

The social adjustment of people with severe mental illness in São Paulo, Brazil

O ajustamento social de pessoas com transtornos mentais graves em São Paulo, Brasil

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Abstract

Objective: To investigate the social adjustment of individuals with severe mental illness living in the community in a large urban center of a developing country, and the characteristics associated with poor social functioning. **Method:** A cross-sectional study was performed in the city of São Paulo. Eligible subjects were residents of a defined geographic area, aged between 18 and 65, with a diagnosis of functional psychosis who had had contact with any public psychiatric service during a defined period. Structured assessments were used to obtain information on social-demographic characteristics, diagnosis (ICD-10), psychiatric symptoms (PANSS), and social adjustment (DAS). **Results:** One hundred and eighty-eight subjects were included, of whom, 120 (63.8%) had some degree of impairment in social functioning. The most frequently affected areas of social functioning were work performance and sexual role. Twenty-four patients (12.8%) showed poor or very poor social adjustment in the month prior to the interview. Negative symptoms, number of previous admissions and general symptoms showed statistically significant associations with global social adjustment scores. **Conclusions:** The proportion of patients showing any degree of impairment in social adjustment was as high as in more developed societies. In order to successfully implement the new mental health policy in Brazil, better provision of community-based mental health services for those with severe mental illnesses is needed.

Keywords: Mental disorders; Social adjustment; Cross-sectional studies; Interview, psychological; Mental health services; Brazil

Resumo

Objetivo: Investigar o ajustamento social em indivíduos com transtornos mentais graves vivendo na comunidade de um grande centro urbano de um país em desenvolvimento e as características associadas a um ajustamento social pobre. **Método:** Um estudo de corte transversal foi conduzido em São Paulo. Indivíduos elegíveis deviam residir em áreas definidas da cidade de São Paulo, ter tido contato com os serviços psiquiátricos do setor público em período de três meses, idade entre 18 e 65 anos e diagnóstico de psicose funcional. Entrevistas estruturadas foram utilizadas para obter dados sociodemográficos, diagnóstico (CID-10), sintomas psiquiátricos (PANSS) e ajustamento social (DAS). **Resultados:** Cento e oitenta e oito indivíduos foram incluídos e 120 (63,8%) apresentaram algum grau de desajustamento social. As áreas mais afetadas foram performance no trabalho e sexual. Vinte e quatro indivíduos (12,8%) apresentaram ajustamento social pobre ou muito pobre no mês anterior à entrevista. Número de internações anteriores, sintomas gerais e negativos de esquizofrenia mostraram-se associados ao ajustamento social global. **Conclusões:** A proporção de indivíduos apresentando qualquer grau de desajustamento social é comparável à encontrada em países mais desenvolvidos. Para a adequada implementação das novas políticas públicas em Saúde Mental no Brasil, há a necessidade de melhor provisão de serviços aos indivíduos com transtornos mentais graves.

Descritores: Transtornos mentais; Ajustamento social; Estudos transversais; Entrevista psicológica; Serviços de saúde mental; Brasil

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Introduction

Studies carried out in the United States and Europe have shown that impairment in social adjustment in individuals with severe mental illness is very frequent, particularly in those with schizophrenia,¹⁻⁴ but also in patients with affective disorders.⁵⁻⁶ Disability in specific areas of social functioning seems to develop according to hierarchical lines, affecting peripheral social contacts first, such as work performance, affecting afterwards internal functioning areas, such as self-care.⁷ Impaired work adjustment in bipolar and unipolar patients, impaired social and leisure activities adjustment in bipolar patients, and impaired marital adjustment in unipolar patients have been associated with recurrent episodes.⁶ Predictors of poor social adjustment have included levels of psychopathology, social adjustment at baseline, the occurrence of psychotic relapse, length of hospitalization, severity of illness,⁸⁻¹¹ family adaptability, and emotional over-involvement in relatives,¹²⁻¹³ gender,^{11,14-15} abnormalities of personality and social adjustment in childhood,¹¹ social skills,¹⁰ and drug use or abuse.¹⁵

Knowledge on disability levels is essential for the adequate provision of community mental health care for people suffering from severe mental illness.¹⁶ Although there is evidence of a better outcome for psychosis in developing countries, empirical data about the social adjustment of people with severe mental disorder in large urban centers of such countries are scarce. A previous study with people suffering from schizophrenia who had been admitted to a hospital in Sao Paulo showed that they experienced high levels of impairment in social functioning, both at the time of admission¹⁷ and 2 years later.¹⁸ However, there is a lack of empirical data on the characteristics of social adjustment of individuals with severe mental illness who are seen at any level of mental health services in urban centers of Brazil. The objectives of the present study were to investigate levels of social adjustment in individuals with severe mental illness living in the community in the city of Sao Paulo, and to study which socio-demographic and clinical characteristics were associated with poor social functioning.

Method

1. Study design and sample

A cross-sectional study was accomplished, with individuals suffering from severe mental disorder, living in defined geographic areas of Sao Paulo, Brazil, originally aimed at estimating the prevalence of comorbidity of substance misuse among those with severe mental illness.¹⁹ Seven administrative districts of the city of Sao Paulo were chosen as the geographic area of the study. This choice followed the organization of the public psychiatric health care in those areas, which would facilitate the execution of epidemiological studies. Each one of these districts had some level of psychiatric health services, such as psychiatric hospital beds, emergency units, mental health outpatient clinics or psychosocial attention centers. They were located in the Northern, Western and Central areas of Sao Paulo, accounting for about 570,000 inhabitants.

Eligible subjects were all those who were living in the study area for at least 6 months, who aged between 18 and 65 years, who had had at least one contact with any public mental health service (emergency units, inpatient and outpatient services, day centers), during the period between September 1st and November 30th, 1997, and met criteria for non-affective psychosis (ICD-10 codes F20.9), bipolar disorder (codes F30.1) or depressive disorder with psychotic symptoms

(codes F32.3 or F33.4), after standardized assessments. A sampling list was created with all potentially eligible subjects identified in the mental health services, of which a sample was then drawn to be included in the study. Details of sampling procedures can be found elsewhere.¹⁹

2. Assessments

1) Socio-demographic data

Information was obtained using a standardized questionnaire, for the following socio-demographic variables: sex, age, marital status, place of birth, educational level, occupational status, living arrangements, monthly family and per capita income.

2) Psychiatric history

A standardized questionnaire was applied to all patients, adapted from the 'Life Chart Rating Form',²⁰ a WHO-developed questionnaire used to obtain longitudinal information for the multicentric study on the course and outcome of schizophrenia. Information obtained included number of previous admissions to psychiatric hospitals and use of medication.

3) Psychiatric diagnosis

Psychiatric diagnoses were given according to the criteria of the 10th version of the International Classification of Diseases, using the ICD-10 check-list,²¹ with data from psychiatric interviews with the subjects, complemented by extra information given by a key informant, generally a relative of the subject.

4) Psychiatric symptoms

The assessment of psychiatric symptoms was performed using the 'Positive and Negative Symptom Schedule',²² a semi-structured scale to assess the presence and the severity of psychopathological symptoms, in the last 2 weeks. Subjects were assessed on three sections: positive symptoms, negative symptoms and general symptoms.

5) Social adjustment

For the assessment of social disability, the WHO psychiatric Disability Assessment Schedule (DAS)²³ was used. This scale, which is answered by key-informants of study participants, has been specially developed to assess the social functioning of patients in a variety of different settings and cultures, and was also available in a Portuguese version, showing good reliability when applied to schizophrenic individuals.²⁴ In the present study, key-informants answered sections 1, 2 and 5. Section 1 is related to overall behavior, with 4 items about self-care, underactivity, slowness and social withdrawal. Section 2 deals with the performance of social roles, such as work, parental duties, sexual relationships and occupational role. Some items are exclusive. If a subject lives with a partner, the item applied is 2.3, and the item 2.5 is not applicable, and vice-versa. The same occurs for items 2.7 and 2.8, related to occupational role. Section 5 is a global assessment of social functioning, based on information obtained for sections 1 and 2. Scores for each item of sections 1 and 2 range from 0 ('no dysfunction') to 5 ('maximum dysfunction'). When there is no information, the code is 8, and when the item is not applicable, the code is 9. Scores for section 5 range from 'excellent social adjustment' (score 0) to 'very poor social adjustment' (score 5). The period covered was the month prior to the interview.

6) Alcohol or drug abuse

The "Schedules of Clinical Assessment in Neuropsychiatry" (SCAN) is a standardized semi-structured psychiatric interview developed by WHO.²⁵ The sections 11 and 12 were applied to the subjects. These sections detailed the behavior about use

of legal, illegal, and medically prescribed substances, as well as the physical, social and psychological consequences of the consumption. This instrument gives diagnosis of dependence or abuse of substances, according to the ICD-10 criteria.

3. Procedures

Medical records of 20 mental health services were browsed, in order to produce the sampling list of potentially eligible subjects. This work was manually accomplished in most services. Inclusion of subjects at this phase was broad, due to the poor quality of medical records in most services. Research assistants, all mental health workers, were oriented to include everyone who could possibly have a psychotic illness. This phase of the fieldwork took place from December 1997 to August 1998. The sample was then drawn from this list, and letters were sent to subjects, explaining the study, and informing about a domicile visit by research workers. These were also mental health professionals, trained in the use of all the instruments described above. Research workers tried to contact subjects at least three times, at different hours, before considering the subject as a non-participant. If the subject did not live in the address recorded in his/her medical file, research workers would try to get information from the current occupiers of that address, or with neighbors. If no such information could be obtained, medical notes of all the mental health services were revised, to check for a possible updated address. Subjects were interviewed at their homes, whenever possible. Key informants, generally relatives, were also interviewed at home. This phase of the study took place from October 1998 to July 1999. The study had ethical approval from the ethical committee of the Medical School of the Universidade de São Paulo, and from all visited institutions with such committees.

4. Analysis

A data file was created using EpiInfo 6.04. Data were entered twice, in order to avoid data entry mistakes. After that, the data file was converted to be analyzed with the Stata 7.0 software. Consistency of data was then checked, and corrections were made when necessary. When explanatory variables were continuous, analysis of variance was used in order to compare means between 2 or more groups. Analysis of associations between categorical variables and 'poor social adjustment' was performed using chi-square test. P-values equal to or lower than 0.05 were considered significant. Logistic regression was used to examine independent associations. A forward stepwise process was accomplished, checking whether adding a new variable would improve the goodness-of-fit of data, at a statistical level of significance of 0.05.

Results

1. Characteristics of the sample

Data obtained by searching records in psychiatric health services allowed the identification of 620 subjects who were potentially eligible, of whom 404 individuals were randomly selected to be included in the study. Two hundred and six interviews (51.0%) were accomplished. The main reasons for non-response were: non-existing address or unknown patient in given address (11.1%), moved to unknown address (9.4%), moved to another city/state/country (8.2%), subject's refusal (6.7%), relative's refusal (3.2%). Compared to subjects who were interviewed, non-respondents had higher proportions

of women (56.1% vs. 47.6%; $p = 0.09$), affective disorders (30.0% vs. 22.8%; $p = 0.15$), and were slightly younger (38.2 years vs. 40.0 years; $p = 0.14$). However, these differences were not statistically significant. Fourteen subjects were excluded from the remaining analysis because they did not meet diagnostic criteria for severe mental illness.

The final sample was composed by 102 men and 90 women. The mean age was 41.5 years (SD = 11.4), ranging from 18 to 64. They were predominantly single, were not born in the city of Sao Paulo, had 8 years or less of formal education and were receiving anti-psychotic drugs at any frequency. The monthly per capita income was less than R\$ 131.00 for 55% of the sample. One hundred subjects (52.1%) had had less than 4 previous admissions to psychiatric wards, and 40 (20%) had never been admitted. More than 85% of the subjects were using anti-psychotic drugs on a regular basis. The positive symptoms section of the PANSS was answered by 189 subjects, with a mean of 11.5 (SD = 5.5), ranging from 7 to 41; 187 individuals had all items of the PANSS about negative symptoms assessed, with a mean of 14.7 (SD = 8.6), ranging from 7 to 47, and 188 patients were assessed for all items of general symptoms, with a mean of 25.9 (SD = 8.5), ranging from 16 to 54 (Table 1).

2. Social adjustment

The WHO/DAS was applied to 188 subjects (97.9%). It was not possible to obtain information from 4 subjects who were living alone, and there were no key informants for them. The areas with higher levels of disability were the occupational and sexual roles, with 73.9% of the subjects scoring 1 or more in the items "interest in getting a job in the month before the interview" or "work performance", and 73.3% scoring 1 or more in the items "marital role/sexual" or "sexual role" (for those who did not live with a partner). These areas were followed by underactivity (67.2%), social withdrawal (61.4%), and participation in household activities (60.9%) – Table 2.

In terms of severity of disability, when considering work performance and interest in getting a job together, 26.2% of the subjects received scores 4 or 5, and this was the area with the highest proportion of subjects showing marked degrees of disability. Interest in getting information followed, with 15.4% of the sample scoring 4 or 5. Taking together marital/sexual relationships and sexual activity (items 2.3 and 2.5, respectively), 10.4% of the patients received a score 4 or 5.

Considering the scores for global social adjustment, 68 subjects (36.2%) had good social adjustment (scores 0 or 1), 96 (51.0%) of them had an intermediate social adjustment (scores 2 or 3), and 24 individuals (12.8%) had a poor social adjustment (scores 4 or 5).

In order to analyze which of the subjects' characteristics were associated with poor social adjustment, the global social adjustment was then binarily categorized, with scores 0 to 3 considered as 'good social adjustment', while scores 4 and 5 were taken together into 'poor social adjustment'.

Variables that showed significant statistical associations with poor social adjustment in the univariate analysis were: age, negative symptoms, positive symptoms, general symptoms, monthly per capita income, number of previous admissions, ICD-10 diagnosis, and marital status (Tables 1 and 3).

Subjects who were single were also more likely to be younger and to have been admitted to psychiatric wards more frequently than subjects who were married or separated. They also showed a higher mean of negative symptoms than subjects with other

Table 1 – Characteristics of the sample and associations with "poor social adjustment" n = 188

Variable	Whole sample	Number with poor SA (%)	OR [‡]	95% Conf. [#]	p
Sex					
Female	88	9 (10.2)	1		0.33
Male	100	15 (15.0)	1.5	0.6 to 3.7	
Place of birth					
City of São Paulo	91	13 (14.3)	1		0.55
Other	97	11 (11.3)	1.3	0.5 to 3.1	
Marital status					
Other	79	3 (3.8)	1		
Single	109	21 (19.3)	6.0	1.9 to 18.6	0.002
Educational level					
0 to 3 years	29	2 (6.9)	1		0.30
4 to 8 years	94	16 (17.0)	2.8	0.6 to 12.2	
9 to 11 years	33	4 (12.1)	1.9	0.3 to 10.9	
12 years or more	32	2 (6.3)	0.9	0.1 to 6.9	
Monthly per capita income*					
R\$ 361.00 or higher	52	1 (1.9)	1		<0.001
From R\$ 131 to 360.00	32	3 (9.4)	5.3	0.6 to 43.3	
Less than R\$ 131.00	34	5 (14.7)	8.8	1.3 to 57.8	
None	68	15 (22.0)	14.4	2.8 to 74.0	
Monthly family income					
R\$ 2700.00 or higher	29	3 (10.3)	1		0.67
From R\$ 1301 to 2699.00	43	5 (11.6)	1.1	0.2 to 5.2	
From R\$ 701 to 1300.00	51	8 (15.7)	1.6	0.4 to 6.6	
From R\$ 361 to 700.00	39	3 (7.7)	0.7	0.1 to 3.8	
Less than R\$ 361.00	26	5 (19.2)	2.1	0.4 to 9.6	
Crowding[¶]					
0 to 0.5	36	3 (8.3)	1		0.39
0.5 to 1.0	75	12 (16.0)	2.1	0.5 to 7.7	
1.0 to 1.5	31	5 (16.1)	2.1	0.5 to 9.5	
1.5 or higher	43	3 (7.0)	0.8	0.1 to 4.4	
Number of previous admissions					
None	39	1 (2.6)	1		< 0.001
1 to 3	60	2 (3.3)	1.3	0.1 to 15.0	
4 to 9	43	8 (18.6)	8.7	1.4 to 54.5	
10 or more	46	13 (28.3)	15.0	2.8 to 80.0	
ICD-10 Diagnosis					
Bipolar affective disorder	45	1 (2.2)	1		0.05
Schizophrenia	112	21 (18.8)	10.1	1.8 to 55.0	
Psychotic depression	14	1 (7.1)	3.4	0.2 to 51.0	
Other non-affective psychosis	12	1 (8.3)	4.0	0.3 to 58.4	
Schizoaffective disorder	5	0 (0.0)			
Use of anti-psychotic drugs					
Never	26	1 (3.9)	1		0.15
Sometimes	18	2 (11.1)	3.1	0.3 to 34.5	
Regularly	142	20 (14.0)	4.1	0.6 to 27.7	

*: Poor SA = Poor Social Adjustment (scores 4 and 5)

‡: OR = Odds Ratio

#: 95% Conf. = 95% Confidence Interval

¶: 2 missings

∅: 3 missings

marital status did and had lower monthly income. Older subjects had the highest number of admissions. A strong positive association between number of previous admissions and score for positive symptoms was found. Subjects who had lower monthly family income showed a higher number of previous admissions and were younger. It was also found that individuals who had higher scores of negative symptoms had

regular use of anti-psychotic drugs. Using logistic regression, the model that best fit the data was obtained by including negative symptoms, number of previous admissions and general symptoms (Table 4).

Discussion

1. Methodological limitations

Poor quality of information in the medical records consulted, regarding data on address, date of birth or age, and diagnosis, did not allow the identification of some individuals who might have been eligible for this study. However, this may be a random loss, not influencing the measures of social adjustment or the associations found in the present study. The sample was composed by individuals who were seen at public mental health services, and therefore those who seek care in private mental health services were not represented in this sample. However, when the study was accomplished, few private health care plans included psychiatric care, particularly psychiatric admissions, and those who had such plans and needed psychiatric care were likely to have sought mental health services of the public sector. Individuals who did not have a permanent residence and homeless patients were not included in the present study. Individuals who are not in contact with any mental health service were also not included. This group may be constituted by individuals with better social functioning or by those with poorer functioning who do not leave home to seek care in mental health services. However, the proportion of people with severe mental illness who remain out of contact with any type of care, including emergency services, for more than three consecutive months must be relatively low, considering the severity and disruption caused by such conditions.

The most important limitation of the present study is the high proportion of non-responses. Forty-nine percent of the individuals selected to be included in the study were not interviewed; 30.8% were not found, and 11.1% were unknown at the given address or this was non-existent. There may be possibly a different proportion of individuals who present poor social adjustment among non-interviewed respondents.

In order to assess the presence and the intensity of psychotic symptoms and to analyze the social adjustment subjects, semi-structured scales were used (PANSS and DAS), which require clinical evaluation by interviewers. Possible systematic errors among interviewers were minimized by constant training and supervision developed along the study.

2. Interpretation of results

The proportion of subjects showing any degree of impairment in social adjustment was very high, with 63.8% of them with global scores ranging from 2 to 5, and 12.8% with scores 4 or 5. Comparison of results with international literature is not straightforward because most studies dealt only with samples of subjects with schizophrenia or with affective disorders, and a small number has examined mixed samples with people with any severe mental illness. In a previous cross-sectional study of individuals with schizophrenia who had been admitted to hospital in Sao Paulo, Brazil, more than 80% of the sample showed some level of impairment in social adjustment, and almost 30% were severely disabled,¹⁷ a much higher rate than that found in this study. This difference may be explained by the fact that in the previous study the sample was constituted by more severe cases (those who were admitted to hospital) and by people with schizophrenia exclusively. Several studies

Table 2 – Distribution of scores by WHO/DAS item, in % (n = 188)

Item	0	1	2	3	4	5	8*	9*
1.1 Self-care	50.8	26.0	16.9	5.8		0.5		
1.2 Underactivity	32.8	12.7	20.1	27.5	6.4	0.5		
1.3 Slowness	64.6	16.9	8.5	9.0	0.5	0.5		
1.4 Social withdrawal	38.6	23.3	14.8	16.9	4.8	1.6		
2.1 Participation	39.1	22.8	18.0	15.3	3.7	1.1		
2.2 Marital / affective	10.6	6.3	2.6	1.1	1.1		0.5	77.8
2.3 Marital / sexual	6.8	3.7	3.1	2.6	0.5	2.1	3.7	77.5
2.4 Parental	15.4	4.8	4.2	2.1				73.5
2.5 Sexual	12.0	12.6	24.1	16.8	7.8		3.7	23.0
2.6 Social contacts	71.4	16.4	2.1	6.3	1.1	1.1		1.6
2.7 Work performance	14.6	3.1	1.1	1.1	1.1		0.5	78.5
2.8 Interest in job	9.4	13.6	14.2	14.7	18.3	6.8	3.1	19.9
2.9 Information	43.4	13.2	20.6	6.9	8.5	6.9		0.5
2.10 Emergencies	47.6	10.6	4.8	4.2	4.2	1.6		27.0

* 8 no information; 9 not applicable

Table 3 – Means of age, household, crowding, and PANSS scores, according to good or poor social adjustment levels (n = 187)

Variable	Good SA [#] n = 164 Mean (SD [§])	Poor SA [#] n = 24 Mean (SD [§])	Means Difference (CI)	p
Age	42.0 (11.3)	37.0 (11.4)	5 (0.12-9.9)	0.04
Crowding	1.2 (1.0)	1.0 (0.5)	0.2 (-0.2-0.6)	0.23
Positive symptoms	10.7 (4.6)	17.4 (7.9)	6.7 (4.5-8.9)	< 0.001
Negative symptoms	13.1 (7.0)	27.9 (9.2)	14.8 (11.6-17.9)	< 0.001
General symptoms	24.7 (7.3)	36.1 (9.9)	11.4 (8.1-14.7)	< 0.001

*: Good SA = Good Social Adjustment (scores 0 to 3)

§: SD = Standard Deviation

#: Poor SA = Poor Social Adjustment (scores 4 and 5)

performed in developed countries have also shown that individuals with severe mental illness have marked levels of impairment in social functioning.¹⁻⁴ Melzer et al.,²⁶ in a 1-year follow-up study of schizophrenic patients discharged from psychiatric hospitals in London, found that at follow-up 29% of the sample had good or excellent social adjustment, 50% had fair or poor, and 22% had very poor social adjustment or severe disability. Four years later, 41% were in the intermediate group, 41% showed good levels of social adjustment, and 18% had severe disabilities.²⁷ In 70 first-episode German schizophrenics, Schubart et al.² found that two-thirds had DAS global scores of 3 or above at 2-year follow-up. They observed a trend of subjects in the extreme categories to remain in such groups, and those in the intermediate category to drift towards better or poor levels of functioning.

The sample was predominantly single, was not born in the city of Sao Paulo, had less than 9 years of formal education, and aged from 18 to 64, being very similar to the sample analyzed by Menezes and Mann.¹⁷ As in their study, social withdrawal and participation in household activities were the items in which patients presented higher levels of disability, but, differently from that, in the present study, the item where most patients showed any degree of dysfunction was underactivity. The item where fewer subjects were reported to have any level of disability was social contacts, a finding similar to that of Menezes and Mann.¹⁷

There was no statistical association between gender and poor social adjustment. Some studies have suggested some relation between symptom severity and social outcome, at least in specific areas of functioning. Strong associations were found between social adjustment levels and current symptomatology, particularly with negative symptoms, differently from MacEwan et al.,¹¹ who found association

between social adjustment and positive symptoms, mainly in Scottish female patients, but similar to Mueser et al.¹⁰

Similarly to Häfner et al.,²⁸ who studied 232 German patients in a first episode of schizophrenia, and had their social disability detected by means of DAS, in this study it was found that, when initial symptoms first appear in early ages, these patients, most of them males, are likely to have a deficient social functioning: they remain single, present a higher number of admissions to psychiatric wards and have more negative symptoms after a long time of social needs in schizophrenia. Consequently, these patients receive anti-psychotic drugs more often, as detected in this study. Due to a higher mean of negative symptoms, they also present lower former education levels and lower familial income. All these characteristics lead these patients to have a lower monthly per capita income, as stated above.

Table 4 – Crude and adjusted odds ratios (OR) for "poor social adjustment" (n = 187) according to the variables kept in the final logistic regression model

Variable	Crude OR	Adjusted OR	95% CI for adjusted OR	p
Negative symptoms	1.2	1.1	1.0 to 1.2	< 0.001
General symptoms	1.1	1.1	1.0 to 1.2	0.018
Previous admissions				< 0.001
4 to 9	8.7	8.9	1.2 to 66.9	
10 or more	15.0	22.4	3.3 to 153.9	

3. Implications

Results of the present study point to the need of a much larger and better network of mental health services in the community for those with severe mental illness, within a multidisciplinary approach. Rehabilitation programs are needed, in order to reduce the high levels of social disability

observed, trying to improve them in society, since disability arises first in peripheral social contacts, progressing towards closer patient's friends, reaching, lastly, the self-care area.⁷ It should also include occupational skill training, help in searching for jobs and adequate housing provision. As most patients are single, their parents and relatives can't be left aside, no matter whether they are carers or not. Financial support, information about the illness and its treatment, respite care and other forms of help for informal carers are extremely important, since most of the burden of caring for people with severe mental illness in less developed countries relies on relatives or close friends. Provision of mental health care should start to be based on needs of care assessments, and research in this field is necessary in order to better plan and organize mental health services.

The findings from the present study are not easily generalizable to the country as a whole, because there are huge regional differences in Brazil regarding culture, social economic development and organization and availability of health care services. Regional investigations are needed to guide service provision and to add knowledge on environmental and socio-cultural factors that may be related to the social adjustment of those with severe mental illness. Nevertheless, the picture seen in the present study must be similar to that found in many large cities of less developed countries all over the world.

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