socioeconomic status and 4 the highest. From the Personal identification component, sex and age characteristics were analyzed. From the questionnaire were considered the data function / body structure, limitations in the activity and restrictions on participation.

The information collected was analyzed using the SPSS software package, version 24 (license from the University). A univariate analysis by absolute and relative frequencies distribution and bivariate analysis by binary logistic regression were performed to determine the relationship between the functional impairments and participation restrictions variables, and functional limitations and participation restrictions on the persons with disabilities from the study. The results are represented in percentages, averages. The Odds Ratio and their 95% confidence intervals (CI) adjusted to age and sex was estimated. A statistical significance of  $p < 0.05$  was obtained.

## RESULTS

Of the 4044, characterized people with disabilities, 55.9% were men, 41.6% were between 15 and 44 years of age,

and 92.9% belonged to the lower socioeconomic stratum. A lower participation in people under 15 years of age was observed (Table 1).

**Table 1.** Baseline characteristics of persons with disabilities

	Frequency	(%)
Gender		
Male	2261	55.9
Female	1783	44.1
Age category		
Under 4 years	140	3.5
5–9 years	191	4.7
10–14 years	254	6.3
15–44 years	1684	41.6
45–64 years	974	24.1
Over 65 years	801	19.8
Socioeconomic stratum		
Low	3756	92.9
High	288	7.1

Table 2 shows the analysis of functional impairments, limitations activities and restrictions for the participation from the general population. A higher frequency (96.6%) of limitations activities is observed in intended sensory experiences, such as distinguishing flavors and smells. Further, 94.9% showed limitations for self-care of their body parts, 93.2% showed limitations for eating and 91.2% had personal hygiene limitations related to excretion processes, such as urination. Regarding restrictions on participation, 99% of persons with disabilities or their caregivers described barriers to accessing non-formal learning activities, 98.6% to public activities, and 97.5% to productive activities. The participation that bore fewer restrictions for persons with disabilities were those organized by friends and family; only 49.4% claimed to have restrictions on these in life situations (Table 2).

Table 3 shows that there is higher participation with friends and family with lower neurological disorders [odds ratio (OR), 0.8; 95% CI, 0.7–0.9]. Subjects with functional impairments of the eyes have 1.3 times more possibilities of being restricted to participate within the community (OR, 1.3; 95% CI, 1.1–1.6) and in religious or spiritual activities (OR, 1.3; 95% CI, 1.1–1.5), whereas functional hearing impairments mean higher restrictions on participation with family and friends (OR, 1.2; 95% CI, 1.1–1.5).

Moreover, people with disabilities who have few impairments in the sensory organs of smell, touch, and taste are less restricted to participate with friends and family (OR, 0.60; 95% CI, 0.4–0.8) and in religious or spiritual activities (OR, 0.5; 95% CI, 0.3–0.8). Table 3 also shows that people with cardiopulmonary disorders have 1.5 times more probability of being restricted to participate in religious or spiritual activities (OR, 1.5; 95% CI, 1.2–2). Having less functional mobility impairments in body,

hands, arms, and legs contributes to higher participation with family and friends (OR, 0.8; 95% CI, 0.7–0.9). Lastly, skin disorders are related to lower participation in formal learning activities (OR, 3.1; 95% CI, 1.2–9.9) (Table 3).

**Table 2.** Frequency of functional impairments, limitations activities and restrictions for the participation of persons with disabilities

Functional impairments	Frequency (%)	Activities limitations	Frequency (%)	Restrictions on participation	Frequency (%)
Neurological	2404 (59.4)	Exercising the power of reason (thinking)	2640 (65.3)	With family and friends	1999 (49.4)
Eyes	3081 (76.2%)	Intended sensory experiences (looking)	3457 (85.5)	With the community	3326 (82.2)
Ears	3446 (85.2)	Intended sensory experiences (listening)	3709 (91.7)	In religious or spiritual activities	3053 (75.5)
Rest of sensory organs (smell, touch, and taste)	3904 (96.5)	Other intended sensory experiences (distinguishing flavors or smells)	3905 (96.6)	In productive activities	3942 (97.5)
Voice and speech	2636 (65.2)	Communication and production (speaking)	2631 (65.1)	In sports or leisure activities	3728 (92.2)
Cardiopulmonary	3682 (91)	Walking and moving (short distances)	3643 (90.1)	In cultural activities	3892 (96.2)
Digestion. Metabolism and hormones	3814 (94.3)	Self-care (eating)	3769 (93.2)	In non-formal learning activities	4005 (99)
Genital and reproductive	3885 (96.1%)	Self-care. Personal hygiene related to excretion processes (urine)	3687 (91.2)	In public activities	3989 (98.6)
Body, hand, arm, and leg mobility	1930 (47.7)	Mobility. Walking and moving (walking, running, and jumping)	2085 (51.6)	–	–
Skin	3876 (95.8)	Self-care (care of body parts)	3837 (94.9)	–	–
–	–	Interactions and interpersonal relationships (interacting with other people and the environment)	3467 (85.7)	–	–
–	–	Mobility. Carrying, moving, and using objects with the hands	3351 (82.9)	–	–
–	–	Mobility. Changing and maintaining body positions	3333 (82.4)	–	–
–	–	Self-care (feeding, washing, and dressing)	3266 (80.8)	–	–

**Table 3.** Relationship between functional impairments and restrictions for the participation of persons with disabilities

Restrictions on participation	With family and friends	With the community	In religious or spiritual activities	In productive activities	In sports or leisure activities	In cultural activities	In non-formal learning activities	In public activities
Functional impairments	OR (CI 95%)	OR (CI 95%)	OR (CI 95%)	OR (CI 95%)	OR (CI 95%)	OR (CI 95%)	OR (CI 95%)	OR (CI 95%)
Neurological	0.8 (0.7–0.9)**	0.9 (0.7–1.1)	0.9 (0.8–1.1)	0.9 (0.5–1.3)	0.8 (0.6–1.0)	1.3 (0.8–1.8)	0.5 (0.2–0.9)*	1.1 (0.6–2)
Eyes	0.9 (0.7–1.1)	1.3 (1.1–1.6)*	1.3 (1.1–1.5)*	0.6 (0.4–1.1)	0.7 (0.5–0.9)*	1.4 (0.8–2.1)	1.9 (0.9–4)	0.7 (0.3–1.4)
Ears	1.2 (1.1–1.5)*	1.1 (0.8–1.4)	0.9 (0.7–1.1)	1.2 (0.7–2.1)	1.6 (1.2–2.2)*	0.6 (0.3–1.1)	0.7 (0.2–1.8)	1.1 (0.5–2.3)
Rest of sensory organs (smell, touch, and taste)	0.60 (0.4–0.8)*	1.1 (0.6–1.8)	0.6 (0.4–1.1)	1.2 (0.3–4.2)	0.2 (0.1–0.8)*	1.7 (0.6–4.8)	0.2 (0.03–2.0)	2 (0.4–9.3)
Voice and speech	1.2 (1.1–1.3)*	0.8 (0.6–0.9)*	0.9 (0.7–1)	0.8 (0.5–1.3)	1.2 (0.9–1.6)	0.8 (0.5–1.3)	0.4 (0.2–1.1)	0.9 (0.4–1.7)
Cardiopulmonary	0.8 (0.6–1.1)	1.1 (0.8–1.5)	1.5 (1.2–2)**	0.8 (0.3–1.7)	0.8 (0.5–1.2)	1.1 (0.5–2)	1.4 (0.5–3.8)	1.1 (0.4–2.6)
Digestion. Metabolism and hormones	0.8 (0.6–1.1)	1.1 (0.8–1.7)	1.1 (0.8–1.5)	0.4 (0.1–1.4)	0.7 (0.4–1.3)	1.7 (0.8–3.3)	0.4 (0.1–3.3)	0.9 (0.2–3.1)
Genital and reproductive	0.8 (0.6–1.2)	0.8 (0.5–1.2)	1.2 (0.8–1.8)	1.7 (0.6–4.5)	0.7 (0.3–1.6)	0.5 (0.1–1.8)	0.8 (0.1–6.5)	0.4 (0.05–3.2)
Bod, hand, arm, and leg mobility	0.8 (0.7–0.9)*	1.1 (0.8–1.2)	0.9 (0.8–1.1)	1.1 (0.6–1.6)	0.9 (0.7–1.2)	1.1 (0.7–1.6)	0.8 (0.4–1.6)	1.4 (0.8–2.5)
Skin	0.8 (0.5–1.2)	1.4 (0.9–2.2)	1.1 (0.7–1.6)	0.3 (0.1–1.4)	0.7 (0.3–1.5)	1.5 (0.6–3.4)	3.1 (1.2–9.9)*	0.9 (0.2–3.4)

\*p<0.05 \*\*p<0.001; OR, odds ratio; CI, confidence interval.

Table 4 reveals that a lower limitation in exercising the power of reason, particularly thinking, can increase participation in activities with family and friends (OR, 0.8; 95% CI, 0.6–0.9), with the community (OR, 0.7; 95% CI, 0.6–0.9), religious or spiritual activities (OR, 0.8; 95% CI, 0.7–0.9), productive activities (OR, 0.4; 95% CI, 0.2–0.8) and public activities (OR, 0.4; 95% CI, 0.2–0.9). The same behavior was observed with the intended sensory experience of seeing; people with disabilities who did report limitations exhibited low participation in religious or spiritual activities (OR, 1.2; 95% CI, 1.1–1.4). Conversely, subjects with speaking limitations have 1.2 times more restrictions to participate in activities with family and friends (OR, 1.2; 95% CI, 1.1–1.4), whereas being able to eat properly facilitates higher participation in activities with family and friends (OR, 0.6; 95% CI, 0.4–0.8).

With regard to self-care activities, limitations for looking after personal hygiene in terms of excretion processes and care of body parts lead to restrictions to participate in sports or leisure activities (OR, 1.6; 95% CI, 1.2–2.3). Conversely, people who stated that they were capable of feeding, washing, and dressing themselves participated to a greater extent in activities with family and friends (OR, 0.7; 95% CI, 0.6–0.9), activities within the community (OR, 0.5; 95% CI, 0.4–0.7), religious or spiritual activities (OR, 0.5; 95% CI, 0.4–0.7), and productive activities (OR, 0.2; 95% CI, 0.1–0.5). Moreover, difficulties interacting with other people and the environment and having interpersonal relationships restrict participation in sport or leisure activities (OR, 1.4; 95% CI, 1.2–1.7). Limitations to carry, move, and use objects with the hands lead to 1.3 times more restrictions to participate in community events (OR, 1.3; 95% CI, 1.1–1.7), whereas not having difficulties to

**Table 4.** Relationship between functional limitations and restrictions for the participation of persons with disabilities

Restrictions on participation	With family and friends	With the community	In religious or spiritual activities	In productive activities	In sports or leisure activities	In cultural activities	In non-formal learning activities	In public activities
Functional limitations	OR (CI 95%)	OR (CI 95%)	OR (CI 95%)	OR (CI 95%)	OR (CI 95%)	OR (CI 95%)	OR (CI 95%)	OR (CI 95%)
Exercising the power of reason (thinking)	0.8 (0.6–0.9)*	0.7 (0.6–0.9)*	0.8 (0.7–0.9)*	0.4 (0.2–0.8)*	0.8 (0.6–1.0)	0.6 (0.4–1.1)	0.9 (0.4–2)	0.4 (0.2–0.9)*
Intended sensory experiences (looking)	1.1 (0.8–1.2)	1.2 (0.9–1.2)	1.2 (1.1–1.4)*	0.9 (0.5–1.7)	0.6 (0.4–1)	1.1 (0.6–1.7)	1.3 (0.3–3.3)	0.7 (0.3–1.7)
Intended sensory experiences (listening)	1.1 (0.8–1.4)	1.1 (0.7–1.4)	0.7 (0.5–1.1)	1.1 (0.5–2.2)	1.2 (0.8–1.8)	0.8 (0.4–1.6)	0.5 (0.1–2.3)	1.3 (0.5–3.2)
Other intended sensory experiences (distinguishing flavors or smells)	0.8 (0.5–1.2)	0.6 (0.3–1.1)	0.8 (0.5–1.4)	1.5 (0.5–4.7)	0.5 (0.2–1.3)	0.4 (0.1–1.8)	1.2 (0.2–6.1)	1.9 (0.4–8.8)
Communication and production (speaking)	1.2 (1.1–1.4)*	0.9 (0.7–1.1)	1.1 (0.8–1.2)	1.1 (0.6–1.6)	1.1 (0.8–1.4)	0.9 (0.6–1.6)	0.8 (0.6–1.6)	1.1 (0.5–2)
Walking and moving (short distances)	0.9 (0.7–1.1)	0.8 (0.6–1.1)	0.9 (0.7–1.1)	0.5 (0.2–1.3)	0.7 (0.4–1.2)	0.6 (0.2–1.2)	0.3 (0.04–2.6)	1.1 (0.4–2.9)
Self-care (eating)	0.6 (0.4–0.8)**	0.9 (0.6–1.3)	0.8 (0.5–1.1)	1.8 (0.8–4.0)	0.5 (0.3–1.1)	1.1 (0.5–2.2)	1.7 (0.5–5.6)	0.6 (0.1–2.9)
Self-care. Personal hygiene related to excretion processes (urine)	0.9 (0.7–1.1)	0.9 (0.6–1.3)	0.9 (0.7–1.3)	1.8 (0.9–3.7)	0.5 (0.2–0.9)*	0.6 (0.2–1.3)	2.4 (0.8–6.9)	0.2 (0.02–1.5)
Mobility. Walking and moving (walking, running, and jumping)	1.1 (0.8–1.2)	1.1 (0.9–1.3)	1.1 (0.9–1.2)	1.2 (0.8–1.9)	0.9 (0.6–1.2)	1.1 (0.7–1.6)	0.5 (0.2–1.1)	1.1 (0.6–2)
Self-care (care of body parts)	1.1 (0.7–1.4)	1.6 (1.2–2.3)*	1.3 (0.9–1.9)	0.8 (0.2–2.3)	1.3 (0.7–2.3)	1.1 (0.5–2.5)	1	0.8 (0.2–3.8)
Interactions and interpersonal relationships (interacting with other people and the environment)	0.8 (0.7–1.1)	0.8 (0.6–1.1)	1.1 (0.8–1.3)	1.1 (0.5–2.3)	1.4 (1.2–2.1)*	1.2 (0.7–2)	0.8 (0.2–2.4)	2.1 (0.9–4.7)
Mobility. Carrying, moving, and using objects with the hands	1.1 (0.8–1.2)	1.4 (1.1–1.7)*	1.1 (0.8–1.3)	1.5 (0.9–2.7)	1.3 (0.9–1.9)	1.1 (0.7–1.9)	1.7 (0.7–4.3)	1.4 (0.6–3.1)
Mobility. Changing and maintaining body positions	0.9 (0.8–1.1)	1.1 (0.7–1.2)	1.1 (0.8–1.3)	0.9 (0.5–1.7)	0.9 (0.6–1.4)	0.9 (0.5–1.5)	0.7 (0.2–2.5)	0.4 (0.1–1.2)
Self-care (feeding, washing, and dressing)	0.7 (0.6–0.9)*	0.5 (0.4–0.7)**	0.5 (0.4–0.7)**	0.2 (0.1–0.5)**	0.6 (0.4–0.8)*	0.8 (0.4–1.3)	0.5 (0.1–1.6)	0.7 (0.3–1.9)

\*p<0.05 \*\*p<0.001; OR, odds ratio; CI, confidence interval.

walk, run, or jump facilitates participation in non-formal learning activities (OR, 0.4; 95% CI, 0.1–0.8) (Table 4).

## DISCUSSION

The results obtained confirm that there is a higher proportion of persons with disabilities male population between 15 and 44 years of age; this distribution is different from the one observed in another study (19), where a higher proportion of disability among women was established. However, the results obtained cancer, HIV, and TB, among others (3). Conversely, an Argentinean study highlighted that 46.9% of the total disability burden in the county is as a result of the increased prevalence of neurological disorders. These authors strongly urge all health authorities, both national and international, to prioritize their actions to prevent neurological disabilities and to have joint efforts to address them in a more efficient manner (23).

It should be noted that the scientific community generally acknowledges the association that exists between neurological disorders and elevated disability, morbidity, and mortality in populations. These disorders have a significant impact on the functioning of the musculoskeletal system, restricting physical and social abilities and the person's overall health (24). In addition, it has been recognized that neurological deficits greatly limit the level of human functioning and the access to different contexts of social participation, in work, educational, medical and leisure environments, among others (25). This statement is consistent with the results obtained in this study, where 97% and 99% of people with disabilities or their caregivers reported restrictions for participating in different educational and public and productive activities, respectively.

Other authors also suggest that functional limitations related to daily-life activities are the most common limitations in most people with any type of disability or severe chronic disease. This is the case for people over 45 years of age diagnosed with degenerative diseases, such as osteoarthritis. They have higher probabilities of developing disability processes related to limitations in getting up from a chair, walking, and climbing up stairs, among others, in comparison with people who do not have these types of diseases (26).

It is important to highlight that, depending on the type of disability and level of severity, the individual will have a specific type of functional limitation, with the resulting restrictions for participating in different family and social activities (27). In this study, people who had visual disabilities had 1.3 times more probabilities of being restricted to participate in community activities, either so-

cial and/or religious, as well as people with hearing or language disabilities, the latter being more restricted in activities with family and friends. These types of impairments result in significant limitations for the people who have them because these organs are the main channels for receiving information and interacting with people and the environment. Therefore, larger efforts are required to help these population groups to adapt to social, work, and daily contexts in order to increase their participation to achieve equal opportunities (28).

Another significant relationship established by this study was the one between cognitive impairment and restrictions on family, community, and work participation, which is evident if we understand that in order to properly develop these roles, it is essential to perform cognitive and thought processes. These will ultimately determine a person's exchange of ideas, performance, and learning (29,30).

Finally, the authors recognize that the current study has some limitations regarding the type of study because we understand that the study's descriptive level cannot prove cause and effect relationships between several variables. Nonetheless, we recognize the need to evaluate other variables related to the barriers in the social environment where persons with disabilities perform their activities, which is possible using other tools already standardized by WHO.

We conclude that there is a close relationship between structural impairment or deficiency and functional limitation with dependence development, and limited familiar, social, and work participation in people with any kind of disability. In line with what other authors have stated, we understand that disabilities go beyond reductionist medical vision and are determined to a greater extent by the existence of environment barriers and structures which are not adapted to the abilities of persons with disabilities, who are subject to marginalization and human-rights violation when these possibilities cannot be found (31). Therefore, this type of study becomes a cornerstone for future intervention studies, where it will be possible to demonstrate the impact of comprehensive rehabilitation processes, expressed through social inclusion of the population with disabilities, with equal opportunities, in such a way, that disability is not a barrier to socioeconomic development and the life project of people with disabilities, their families and communities (32) ♦

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