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Functional Disability Among Disadvantaged Mexican Children With Mental Disorders Seeking Treatment: Differences by Gender and Diagnosis

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ABSTRACT

Introduction: Disability is a primary predictor of the need for healthcare and services, yet it is not commonly evaluated.

Aim: To analyze the functional disability of children with mental disorders based on gender and diagnosis.

Methods: A cross-sectional study was conducted in two psychiatric hospitals specializing in child and adolescent mental health in Mexico. The "WHODAS 2.0 adapted for children" questionnaire was administered to a total of 397 dyads ($n = 794$) to measure functioning. T-tests and analysis of variance were used to compare means between groups (sex and diagnosis) and variables within each domain of functioning.

Results: Girls reported greater global dysfunction compared to boys (girls $\bar{X} = 33.72$, boys $\bar{X} = 30.43$, SE = 1.57, $p < 0.05$), particularly in the domain of mobility. Conversely, boys exhibited greater disability in the domain of life activities (domestic and school). Depressive disorder (DD) was associated with worse functioning in the domains of social participation and interpersonal interactions, whereas hyperactivity disorder (HD) was associated with greater disability in the domain of life activities (domestic).

Conclusions: The level of functional disability varies by gender and diagnosis, highlighting the need for tailored interventions based on these perspectives.

1 | Introduction

Globally in 2019, 293 millions out of 2.516 million individuals aged 5–24 years had at least 1 mental disorder (MD), and 31 million had an substance use disorders (SUDs). The mean prevalence was 11.63% for MD and 1.22% for SUDs (Kieling et al. 2024). The peak age of onset for mental health disorders is 14.5 years, with 48.4% of cases occurring before the age 18 years, and 13.4% of children and adolescents experiencing serious mental health challenges at some point (Farrell et al. 2024). Adverse childhood experiences affect more than 50% of children and predispose them to academic and behavioral problems throughout their youth, as well as future physical disability (Shatkin 2019).

The Global Burden of Disease (GBD) study 2021 for Mexico reported that MD significantly contribute to Disability-Adjusted Life Years (DALYs) in children and adolescents. Among both sexes, MD ranked first in the 5–14 age group, with 1033 DALYs

per 100,000. In the 10–24 age group, MD ranked second, with 2135 DALYs per 100,000, just behind self-harm and violence (2281 DALYs per 100,000). Across all ages and both sexes, MD ranked sixth, with 2173 DALYs per 100,000, while self-harm and violence ranked seventh, with 2589 DALYs per 100,000 (Institute for Health Metrics and Evaluation IHME 2025). The impact of these disorders on the burden of disease in children ages 5–14 appears higher in the Americas and Europe (Baranne and Falissard 2018).

Nevertheless, adolescents and young adults are less likely to seek professional help or access to specialized mental healthcare. This presents a significant obstacle, as the absence of treatment or inadequately treated MD is associated with impairments in both short-term and long-term functional well-being. Additionally, children are disproportionately affected by poverty, which increases their risk for mental health disorders and decreases their access to mental healthcare services. These multifaceted risk factors create barriers to accessing mental healthcare (Glomb and Grupp-Phelan 2020). This gap in access not only exacerbates mental health problems but also the associated functional impairment.

The degree of disability in an individual can be reduce not only through interventions aimed at treating psychopathological symptoms but also through measures designed to prevent and/or modifying functional impairment. Such measures include the early identification of child and adolescent mental health problems and the implementation of evidence-based interventions to address these challenges and their consequences (Ribeiro et al. 2023). In Mexico, as in other countries, MD in children and adolescents are among the leading causes of years lived with disability. However, there is limited information and scientific evidence on the degree of functional impairment.

According to the International Consortium for Health Outcomes Measurement (ICHOM), functioning is part of the final standard set of seven primarily patient-reported outcome measures when tracking mental health (Krause et al. 2021). The construct of functioning refers to how the child engages in typical activities and manages the demands of their role, aligned with age-specific sociocultural norms. Within the conceptual framework of the WHO's International Classification of Functioning, Disability and Health for Children and Youth, the WHODAS 2 is a disability and functioning assessment adapted from the adult version specifically for use in children, particularly in low- and middle-income countries (LMICs) (Scorza et al. 2013).

Given the rising prevalence and significant impact of mental disorders among children and adolescents, this study aims to analyze the functional disability associated with these conditions among children receiving specialized mental healthcare services in Mexico. By examining differences by gender and diagnosis, this research seeks to provide insights that could inform targeted interventions and policy changes.

2 | Materials and Methods

2.1 | Setting

The study was conducted in two mental health facilities that provide outpatient and inpatient services for low-income children and adolescents in Mexico: the National Institute of Psychiatry and the Children's Psychiatric Hospital. Both hospitals offer outpatient and inpatient services for low-income populations without social security, as well as surrogate services for adolescents in need of hospitalization who are in the social security system (Márquez-Caraveo et al. 2017). A total of 397 dyads ($n = 794$), each child and their primary caregiver receiving psychiatric care from January 2018 to February 2020, participated.

2.2 | Study Design

A cross-sectional study was conducted, with data collected through a survey method and organized in a database for further analysis. The protocol was approved by the Ethics and Investigation Committee of both hospitals. During the study, the primary caregivers of children receiving medical care were identified and provided with accurate information about the study. All participants agreed to participate and signed an informed consent form.

2.3 | Study Sample

Children of both sexes, aged 5–18, receiving mental healthcare services in two psychiatric hospitals, were selected for the study. Additionally, those with a primary caregiver who agreed to participate were included. A probabilistic sample calculation was performed to estimate a proportion for a finite population, with a 95% confidence interval (Daniel 1999). The sample size for this study was determined using hospital outpatient statistics from the previous year. The finite sample formula was employed, considering a confidence level (Z) of 1.96, a desired attribute prevalence (p) of 15%, a prevalence of the population without the desired attribute (q) of 85%, a maximum accepted estimation error (e) of 3%, and a universe size (N) of 732. Applying these parameters, the calculated sample size (n) was initially 312. To accommodate for potential losses, the sample size was adjusted by 10%, resulting in a final sample size of 347. To collect the sample, a simple randomization method was utilized, specifically selecting one user care record randomly from every three records in the outpatient services of each hospital. This approach ensured a representative sample from the outpatient population under study.

2.4 | Instruments and Study Variables

2.4.1 | *Sociodemographic Variables/Diagnosis*

Key variables included age, sex, level of schooling, years of education completed, marital status, occupation, and health coverage status. The diagnosis was conducted by a certified child psychiatrist providing care and was documented in the most recent clinical note. This note reflected the current status of the child or adolescent and coincided with the functioning assessment. Diagnoses were based on the International Classification of Diseases, 10th Revision (ICD-10) (World Health Organization 2004) and were aligned with clinical guidelines adapted to the Mexican healthcare context.

2.4.2 | *Questionnaire WHODAS 2.0*

The level of functionality and limitations in activities and participation were assessed using an adapted version of the

WHODAS 2.0 tailored for children (Hamdani et al. 2020). The WHODAS 2.0 is developed and validated in alignment with the International Classification of Functionality (ICF), Disability, and Health (World Health Organization 2015). This multidimensional scale evaluates various domains of an individual's health status, including: (1) Cognition: Understanding and communication, (2) Mobility: Movement and displacement, (3) Self-care: Hygiene, dressing, eating, and managing alone, (4) Social relationships: Interactions with others, (5) Activities of life: Domestic responsibilities, leisure, work, and school, and (6) Participation: Engagement in community activities. The questionnaire utilizes a Likert scale ranging from 1 ("no difficulty") to 5 ("extreme difficulty"). The psychometric properties of WHODAS 2.0 demonstrate strong reliability, with a high internal consistency index for the total scale ($\alpha = 0.92$). Dimension-specific reliability indices include: Activities of Daily Living-School ($\alpha = 0.93$), Activities of Daily Living-Home ($\alpha = 0.91$), Cognition ($\alpha = 0.78$), Mobility and Self-Care ($\alpha = 0.75$), Getting Along ($\alpha = 0.83$), and Participation ($\alpha = 0.75$). Evidence supporting the convergent validity of WHODAS 2.0 scores with clinical variables has also been reported (Díaz-Castro et al. 2024).

2.5 | Procedure for Data Collection and Analysis

To achieve the study's objectives, fieldwork was conducted in the outpatient services of two psychiatric hospitals. The interviewers, who were two graduate students specializing in public mental health, underwent thorough training on the use of the WHODAS 2.0 and the principles of the International Classification of Functioning, Disability, and Health (ICF). This training aimed to standardize data collection and reduce response variability.

The WHODAS 2.0 instrument was adapted for use with children and parents, with children responding in the presence of a caregiver who validated their answers (Díaz-Castro et al. 2024). To facilitate comprehension, color-coded cards were used, allowing children to visually identify response options ranging from light to dark red.

A list of patients eligible for the study was obtained, and participants were selected using a simple random sampling method. The primary caregivers of the selected children were identified, invited to participate, and provided with detailed and accurate information about the study. All participants gave their informed consent to participate. Additionally, minors aged 12 years or older provided informed assent. Interviews were conducted with the primary caregivers of children under 12 years old, while adolescents aged 12–18 participated directly. All participants were active users of the mental health services provided by the hospitals.

Responses provided by children under 12, facilitated through the card procedure and validated by their caregivers, as well as responses obtained directly from adolescents through trained interviewers, formed the basis for data collection and analysis. The 36-item version of WHODAS 2.0 was administered in written format to assess functioning over the previous 30 days among children and adolescents who regularly attended the mental health facility. The administration process, involving both primary caregivers and children, was designed to ensure accuracy and took approximately 30 min to complete. Data collected was immediately entered into Access computer software, using an SQL database for further analysis.

2.6 | Statistical Analysis

Statistical analyses were performed to evaluate the variables and indicators outlined in the study instruments. Descriptive statistics, including frequency distributions and measures of central tendency and variability (mean deviation and standard deviation), were applied to all variables.

Inferential statistics, such as T-tests and analyses of variance (ANOVA), were utilized to assess differences in means among variables and indicators. Specifically, differences in WHODAS scores between boys and girls were evaluated using T-tests. Effect sizes were calculated using Cohen's d to provide additional context for the observed differences (Rendón-Macías et al. 2021). All analysis were conducted using SPSS statistic software version 25.

2.7 | Ethical Approval

The study protocol was reviewed and approved by the Ethics and Investigation Committee of the two psychiatric hospitals involved, under the following registrations: II3/02/0917 and CEI/C/073/2079.

3 | Results

3.1 | Sample Characteristics

The study sample included 397 children and their respective 397 primary caregivers, all receiving specialized mental health services (SMHS). Among the caregivers, 95% were women, with mothers fulfilling the caregiving role in 84% of cases. The caregivers had an average age of 41 years (SD = 9.2) and a mean education level of 11.7 years of schooling (SD = 3.3). Regarding their primary occupations, 42.8% were engaged in household activities, followed by 28% who were self-employed and 23.4% in formal employment.

3.2 | Child Participants

The study included 397 children and adolescents, of whom 63% were boys ($n = 250$). Among the participants, 83% identified Mexico City as their place of origin. Regarding living arrangements, 92% ($n = 365$) reported residing with their parents, while 6% ($n = 24$) lived with their grandparents. A further 1.5% ($n = 6$) lived with a sibling, and the remaining 0.6% ($n = 2$) reported living with other relatives.

Table 1 summarizes the generic diagnoses categorized according to ICD-10. Hyperkinetic disorders (HD and depressive disorders (DD) were selected for this analysis, as they accounted for 85% of the total demand for psychiatric care. Specifically, HD constituted 51% ($n = 203$) of cases, while DD represented 34% ($n = 135$). Additionally, Table 1 includes a comparison of sociodemographic characteristics by sex among the 397 children in the study.

TABLE 1 | Children´s sociodemographic characteristics by sex, México 2020.

Characteristic	Female	Male	Hypothesis test
Age (mean, SD)	$\bar{X}$ =13.8, SD = 3.3	$\bar{X}$ =11.2, SD = 3.5	$T = 7.34$***
Education years (mean, S.D.)	$\bar{X}$ =7.6, SD = 3.4	$\bar{X}$ =4.8, SD = 3.5	$T = 7.53$***
Scholarship (% total)			$X^2 = 26.6$*
No study	0 (0)	1 (0.3)	
Early childhood education	3 (0.8)	9 (2.3)	
Primary education	51 (13)	147 (37)	
Lower secondary education	90 (23)	89 (22)	
Upper secondary education	3 (0.8)	3 (0.8)	
Occupational activity (% total)			$X^2 = 12.6$*
Student	125 (32)	237 (60)	
Inactivity due to health issues	12 (3.0)	6 (1.5)	
At-home activities (household)	2 (0.5)	3 (0.8)	
Self-employed	1 (0.3)	1 (0.3)	
Other	5 (1.3)	2 (0.5)	
Diagnosis (% total)			$X^2 = 77.4$***
Personality disorders	2 (0.5)	0 (0.0)	
Anxiety disorders	23 (5.8)	8 (2.0)	
Depressive disorders	68 (17.1)	67 (17.0)	
Bipolar disorders	2 (0.5)	0 (0.0)	
Schizophrenia	0 (0.0)	1 (0.3)	
Other psychotic disorders	0 (0.0)	2 (0.5)	
Unspecific mental disorders	6 (1.5)	1 (0.3)	
Hyperkinetic disorders	39 (9.8)	164 (41.3)	
Disocial behavioral disorders	3 (0.8)	1 (0.3)	
Psychoactive substance use disorders	0 (0.0)	1 (0.3)	
Asperger	0 (0.0)	2 (0.5)	

Note: Female $N = 147$ (37%). Male $N = 250$ (63%).
*$p < 0.05$; **$p < 0.01$; ***$p < 0.000$.

3.3 | Functionality Measurement Using WHODAS 2

The evaluation of internal consistency for the adapted version of WHODAS for children in this study revealed a global Cronbach's alpha coefficient of 0.92. Variability was observed across the six dimensions, with reliability scores ranging from $\alpha = 0.64$ for the Self-care dimension to $\alpha = 0.89$ for the Activities of Life dimension.

3.3.1 | *Functionality Levels and Gender Comparisons*

The overall functionality measurement of the sample revealed a functionality level of 68.35%, indicating a global dysfunction rate of 31.65%. To evaluate differences in means by gender and diagnosis, normality assumptions were assessed prior to conducting T-tests. The results indicated that girls exhibited significantly greater dysfunction compared to boys, with mean scores of 33.72 for girls and 30.43 for boys (SE = 1.57, $p < 0.05$).

3.3.2 | *Gender Differences Across Domains*

When analyzed by domain, statistically significant gender differences were observed in several dimensions. In Domain 2 (Mobility), girls reported a mean score of 23.00 compared to 17.73 for boys (SE = 2.03, $p < 0.05$). For Domain 4 (Getting Along), the mean score for girls was 33.79, significantly higher than the 25.83 reported for boys (SE = 2.53, $p < 0.01$).

In the dimension of Domain 5.1 (Life Activities: Domestic), boys demonstrated better functionality with a mean score of 47.03, compared to 41.56 for girls (SE = 2.71, $p < 0.05$). Additionally, significant differences were observed in Domain 6 (Social Participation), where girls scored a mean of 40.50, while boys scored 34.87 (SE = 2.19, $p < 0.05$).

3.3.3 | *Effect Sizes and Table Reference*

Table 2 presents the WHODAS 2.0 dysfunctionality measurements by gender. Cohen's d values suggested small to moderate effect sizes, particularly in the domains of Mobility, Getting Along, and Life Activities. For further details, refer to Table S1.

Similarly, An analysis focusing on the two primary diagnoses identified in the study sample revealed significant differences in specific domains of functioning.

TABLE 2 | Dysfunctionality measurement through the WHODAS 2.0 by sex, Mexico, 2020.

Domain (Do) of functionality	N	Sex	Mean	t	df	Sig. (2-tailed)	Mean Difference	SE	95% CI LL	95% CI UL
Do1 Cognition	147	Female	37.86	0.99	311	0.322	1.97	1.99	−1.94	5.90
	250	Male	35.88							
Do2 Mobility	147	Female	23.00	2.59	278	0.010	5.27	2.03	1.26	9.28
	250	Male	17.73							
Do3 Self-care	147	Female	18.37	0.04	327	0.965	0.08	2.00	−3.85	4.03
	250	Male	18.28							
Do4 Getting along	147	Female	33.79	3.13	281	0.002	7.95	2.53	2.95	12.95
	250	Male	25.83							
Do5 1 Life activities: domestic	147	Female	41.56	−2.01	325	0.045	−5.46	2.71	−10.80	−0.17
	249	Male	47.03							
Do5 2 Life activities: school or work	147	Female	33.28	−1.89	316	0.059	−5.25	2.77	−10.71	0.20
	250	Male	38.54							
Do6 Social participation	147	Female	40.50	2.65	274	0.011	5.63	2.19	1.30	9.96
	250	Male	34.87							
Global WHODAS 2.0	147	Female	33.72	2.08	285	0.038	3.28	1.57	0.18	6.39

Abbreviations: CI, confidence interval; LL, lower limit; SE, standard error; UL, upper limit.

3.3.4 | *Domain 4 (Getting Along)*

Participants with depressive disorders (DD) demonstrated a higher mean dysfunction score ($\bar{X} = 30.56$) compared to those with hyperkinetic disorders (HD) ($\bar{X} = 24.71$, SE = 2.58, $p < 0.05$).

3.3.5 | *Domain 5.1 (Life Activities: Domestic)*

Those with hyperkinetic disorders reported significantly lower levels of dysfunction ($\bar{X} = 49.25$) compared to participants with depressive disorders ($\bar{X} = 40.96$, SE = 2.90, $p < 0.01$).

Domain 6 (Social Participation): Participants with depressive disorders exhibited greater dysfunction ($\bar{X} = 39.38$) compared to those with hyperkinetic disorders ($\bar{X} = 32.73$, SE = 2.19, $p < 0.01$).

For further details, refer to Table 3.

3.3.6 | *Loss of Functioning and Daily Activities*

The loss of functioning was reflected in the number of days children perceived themselves unable to carry out their daily activities. On average, children reported experiencing 10 days of difficulty. However, when analyzing the days they completely ceased their daily activities, boys reported a higher mean number of days compared to girls (boys: $\bar{X} = 8.06$, SD = 10.3; girls: $\bar{X} = 6.79$, SD = 9.32). Detailed comparisons can be found in Table 4.

3.3.7 | *Differences by Diagnosis*

The number of days children ceased their daily activities also varied by diagnosis, as shown in Table 4. Children diagnosed with hyperkinetic disorders (HD) reported a greater mean number of affected days ($\bar{X} = 8.88$, SD = 10.85) compared to children with depressive disorders (DD), who reported a lower mean of 6.21 days (SD = 8.90). This difference was statistically significant ($p < 0.001$).

4 | Discussion

The findings of this empirical study provide meaningful insights into the functional impairments experienced by children with mental disorders who are receiving specialized services. Notably, the results highlight gender-based differences in functional difficulties. Girls demonstrated higher levels of dysfunction in mobility, whereas boys exhibited greater challenges in performing life activities. Furthermore, depressive disorders were found to significantly impact social participation, while hyperkinetic disorders predominantly affected domestic activities.

Significant gender-based differences were identified across several functional domains, including Mobility, Getting Along, Domestic Life Activities, Social Participation, and overall Global WHODAS scores. Females exhibited higher levels of dysfunctionality across most domains, with the exception of Domestic Life Activities, where males demonstrated greater dysfunction. These findings are consistent with previous research, which highlights that females tend to experience greater delays compared to males in recognizing psychiatric symptoms, seeking help, and initiating contact with specialized mental health services (Diaz-Castro et al. 2023).

Gender-sensitive approaches are crucial for understanding the impact of disability on children with mental disorders. The higher levels of global and mobility-related dysfunction observed in girls may be attributed to additional barriers arising from gender norms that limit their autonomy (Miranda 2013). Conversely, boys tend to show greater impairment in domestic and school activities, likely due to socially imposed expectations regarding performance and discipline, which adversely affect their functional well-being (Cova S. et al. 2005). These findings underscore the importance of incorporating gender-sensitive preventive and

TABLE 3 | Dysfunctionality measurement through the WHODAS 2.0 by diagnosis, Mexico, 2020.

Domain (Do) of functionality	Diagnosis	N	Mean	t	df	Sig. (2-tailed)	Mean Difference	SE	95% CI	
									LL	UL
Do1 Cognition	Depressive disorder	135	33.96	−1.59	298	0.112	−3.35	2.10	−7.49	0.78
	Hyperkinetic disorder	203	37.32							
Do2 Mobility	Depressive disorder	135	20.79	0.73	290	0.467	1.54	2.11	−2.62	5.71
	Hyperkinetic disorder	203	19.24							
Do3 Self-care	Depressive disorder	135	19.56	0.60	303	0.549	1.32	2.21	−3.02	5.68
	Hyperkinetic disorder	203	18.23							
Do4 Getting along	Depressive disorder	135	30.56	2.26	287	0.025	5.84	2.58	0.75	10.93
	Hyperkinetic disorder	203	24.71							
Do5 1 Life activities: domestic	Depressive disorder	135	40.96	−2.86	298	0.005	-0.29	2.90	14.00	−2.58
	Hyperkinetic disorder	203	49.26							
Do5 2 Life activities: school or work	Depressive disorder	135	34.29	−1.29	294	0.197	−3.82	2.95	−9.64	1.99
	Hyperkinetic disorder	203	38.11							
Do6 Social participation	Depressive disorder	135	39.38	3.03	280	0.003	6.64	2.19	2.32	10.96
	Hyperkinetic disorder	203	32.74							
Global WHODAS 2.0	Depressive disorder	135	31.84	0.79	291	0.429	1.29	1.63	−1.92	4.52

Abbreviations: CI, confidence interval; LL, lower limit; SE, standard error; UL, upper limit.

TABLE 4 | Activity days lost per month in children with mental disorders, by sex and diagnosis México, 2020.

Lost days indicator[a]	Sex	Mean	Standard deviation	T-test	Significance	Diagnosis	Mean	Standard deviation	T-test	Significance
Days children stopped doing daily activities	Male	8.06	8.90	1.22	0.051	Depressive disorder	6.21	8.90	−2.37	0.001
	Female	6.79	10.85			Hyperkinetic disorder	8.88	10.85		
Days that child perceived difficulty in doing their daily activities	Male	9.52	10.42	−0.38	0.289	Depressive disorder	9.46	9.50	0.42	0.156
	Female	9.93	9.82			Hyperkinetic disorder	8.99	10.43		
Days children were absent from school	Male	3.36	6.39	0.09	0.304	Depressive disorder	3.63	6.36	1.4	0.305
	Female	2.78	5.66			Hyperkinetic disorder	2.69	5.72		

[a]Children's perception of the affectation in their level of daily functioning in 1 month, measured in days.

therapeutic strategies to promote equitable care. Addressing the unique needs of each group can help reduce inequalities and improve mental health outcomes among children.

Hyperkinetic disorders (HD), primarily encompassing attention deficit hyperactivity disorder (ADHD), emerged as the most prevalent mental condition within our study sample. This finding aligns with existing literature on children and adolescents (Dahl et al. 2020). Depressive disorders (DD) were identified as the second most prevalent diagnosis, contrasting with findings from a study conducted at a pediatric tertiary care center in Canada, where generalized anxiety was reported as slightly more prevalent than DD (Dol et al. 2022). This discrepancy may be attributed to lower rates of mental health service utilization among Mexican youth.

Early-stage depression, persisting into childhood or adolescence, has been linked to elevated risks of adult anxiety, illicit drug use, and poorer health, criminal, and social functioning outcomes (Copeland et al. 2021). These associations underscore the critical need for early identification and intervention in cases of childhood depression. In our study, DD was particularly associated with poorer functioning in social domains, including Getting Along and Social Participation. These findings highlight the importance of addressing the social impacts of depressive disorders during childhood and adolescence to mitigate long-term consequences.

This study's significance lies in its evaluation of the degree to which various domains of functional disability are affected in children with depressive disorders (DD) and hyperkinetic disorders (HD). Disability remains a primary predictor of healthcare and service needs; however, it is not routinely assessed in this population (Martínez Taboas et al. 2017). Moreover, there are no established standards or thresholds for evaluating disability in these groups (Konecky et al. 2014).

While functional capacity parameters are universally impacted in this population, the degree of disability varies by gender. Girls demonstrated higher levels of disability specifically in mobility-related domains, whereas boys exhibited significant impairments across all domains, with particular severity in life activities.

The clinical implications for the care of children and adolescents with mental disorders in Mexico point to the need for gender-sensitive approaches. Girls, who show stronger functionality in autonomy, may benefit from therapeutic interventions focusing on emotional regulation and enhanced social support. Conversely, boys, who excel in school-related activities, would benefit from interventions aimed at strengthening emotional intelligence and coping mechanisms within educational settings.

Dysfunction was more pronounced in cases of depressive disorder (DD), which helps explain the higher Global Burden of Disease (GBD) associated with DD in youth. Its high prevalence and early onset often lead to delays in identification and treatment. Consequently, depression significantly contributes to lifelong functional disability, marked by recurring episodes and persistent impairments, despite the greater demand for care observed in cases of hyperkinetic disorders (HD) (Davey and McGorry 2019).

This issue is particularly pronounced in low- and middle-income countries (LMICs) such as Mexico, where early identification and intervention during the initial stages of mental

disorders (MD) in childhood can alter the clinical trajectory, prevent chronicity, and reduce dysfunctionality. Lu et al. (2018) analyzed development assistance for child and adolescent mental health (DAMH_CA) across 132 developing countries between 2007 and 2015. Their findings revealed that such assistance constituted only a small fraction of total mental health and health aid in these nations, emphasizing the urgent need for greater investment in this area.

Ensuring access to care for children and adolescents with mental disorders remains a significant challenge in LMICs, underscoring the importance of addressing resource allocation and prioritizing early interventions.

The findings of this study underscore that the high prevalence of dysfunctionality among children with mental disorders constitutes a significant public health issue. Despite its critical importance, standardized tools for evaluating psychopathology and functional levels in children and adolescents are often underutilized. Systematic evaluations, when implemented, play a pivotal role in identifying and diagnosing additional problems in children, contributing to more comprehensive care strategies (Sheldrick et al. 2023).

Children in low- and middle-income countries (LMICs) face a complex array of challenges that heighten their vulnerability to mental health disorders. Poverty remains a widespread issue, with many families struggling to meet basic needs, which significantly impacts children's mental well-being. Additionally, limited access to healthcare services, including specialized mental healthcare, results in many children with mental disorders remaining undiagnosed and untreated. The pervasive social stigma surrounding mental health further discourages families from seeking assistance, compounding the issue.

These interconnected factors contribute to the higher prevalence and severity of mental health problems among children in LMICs. This reality underscores the pressing need for targeted research and interventions to address these challenges effectively (Patel et al. 2018).

4.1 | Limitations

This study is limited to the characteristics of boys and girls who received specialized psychiatric care in Mexico, and the findings may not be generalizable to other countries or contexts. Furthermore, the results do not include data on patients who did not access specialized mental health services.

The scope of this study focused on the two most prevalent diagnoses among care-seeking populations, thereby excluding less common conditions, such as anxiety disorders. Additionally, the analysis did not consider comorbidities, which further limits the comprehensiveness of the findings.

A notable limitation of this study is the omission of key confounding variables that could influence the relationship between mental disorders and functional disability in children. Factors such as variations in treatment modalities, adherence rates, and the effectiveness of interventions may significantly impact the severity and progression of functional impairments. This concern is particularly pertinent in the Mexican context, where access to mental healthcare—especially high-quality and effective treatment—remains constrained.

Several systemic challenges contribute to these limitations, including the concentration of mental health services in urban centers, inadequate infrastructure, poor detection of mental health symptoms and functional impairments, limited understanding of the long-term consequences of mental disorders, and insufficient resources for mental health services (Ramírez-Bermúdez 2023). Future research should aim to explore the longitudinal relationships between WHODAS scores and clinical outcomes, providing deeper insights into these complex dynamics.

5 | Conclusion

The findings of this study underscore gender-specific patterns of functional impairment and the distinct effects of depressive and hyperactivity disorders on daily life. Girls were found to exhibit greater global dysfunction, particularly in mobility, while boys faced more significant challenges in life activities. Depressive disorders were associated with difficulties in social participation and interpersonal relationships, whereas hyperactivity disorders predominantly impacted domestic life activities.

These results emphasize the necessity of tailored interventions designed to address the unique needs of each group and enhance overall functioning. When functional impairments are effectively identified and treated, they can lead to improved mental health, better educational and vocational outcomes, and an increased ability to contribute positively to society—ultimately fostering a fulfilling and productive life trajectory.

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Data Availability Statement

The data that support the findings of this study are available on request from the corresponding author. The data are not publicly available due to privacy or ethical restrictions.

References

Baranne, M. L., and B. Falissard. 2018. "Global Burden of Mental Disorders Among Children Aged 5–14 Years." *Child and Adolescent Psychiatry and Mental Health* 12: 19. https://doi.org/10.1186/s13034-018-0225-4.

Copeland, W. E., I. Alaie, U. Jonsson, and L. Shanahan. 2021. "Associations of Childhood and Adolescent Depression With Adult Psychiatric and Functional Outcomes." *Journal of the American Academy of Child and Adolescent Psychiatry* 60, no. 5: 604–611. https://doi.org/10.1016/j.jaac.2020.07.895.

Cova S., F., M. Valdivia P., and C. Maganto M. 2005. "Diferencias de género en psicopatología en la niñez: Hipótesis explicativas." *Revista Chilena de Pediatría* 76, no. 4: 418–424. https://doi.org/10.4067/S0370-41062005000400008.

Dahl, V., A. Ramakrishnan, A. P. Spears, et al. 2020. "Psychoeducation Interventions for Parents and Teachers of Children and Adolescents With ADHD: A Systematic Review of the Literature." *Journal of Developmental and Physical Disabilities* 32, no. 2: 257–292. https://doi.org/10.1007/s10882-019-09691-3.

Daniel, W. W. 1999. *Biostatistics: A Foundation for Analysis in the Health Sciences* (7th ed.). John Wiley & Sons, Inc.

Davey, C. G., and P. D. McGorry. 2019. "Early Intervention for Depression in Young People: A Blind Spot in Mental Health Care." *Lancet Psychiatry* 6, no. 3: 267–272. https://doi.org/10.1016/S2215-0366(18)30292-X.

Díaz-Castro, L., M. Arroyo-Belmonte, P. Suárez-Brito, M. E. Márquez-Caraveo, and C. Garcia-Andrade. 2024. "Validation of the World Health Organization's Disability Assessment Schedule 2.0 for Children With Mental Disorders in Specialized Health-Care Services." *Frontiers in Psychiatry* 15: 1415133.

Diaz-Castro, L., K. Hoffman, M. E. Marquez-Caraveo, and H. Cabello-Rangel. 2023. "Mental Health Needs and Accessing Specialised Healthcare in Mexican Children With Mental Disorders: Gender- and Diagnosis-Dependent Differences." *BJPsych Open* 9, no. 6: e219. https://doi.org/10.1192/bjo.2023.604.

Dol, M., M. Reed, and M. A. Ferro. 2022. "Internalizing-Externalizing Comorbidity and Impaired Functioning in Children." *Children (Basel, Switzerland)* 9, no. 10: 1547. https://doi.org/10.3390/children9101547.

Farrell, A. H., P. Szatmari, and T. Vaillancourt. 2024. "Epidemiology of Mental Health Challenges in Children and Adolescents." *Pediatric Clinics of North America* 71, no. 6: 999–1011. https://doi.org/10.1016/j.pcl.2024.07.009.

Glomb, N. W., and J. Grupp-Phelan. 2020. "A Call to Action to Address Disparities in Pediatric Mental Health Care." *Pediatrics* 146, no. 4: e2020018911. https://doi.org/10.1542/peds.2020-018911.

Hamdani, S. U., Z.-E. Huma, L. Wissow, A. Rahman, and M. Gladstone. 2020. "Measuring Functional Disability in Children With Developmental Disorders in Low-Resource Settings: Validation of Developmental Disorders-Children Disability Assessment Schedule (DD-CDAS) in Rural Pakistan." *Global Mental Health (Cambridge, England)* 7: e17. https://doi.org/10.1017/gmh.2020.10.

Institute for Health Metrics and Evaluation (IHME). 2025. *Global Burden of Diseases (GBD) 2021. GBD Compare Data Visualization*. IHME, University of Washington. http://vizhub.healthdata.org/gbd-compare/.

Kieling, C., C. Buchweitz, A. Caye, et al. 2024. "Worldwide Prevalence and Disability From Mental Disorders Across Childhood and Adolescence: Evidence From the Global Burden of Disease Study." *JAMA Psychiatry* 81, no. 4: 347–356. https://doi.org/10.1001/jamapsychiatry.2023.5051.

Konecky, B., E. C. Meyer, B. P. Marx, N. A. Kimbrel, and S. B. Morissette. 2014. "Using the WHODAS 2.0 to Assess Functional Disability Associated With DSM-5 Mental Disorders." *American Journal of Psychiatry* 171, no. 8: 818–820. https://doi.org/10.1176/appi.ajp.2014.14050587.

Krause, K. R., S. Chung, A. O. Adewuya, et al. 2021. "International Consensus on a Standard Set of Outcome Measures for Child and Youth Anxiety, Depression, Obsessive-Compulsive Disorder, and Post-Traumatic Stress Disorder." *Lancet Psychiatry* 8, no. 1: 76–86. https://doi.org/10.1016/S2215-0366(20)30356-4.

Lu, C., Z. Li, and V. Patel. 2018. "Global Child and Adolescent Mental Health: The Orphan of Development Assistance for Health." *PLoS Medicine* 15, no. 3: e1002524. https://doi.org/10.1371/journal.pmed.1002524.

Márquez-Caraveo, M. E., E. Arroyo-García, A. Granados-Rojas, and A. Ángeles-Llerenas. 2017. "Hospital Psiquiátrico Infantil Dr. Juan N." In *Navarro: 50 años de atención a la salud mental de niños y adolescentes en México* (59, 477–484. Salud Pública de México).

Martínez Taboas, A., E. Medina Sustache, D. Y. González Díaz, et al. 2017. "El WHODAS 2.0 en Puerto Rico: Psicometría y su relación con la escala de evaluación de actividad global con pacientes psiquiátricos." *Salud & Sociedad* 8, no. 1: 82–93. https://doi.org/10.22199/S07187475.2017.0001.00006.

Miranda, M. 2013. "Discapacidad y perspectiva de género." *MEDIC* 21, no. 2: 36–45. https://doi.org/10.4067/S0370-41062005000400008.

Patel, V., S. Saxena, C. Lund, et al. 2018. "The Lancet Commission on Global Mental Health and Sustainable Development." *Lancet* 392, no. 10157: 1553–1598. https://doi.org/10.1016/S0140-6736(18)31612-X.

Ramírez-Bermúdez, J. 2023. "The Multifaceted Problem of Mental Health in Mexico: Challenges and Perspectives." *BMJ Leader*. https://blogs.bmj.com/bmjleader/2023/12/21/the-multifaceted-problem-of-mental-health-in-mexico-challenges-and-perspectives-by-professor-jesus-ramirez-bermudez/.

Rendón-Macías, M. E., I. S. Zarco-Villavicencio, and M. Á. Villasís-Keever. 2021. "Métodos estadísticos para el análisis del tamaño del efecto." *Revista Alergia México* 68, no. 2: 128–136. https://doi.org/10.29262/ram.v658i2.949.

Ribeiro, W. S., A. J. Grande, M. S. Hoffmann, et al. 2023. "A Systematic Review of Evidence-Based Interventions for Child and Adolescent Mental Health Problems in Low- and Middle-Income Countries." *Comprehensive Psychiatry* 121: 152358. https://doi.org/10.1016/j.comppsych.2022.152358.

Scorza, P., A. Stevenson, G. Canino, et al. 2013. "Validation of the "World Health Organization Disability Assessment Schedule for Children, WHODAS-Child" in Rwanda." *PLoS One* 8, no. 3: e57725. https://doi.org/10.1371/journal.pone.0057725.

Shatkin, J. P. 2019. "Mental Health Promotion and Disease Prevention: It's About Time." *Journal of the American Academy of Child and Adolescent Psychiatry* 58, no. 5: 474–477. https://doi.org/10.1016/j.jaac.2019.01.012.

Sheldrick, R. C., S. Marakovitz, D. Garfinkel, E. C. Perrin, and A. S. Carter. 2023. "Prevalence and Co-Occurrence of Developmental and Emotional-Behavioral Problems in Young Children." *Academic Pediatrics* 23, no. 3: 623–630. https://doi.org/10.1016/j.acap.2022.11.008.

World Health Organization. 2004. *ICD-11. International Classification of Diseases 10th Revision*. World Health Organization. https://www.who.int/standards/classifications/classification-ofdiseases.

World Health Organization. 2015. *Medición de la salud y la discapacidad: Manual para el cuestionario de evaluación de la discapacidad de la OMS: WHODAS 2.0 [Measuring Health and Disability: Manual for WHO Disability Assessment Schedule (WHODAS 2.0)]*. National Rehabilitation Service. https://apps.who.int/iris/handle/10665/170500.

Supporting Information

Additional supporting information can be found online in the Supporting Information section.
STROBE-checklist-cross-sectional-Funct-Feb-28-2025. **Table S1:** Cohen's d values for each WHODAS 2.0 domain.