ORIGINAL ARTICLE

Mental disorders prevalence among female caregivers of children in a cohort study in Salvador, Brazil

Prevalência de transtornos mentais entre cuidadoras de crianças de um estudo de coorte realizado em Salvador, Brasil

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Abstract

Objective: The caregiver-child relationship is important for child development. The prevalence of mental disorders was assessed in a female caregiver group and associated with socioenvironmental factors. Method: A cross sectional study was conducted in 326 caregivers whose children have been participating in a cohort study on mental development since 1999. Results: The overall prevalence of mental disorders assessed according to the CIDI version 2.1 was 47.5% (95% CI 0.42-0.53). They were predominantly anxiety disorders (32.8%; 95%CI 0.27-0.38), followed by mood disorders (26.1%; 95%CI 0.21-0.31) and psychoactive substance abuse (10.1%; 95%CI 0.07-0.13). Anxiety and mood disorders were less likely in younger caregivers and substance abuse disorder was less likely among those better educated. Discussion: The overall prevalence was similar to previous estimates, although 32.8% of anxiety disorders exceeded previous findings, which is unsurprising in a female sample. Conclusions: Younger caregivers with higher schooling were more likely to have better mental health, which favors child development.

Keywords: Mental disorders; Epidemiology; Prevalence; Caregivers; Brazil

Resumo

Objetivo: A relação criança-cuidador tem repercussões sobre o desenvolvimento infantil. Estimou-se a prevalência de transtornos mentais em um conjunto de cuidadoras, associando esta prevalência com fatores sócio-ambientais. Método: Estudo transversal realizado com 326 cuidadoras de uma coorte infantil em seguimento desenvolvimental desde1999. Resultados: A prevalência global avaliada pelo CIDI versão 2.1, foi 47,5% (95% IC 0,42-0,53), predominando os transtornos de ansiedade (32,8%, 95% IC 0,27-0,38), seguidos por transtornos de humor (26,1%, 95% IC 0,21-0,31) e abuso de substâncias psicoativas (10,1%, 95% IC 0,07-0,13). Melhor escolaridade reduziu a chance de transtornos por abuso de substância. Entre jovens, foi menor a probabilidade de ocorrência de transtornos ansiosos e de humor. Discussão: A prevalência global coincidiu com outros achados; porém, 32,8% de transtornos ansiosos superaram estimativas anteriores, embora condizentes com a elevada morbidade entre mulheres. Conclusões: Cuidadoras jovens com melhor escolaridade têm maior probabilidade de possuir melhor nível de saúde mental, com repercussões nas práticas de cuidado infantil.

Descritores: Transtornos mentais; Epidemiologia; Prevalência; Cuidadores; Brasil

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Introduction

Studies concerning the prevalence of mental disorders within communities have been conducted since the Second World War.[1] These studies favored the improvement of the recognition of psychiatric morbidity in untreated population groups, which is an important indicator for health planners in defining and organizing mental health care.[2]

In Brazil, studies in primary health care have shown that around 50% of the population is affected by any non-psychotic psychiatric disorder during lifetime.[3-5] In this context a study by Mari found 12% and 13% of depressive and anxiety disorders lifetime prevalence[5] respectively. A population-based study conducted in Pelotas[6] southern Brazil, found 22.7% prevalence (17.9% males and 26.5% females) of minor psychiatric disorders; a cross-sectional study conducted in Olinda,[7] northeastern Brazil, found a 35% prevalence for these conditions. A study on data of first hospital admission[8] carried out in 1970 revealed an admission rate of around 157 per 100,000 white males. For women in the same ethnic group, this rate was 96 admissions per 100,000. Household surveys conducted in Salvador revealed prevalences of 49.3%,[9] 20.2%[10] and 24%.[11] Almeida Filho et al.[12] carried out a standard diagnostic investigation in community-based samples in three metropolitan areas of Brazil, using a 44-item screening instrument involving yes-no answers, designed to identify psychiatric morbidity in adults.[10] Sub-samples of probable cases and non-cases (n = 836) were interviewed by psychiatrists using the Diagnostic and Statistical Manual (3rd ed., DSM-III) symptom checklist. The lifetime prevalence of any psychiatric disorder ranged from 30% to 50% in the three study areas. These findings revealed that anxiety and phobias were the main mental health problems in the Brazilian urban population, showing lifetime prevalences between 10% and 18%, with predominance among women.

There followed an epidemiological study[13] assessing population-based depression data, using the Composite International Diagnostic Interview (CIDI),[14] which allows international comparisons. In this study, the 1-month, 1-year and lifetime depression prevalences according to the 10th International Classification of Diseases (ICD-10) were 8.2%, 10.0% and 15.6% respectively, being higher among women and increased with age.

Another epidemiological study comprising 1,464 participants living in a catchment area of the city of São Paulo[15] also applied a structured psychiatric interview for data collection. Psychiatric morbidity assessed was defined according to the ICD-10,[16] being found a lifetime overall prevalence of psychiatric diagnosis of 45.9%, with 26.8% and 22.2% in the year and month prior to the interview, respectively. In this study, lifetime use of psychoactive substances was the most prevalent psychiatric disorder (27.3%). Excluding nicotine-related disorders, lifetime prevalence remained high, with rates of 33.1%, 18.8%, and 15.4% for the three time points examined. Lifetime mood disorders (18.4%) were the second most prevalent psychiatric disorders, followed by anxiety disorders, prevalent in 12.5% of the population.

A study on mental health conditions of mothers rearing young children found 36% of probable cases of mental ill-health after applying the Self-Reporting Questionnaire 20 items (SRQ20) to 1,048 mothers in a squatter settlement in Rio de Janeiro.[17]

Associations between parents' mental condition and children's mental health were first described in studies from the 1950s. Later, Almeida Filho et al. found a positive correlation between maternal mental health and children's indicators of psychopathology in a representative sample of 1,516 adults and 829 children living in a low-income area in Salvador.[18]

Contemporary perspectives on emotional regulation suggest that the caregiver's role in modulating levels of arousal is especially important for the development of negative emotionality and fear. The development of affective regulation and tolerance has been conceived as depending on parental interaction behavior and assumed that maternal sensitivity influences the development of infant emotionality.[19]

Parental attributes such as antisocial behavior and psychopathological conditions have been related to the development of the children's early disruptive behavior; also, associations between child behavior problems and other forms of parental psychopathological conditions such as unipolar and bipolar depression have been explored.[20] It has been suggested that children at risk because of parental psychopathological condition and/or poor family functioning appear to be especially vulnerable to the effects of such stressors.[21]

Comparisons between young children with disruptive behavior and normal controls have found that mothers of children with behavioral problems report more depressive symptoms,[22] and these differences in externalizing problems persist at follow-up.[23]

Further studies revealed that maternal depression, especially when accompanied by other unfavorable conditions such as low levels of social and emotional support, particularly in the partnership, are associated with poorer mother's interactional competence.[24] Therefore evidence of the importance of the caregiver-child relationship for the children's emotional and behavioral self-regulation is well established.

Overall the prevalence studies have shown that higher rates of psychiatric morbidity have been found among women, especially for minor disorders. In Brazil there has been an increase of qualitative data on psychiatry morbidity but little is known about the mental health of individuals caring for young children in the community. The present study examines the mental health status of primary caregivers of a cohort of children set up to investigate cognitive development and emotional health.

The objective was to apply the CIDI 2.1[14] to the primary caregiver of children in order to estimate the prevalence of mental disorders, so as to establish associations between this prevalence and socio-environmental risk factors.

Method

1. Study design and setting

A cross-sectional study was conducted between July and December 2001 comprising 326 female caregivers of children who have been participating in a cohort study on mental development since 1999, in Salvador, Brazil. This cohort was part of a larger cohort set up in 1997 for a diarrhea study. Those children younger than 42 months in January 1999 were eligible to participate in the mental development study's sub-sample.

2. Enrolment

Selection of study areas[25] and population for the original cohort[26] has been described elsewhere. Briefly, for the diarrhea study, a cohort of 1,156 children under 3 years of age at baseline was randomly selected from 30 'sentinel areas' to represent the range of socioeconomic and environmental

conditions in Salvador. This cohort was created to study children's health as part of an investigation evaluating the impact of a city-wide environmental sanitation program.[27] For the mental development study, all 510 children from this cohort under 42 months of age in January 1999 were considered eligible. Of these, the families of 365 children (71.5%) agreed to participate in this extended follow-up and completed baseline data on cognition and psychosocial factors. In 2001, during the second measurement of the children's mental development follow-up, 346 caregivers were assessed for their mental status, composing the sample for the prevalence study presented here.

3. Ethical considerations

This study had the approval of the University Hospital Research Ethics Committee of the Universidade Federal da Bahia, in november 2001 without process number, and all the subjects consented to participate.

Diagnostic assessment

The CIDI version 2.1 was employed to determine psychiatric diagnosis according to the ICD-10 criteria, establishing prevalence in lifetime, and in a one-year and a one-month prior to the interview. The instrument was applied by two psychiatrists trained at the Universidade Federal de São Paulo in the use of the Brazilian version of the CIDI.[14] This is a structured interview which provides psychiatric diagnoses based on the interviewee's life history (lifetime), and also for the last 12 months, in 17 main disease categories according to the ICD-10 as follows: mood disorders (depressive episode, dysthymia, bipolar disorder); anxiety disorders (panic disorder, agoraphobia, social phobia, simple phobia, obsessive-compulsive disorder); substance use disorders (alcohol, tobacco, other drugs); non-affective psychosis; dissociative disorders; somatoform disorders; and eating disorders (bulimia, anorexia).

Symptoms considered clinically significant are those that can lead to specialist consultation and drug treatment, or those that the interviewer considers to significantly interfere with their life or activities.

Sociodemographic and environmental measures

A questionnaire was applied at the beginning of the original study and more information was elicited during the second follow-up segment, at the time of the psychiatric assessment of caregivers. This questionnaire was elaborated by the research group at the Institute of Collective Health of the Universidade Federal da Bahia to describe the sociodemographic characteristics and the internal and external household sanitation infrastructure. Indicators were developed to classify the families' purchasing power and quality of sanitation infrastructure.

1. Purchasing power

An indicator constructed on the basis of information concerning the number of television sets, radios, videocassette recorders, washing machines, refrigerators, freezers and cars in the household. A system of scores was attributed to the number of items possessed, establishing therefore a total score value for each family. Each variable was categorized at three levels, where 0 was none, 1 was possession of only one item and 3 was possession of more than one item. The average score value was 7.94 ± 5.01, zero meaning extreme deprivation and 21 indicating possession of all items investigated. Families were classified into groups of zero to 4 scores, 5 to 11 scores and 12 to 21 scores, corresponding to low, average and high purchasing power, respectively.

2. Indicator of internal household sanitation

Information was obtained on sewage systems, frequency of water availability, toilet fittings, separate kitchens, tap water, and number of people per household room. A system of scores attributed values zero, 1 and 2 to the environment quality meaning bad, regular and good, respectively. The score sum of the set of these variables provided a score for each household, the average being 7.84 ± 2.76 and the minimum and maximum values 0 and 12, respectively. The cut-off values were subsequently categorized as follows: 0 to 5, inadequate sanitation; 6 to 9, intermediate, and 10 to 12, adequate.

3. Indicator of external sanitation

This item assessed sanitary conditions based on the characteristics of the environment outside the household, including type of construction, paving, water supply, regular garbage collection and solid waste sewage. The housing areas investigated were classified into four categories of environment quality: adequate, intermediate, poor and very poor.[28]

Variables analyzed

1. Independent variables

Age was categorized into the following age groups: 18-25, 26-34, 35-40 and > 40 years. Skin color was classified as black or non-black. Marital status was categorized as: married, never married and previously married (widowed, separated and divorced). Family arrangement: grouped into three categories, defined as single parent, nuclear (partners living together) and extended (coexisting generations). Family income: up to 1 minimum wage (MW), between 2 and 3 MW, and 4 MW and more. Years of schooling: zero to 5 years, 6 to 9 years, 10 years or more. Purchasing power: low (no basic items: radio, television set and refrigerator); intermediate and high level of domestic comfort. Environment quality: classified into poor, intermediate and adequate sanitation for internal and external settings.

2. Dependent variables

Lifetime prevalence for four categories of psychiatric morbidity, generated by the CIDI according to the ICD-10 and defined as: anxiety disorders (F40-F48); mood disorders (F30-F39); psychoactive substance abuse and dependence disorders (F10-F19); and lifetime overall prevalence of psychiatric morbidity, summarized by the category 'any disorder'.

3. Data set

Obtained by the application of CIDI 2.1 software, which allows the checking of the data entered, producing the psychiatric diagnoses according to the DSM-IIIR and the ICD-10 criteria. Data collection was duly monitored for correction of lost or missing data. The present study provides lifetime prevalence, according to the ICD-10 criteria. The statistical package SPSS, version 10.0, was used for the analysis.

Analysis

A descriptive analysis was conducted to establish lifetime prevalence and 95% confidence intervals (95%CI) for the ICD-10 categories of psychiatric morbidity. Crude odds ratios and 95% confidence intervals were calculated to assess the role of each independent variable in the psychiatric morbidity.

Finally, adjusted odds ratios using the multiple regression model were used applying backword method to verify risk factors on psychiatric morbidity using the likelihood ratio test. The 20% significance level in the univariate analysis was the inclusion criterion of variables in the logistic regression model, but p-value below 5% was required for the association to be ultimately considered.

Results

Of the 341 primary caregivers examined in the second measurement step for the children's follow-up, 15 males were excluded. Of the 326 women studied, 92.0% were mothers, 5.6% grandmothers, 1.2% aunts and 1.2% babysitters. Among them, 47.5% presented at least one lifetime psychiatric diagnosis, being 9.5% affected by any disorder in the previous year and less than 1% reporting morbidity in the period immediately before the interview. Only the lifetime prevalence was considered for analysis.

Table 1 presents the lifetime prevalence and 95% CI of psychiatric disorders according to the ICD-10. Anxiety disorders had the highest lifetime prevalence (32.8%), followed by post-traumatic stress disorder (17.8%), and generalized anxiety and dissociative disorder (9.2% and 6.4%, respectively). There followed a 26.1% prevalence for mood disorders, with higher frequencies for depressive episodes. Next, there was a 10.1% prevalence for disorders related to psychoactive substance use, 7.4% and 3.7% for tobacco and alcohol abuse, respectively. For psychotic disorders, a 1.8% prevalence was found.

Table 2 presents the results of the univariate analysis of socioenvironmental factors associated with lifetime prevalence for ICD-10 categories of psychiatric morbidity. At a 5% level the age groups 26-34 and 35-40 were less likely to have presented lifetime diagnosis for mood disorder. Nuclear and extended families, better schooling and better purchasing power were also less frequent among those with lifetime substance abuse disorder.

Table 3 presents adjusted odds ratios for diagnosis groups by age, family type, schooling, purchasing power and sanitation conditions. Higher schooling reduced the likelihood of subjects suffering from substance abuse disorder. The likelihood of anxiety and mood disorders between 26 and 34 years is lower (95% CI 0.262-0.89) than in the other groups.

Discussion

A high prevalence of mental disorders was found, where one in every two children's caregivers presented at least one lifetime mental disorder, according to CIDI/ICD-10. Anxiety disorders were the most frequent diagnosis (31.7%) especially post-traumatic stress (17.8%), followed by mood disorders (26.1%) and psychoactive substance use (10.1%). The likelihood of lifetime substance abuse disorder was lower in subjects who were college undergraduate and graduate subjects and anxiety and mood disorders were less likely to occur among those aged 26 to 34.

The sample was not primarily defined for a study of psychiatric morbidity and therefore it was not randomized to represent the adult population of the city of Salvador. The original study's sampling strategy was based on criteria such as income, sanitation and distribution of children under 3 years of age. An insufficient number of cases for adequately matching all diagnostic categories in the three prevalence points prevented a more robust analysis with more stable estimates. The fact that only female caregivers were studied prevented gender comparisons.

The period from infancy to pre-school is critical to child development because it is when developmental paths leading to adaptive or maladaptive outcomes start.[29] Maternal depression, lack of social support and marital problems may cause stress within the family and thus poor quality of maternal care.[30] Risk factors from multiple sources are found more often in families from lower social economic backgrounds.[31] In a previous study, an increase in positive emotionality has

Table 1 – Lifetime prevalence and 95% confidence interval for ICD-10 psychiatric diagnoses (n = 326)

ICD-10 Diagnosis	n	%	95% CI
Any disorder	**155**	**47.5**	**(42.0-53.1)**
Anxiety disorders	**107**	**32.8**	**(27.7-38.2)**
Phobic anxiety disorders (agoraphobia)	13	4.0	(2.1-6.7)
Generalized anxiety disorder	30	9.2	(6.2-12.8)
Post-traumatic stress disorder	58	17.8	(13.7-22.3)
Dissociative disorders	21	6.4	(4.0-9.6)
Somatoform disorders	19	5.8	(3.5-8.9)
Somatization disorder	1	0.3	(0.0-1.6)
Hypochondriacal disorder	3	0.9	(0.1-2.6)
Persistent somatoform pain disorder	16	4.9	(2.8-7.8)
Mood disorders	**85**	**26.1**	**(21.3-31.1)**
Hypomania	3	0.9	(0.1-2.6)
Bipolar affective disorder	4	1.2	(0.3-3.1)
Mild depressive episode	9	2.8	(1.2-5.1)
Moderate depressive episode	30	9.2	(6.2-12.8)
Severe depressive episode without psychotic symptoms	25	7.7	(5.0-11.1)
Recurrent depressive disorder	20	6.1	(3.7-9.3)
Dysthymia	9	2.8	(1.2-5.1)
Psychoactive substance abuse disorder	**33**	**10.1**	**(7.0-13.9)**
Alcohol	12	3.7	(1.9-6.3)
Cannabinoids	1	0.3	(0.0-1.6)
Sedatives or hypnotics	1	0.3	(0.0-1.6)
Cocaine	1	0.3	(0.0-1.6)
Tobacco	24	7.4	(4.7-10.7)
Psychotic disorders	**6**	**1.8**	**(0.6- 3.9)**
Bulimia Nervosa	**1**	**0.3**	(0.0-1.6)

been found to be associated with a higher degree of social support to the caregiver.[32] Another finding that supports these observations is that infants of chronically depressed mothers with good economic conditions have been found not to differ from those children of sometimes or never depressed mothers as observed in another study.[33]

This study provided a nosological profile of children's primary caregivers living in central and peripheral areas of the city. The assessment of general lifetime psychiatric morbidity was satisfactory and a high prevalence of anxiety and mood disorders corroborates previous studies.[34] However, the high prevalence of post-traumatic stress disorder requires further investigation.

The lifetime prevalence for any disorder was in agreement with a recent Brazilian study,[15] which used the same diagnostic instrument and classification system, despite differences in the sampling strategy and socioeconomic condition of the population studied. The present study estimate is compatible with the diagnostic standard in community-based samples and consistent with overall prevalence rates for mental disorders in Brazilian studies[17,35] and similar to those estimates found in the United States (48%),[36] Holland (41.2%)[37] and California (48.7%).[38] However, the 31.7% prevalence for anxiety disorders was much higher than that found in all the studies mentioned above. It may confirm that minor psychiatric disorders are more frequent among women[15] and also that social condition disadvantages such as education and income are the most powerful indicators related to common mental disorders.[39]

The magnitude of the estimate for anxiety disorders is higher than those cited in the literature, particularly the 12.5 prevalence found in São Paulo.[15] The high prevalence of post-traumatic stress disorder could be explained by the makeup of the sample, since women have a higher rate of PTSD than men.[40] It may also be due to an inclusive definition that encompasses a wide range of traumatic events.[41] Yet it is worth examining which sort of traumatic events are affecting this population of children's caregivers. Associations have been observed between this syndrome and level of income and schooling, with higher risk for those with lower income and schooling.[42] Only 33% of the subjects in the present sample had education higher than basic and only 21% had good economic conditions. While Andrade has found the highest prevalence of disorders due to psychoactive substance use, these disorders were third in frequency in this study, which is unsurprising in a female sample.[15]

The exploratory analysis showed that age, family type, schooling and purchasing power were significantly associated with ICD-10 lifetime prevalence of mental disorder in the

Table 2 – Univariate analysis for lifetime prevalence of psychiatric diagnosis grouped by ICD-10 categories and sociodemograph and environmental characteristics (n = 326)

	Anxiety disorder	Mood disorder	Substance abuse disorder	Any disorder
	OR (95%CI)	OR (95%CI)	OR (95%CI)	OR (95%CI)
Age (years)				
> 40	1.0	1.0	1.0	1.0
35–40	0.87 (0.41-1.87)	0.39 (0.17-0.91) [a]	0.63 (0.21-1.87)	0.73 (0.36-1.49)
26–34	0.72 (0.37-1.37)	0.42 (0.21-0.82) [a]	0.63 (0.26-1.53)	0.75 (0.41-1.36)
18–25	1.46 (0.73-2.90)	0.82 (0.41-1.64)	0.30 (0.08-1.01)	1.16 (0.60-2.25)
Skin color				
Black	1.0	1.0	1.0	1.0
Non-black	1.23 (0.59-2.56)	0.82 (0.35-1.89)	1.16 (0.38-3.53)	1.35 (0.66-2.73)
Marital status				
Never married	1.0	1.0	1.0	1.0
Previously married	1.52 (0.70-3.31)	1.29 (0.57-2.94)	0.91 (0.25-3.26)	1.63 (0.76-3.53)
Married	0.96 (0.58-1.61)	0.80 (0.46-1.40)	0.89 (0.40-1.99)	1.07 (0.66-1.73)
Family type				
Extended	1.0	1.0	1.0	1.0
Nuclear	0.84 (0.51-1.39)	0.81 (0.47-1.40)	1.09 (0.46-2.57)	0.89 (0.55-1.44)
Single parent	0.70 (0.31-1.56)	1.31 (0.59-2.89)	2.86 (1.01-8.06) [a]	1.57 (0.75-3.30)
Schooling				
10 or more	1.0	1.0	1.0	1.0
6 to 9	1.32 (0.73-2.39)	1.07 (0.56-2.06)	1.83 (0.57-5.81)	1.40 (0.80-2.45)
Up to 5 years	1.23 (0.70-2.16)	1.50 (0.83-2.73)	3.88 (1.40-10.74) [a]	1.61 (0.95-2.72)
Income				
4 or more MW	1.0	1.0	1.0	1.0
Between 2 and 3 MW	0.89 (0.48-1.65)	0.98 (0.52-1.86)	1.01 (0.36-2.83)	0.91 (0.51-1.62)
Up to 1 MW	1.12 (0.60-2.11)	0.70 (0.35-1.39)	1.55 (0.57-4.20)	0.98 (0.54-1.78)
Purchasing power				
High	1.0	1.0	1.0	1.0
Average	0.71 (0.39-1.27)	0.58 (0.32-1.07)	1.54 (0.49-4.78)	0.53 (0.30-0.92) [a]
Low	1.30 (0.65-2.58)	0.62 (0.29-1.30)	3.83 (1.18-12.41) [a]	1.16 (0.59-2.28)
Household interior				
Adequate	1.0	1.0	1.0	1.0
Intermediate	1.33 (0.76-2.32)	1.16 (0.64-2.10)	0.68 (0.28-1.64)	1.14 (0.68-1.90)
Inadequate	1.56 (0.81-3.02)	1.34 (0.67-2.70)	1.51 (0.60-3.79)	1.52 (0.82-2.83)
Household exterior				
Adequate	1.0	1.0	1.0	1.0
Intermediate	1.04 (0.62-1.76)	1.19 (0.68-2.08)	0.62 (0.27-1.45)	1.13 (0.69-1.84)
Poor	1.21 (0.64-2.28)	1.24 (0.63-2.46)	1.09 (0.43-2.73)	0.60 (0.90-3.01)

[a] *p-value for likelihood ratio test < 0.05*

Table 3 – Multivariate analysis for lifetime prevalence of psychiatric diagnosis grouped by ICD-10 categories and sociodemographic and environment characteristics (n = 326)

	Anxiety disorder OR (95%CI)	Mood disorder OR (95%CI)	Substance abuse disorder OR (95%CI)	Any disorder OR (95%CI)
Age (years)				
18–25	1.0	1.0		1.0
26–34	0.48 (0.26-0.89) [a]	0.50 (0.26-0.97) [a]		0.55 (0.29-1.02)
35–40	0.55 (0.26-1.15)	0.48 (0.21-1.08)		0.49 (0.23-1.04)
> 40	0.60 (0.29-1.21)	1.11 (0.53-2.28)		0.60 (0.29-1.24)
Family type				
Single parent			1.0	1.0
Nuclear			0.41 (0.15-1.11)	0.62 (0.29-1.30)
Extended			0.35 (0.11-1.05)	0.58 (0.26–1.32)
Schooling				
Up to 5 years		1.0	1.0	1.0
6 to 9		0.80 (0.42-1.51)	0.41 (0.16-1.04)	0.86 (0.48-1.53)
10 or more		0.73 (0.39-1.35)	0.24 (0.07-0.78) [a]	0.54 (0.29–1.02)
Purchasing power				
Low	1.0		1.0	1.0
Intermediate	0.58 (0.32-1.05)		0.52 (0.22-1.21)	0.56 (0.31-1.02)
High	0.96 (0.46-2.00)		0.41 (0.11-1.53)	1.50 (0.69–3.25)
Household interior				
Inadequate	1.0		1.0	1.0
Intermediate	0.88 (0.48-1.61)		0.66 (0.26-1.67)	0.87 (0.47-1.61)
Adequate	0.61 (0.30-1.23)		1.40 (0.49-4.01)	0.81 (0.38-1.70)
Household exterior				
Poor				1.0
Intermediate				0.76 (0.40-1.45)
Adequate				0.67 (0.33-1.34)

[a] *p-value for likelihood ratio test < 0.05*

univariate analysis, but only schooling and age remained statistically significant in the multivariate analysis. Women who had college education were less likely to have substance abuse disorders and there seems to be lower anxiety and mood disorders among those aged between 26 and 34 years.

Conclusions

The morbidity profile by diagnostic group identified in this study is different from that found by Andrade et al. and showed anxiety and mood disorders as the most prevalent conditions.[15] But there was agreement in the rates of general lifetime psychiatric morbidity. A high prevalence of post-traumatic stress disorder raised questions about traumatic events affecting this population of children's caregivers living in urban areas under precarious conditions. The improvement of socioeconomic conditions reflected by better schooling contributes significantly to a better level of community mental health and, consequently, better child development.

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