"I don’t need any treatment" – barriers to mental health treatment in the general population of a megacity

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Objective: Most countries fail to treat individuals with psychopathologies. Investigating treatment barriers and reasons for dropout are key elements to overcoming this scenario.

Methods: A representative sample of 2,942 urban-dwelling adults was interviewed face-to-face within a cross-sectional, stratified, multistage probability survey of the general population. Psychiatric diagnosis, severity level, use of services, reasons for not seeking treatment, and treatment dropout were investigated.

Results: Only 23% of individuals with a psychopathology of any severity level in the last 12 months received treatment. Low perceived need for treatment (56%) was the most common reason for not seeking treatment. The most visited settings were psychiatric, other mental health care, and general medical care. Among those with a perceived need for treatment (44%), psychological barriers were the most common reason for not seeking it. Treatment dropout was more prevalent among those who visited a general medical care setting. Among individuals still in treatment, human services and psychiatric care were the most common types. Female sex was associated with structural barriers (OR = 2.1). Disorder severity was negatively associated with need barriers (OR = 0.4), and positively associated with structural barriers (OR = 2.5) and psychological barriers (OR = 2.5).

Conclusion: Despite the need for treatment and better services, psychological barriers were the major reason for not seeking treatment. Apart from providing more specialists, investing in awareness, de-stigmatization, and information is the ultimate strategy for improving psychiatric care.

Keywords: Mental health; healthcare; treatment adherence; treatment seeking; treatment dropout

Introduction

Mental disorders are among the most burdensome health problems worldwide, affecting approximately one quarter of the adult population.1 According to the Global Burden of Disease study, mental disorders represent 32.4% of all years lived with disability, involving human, economic, and social costs.2 Despite advances and the availability of treatment resources for managing mental disorders, mental health policies have failed to provide full access to the health care system for individuals with psychopathologies. Even in countries where mental health coverage is broader, the rate of individuals who drop out of – rather than seek – treatment is substantial.3 This issue is even more critical when the available resources are scarce, the distribution is unequal, and their use is inefficient.4,5 Across the world, the major obstacles to seeking and staying in treatment are the low perceived need for treatment, and attitudinal barriers (such as misunderstandings about treatment and stigma).6,7

In low-and-middle-income countries (LMIC), treatment dropout is high7-10 despite the difficulty obtaining it.11 Furthermore, multimorbidity plays a major role in LMIC, because co-occurring disorders begin approximately one decade earlier than in high-income countries.12 Multi-morbidity affects economically active individuals, involves earlier treatment, and generally requires more specialized personnel an in already overloaded health care system.12,13 These findings suggest that the reasons for treatment dropout require closer investigation and that comprehensive explanations must go beyond the structural availability of health care facilities.

Data from cross-sectional studies7,14 in both high-income14 and LMIC15 indicate that attitudinal barriers are the most frequent reasons for lack of treatment. In most LMIC, the shortage of health care personnel and limited health facilities hinder treatment access. Unequal...
distribution and regional variations in health care resources are further barriers to treatment for mental disorders. As consequence, the approach to regional health care planning could influence health-seeking behaviors in the midst of scarce resources and budget shortages, which are commonplace in LMIC.

We are unaware of any Brazilian study that has addressed the problem of treatment barriers and/or treatment dropout in epidemiological samples of individuals with mental disorders. The few studies focusing on this issue have investigated clinical samples and patients with substance use disorders, limiting the generalization of the findings. The aim of the present study was to examine the barriers to seeking and staying in treatment, as well as the correlates of those barriers, in a community sample of individuals with mental disorders in the fourth largest metropolitan area in the world.

Methods

Sampling

A representative sample of individuals aged 18 years or older was selected through a multistage, stratified probability sampling strategy (n=5,037) in the São Paulo metropolitan area. The region of São Paulo and its 38 adjacent municipalities has about 20 million inhabitants. Details of sampling, recruitment, and weighting procedures have been reported elsewhere. Table S1, available as online-only supplementary material, shows the sample characteristics and the lifetime and 12-month prevalence of any mental disorders. The sample predominantly consisted of employed (66.2%), married (59.8%) women (52.8%). The lifetime prevalence of at least one mental disorder was 44.8%, and the 12-month prevalence of at least one mental disorder was 29.6%.

Diagnostic and sociodemographic data assessment

We applied the World Mental Health Survey version of the Composite International Diagnostic Interview (WMH-CIDI) to collect the respondents’ sociodemographic data, psychiatric diagnosis, level of impairment, and access to health care services. Lay professional interviewers administered a fully structured WMH-CIDI in the respondents’ households between May 2005 and May 2007. This interview allows diagnosis of 20 DSM-IV mental disorders: major depressive disorder, bipolar I and II disorders, dysthymia, panic disorder, agoraphobia, social phobia, specific phobia, childhood and adult separation anxiety disorders, generalized anxiety disorder, post-traumatic stress disorder, alcohol and drug abuse and dependence, intermittent explosive disorder, oppositional-defiant disorder, conduct disorder, and attention-deficit/hyperactivity disorder. The interview consists of two broad sections. Part 1 (n=5,037), which was administered to the whole sample, includes core diagnostic sections, demographic information, daily functioning, and physical morbidity. Part 2 includes questions about risk factors, consequences, and other correlates, assessment of additional disorders (e.g., pre-menstrual disorder or neurasthenia) and the use of mental health care services. To reduce respondent burden and control study costs, Part 2 was only administered to those (n=2,942) who met lifetime criteria for any Part 1 core disorders, as well as a probability subsample of other respondents. To prevent recall bias, oppositional-defiant, conduct, and attention-deficit/hyperactivity disorders were assessed only in respondents aged 18 to 44 years old.

The sociodemographic correlates were age (years), sex (male/female), completed years of education (0-4, 5-8, 9-11, and ≥12), marital status (married/cohabiting, previously married, never married), and family income (low, lower-middle, upper-middle, and high).

Severity level

Serious disorders in the last 12 months were defined as: bipolar I disorder or substance use disorder with physiological dependence, a suicide attempt in conjunction with any other disorder, severe role impairment due to a mental disorder in at least two areas in the disorder-specific Sheehan Disability Scales, or overall functional impairment from any disorder consistent with a score of 50 or less on the Global Assessment of Functioning. Disorders were classified as moderate if the respondent had substance use disorder without physiological dependence or at least moderate interference in any Sheehan Disability Scale domain. All other disorders were classified as mild.

Use of services

Treatment was assessed by asking the respondents (n=2,942) if they had consulted any professionals (as an outpatient or inpatient) for problems with their emotions, nerves, mental health, or alcohol/drug use in the last 12 months. A list of professionals was presented that included mental health (e.g., psychiatrist, psychologist), general medical (e.g., general physician, cardiologist, gynecologist), other mental health professionals (e.g., nurse, occupational therapist, social worker), religious counselors (e.g., priest, minister, rabbi), and traditional healers (e.g., herbalist, spiritual healer). In a previous publication, we indicated that approximately 90% of people with mental disorders in São Paulo were either untreated or insufficiently treated.

Barriers to using services or not continuing their use

First, using the WMH-CIDI, we asked the respondents who reported not having used mental health services in the 12 months prior to the interview if they “ever felt that they would need to see a professional because of problems with emotions, nerves, or mental health” (perceived need for treatment).

Low perceived need refers to respondents who reported that they “did not need help” or that they “needed help for less than 4 weeks.” Additional questions regarding structural barriers (e.g., lack of health insurance, money, or available treatment) and attitudinal barriers (e.g., low
perceived efficacy of treatment, stigma, or the desire to handle the problem on their own) to seeking treatment were asked to those who reported a perceived need for treatment (needing help for more than 4 weeks) (see Table S2, available as online-only supplementary material, for the full list of structural and attitudinal barriers to treatment seeking).

Individuals who had obtained mental health treatment in the 12 months prior to the interview were further asked if they were still in treatment. If not, we asked whether they discontinued treatment before the date recommended by their treatment provider. A series of reasons for treatment dropout were presented. For those who "got better" or "didn't need help anymore," no questions about structural or attitudinal reasons were asked. Table S3 (online-only supplementary material) presents the full list of structural and attitudinal reasons for dropout.

Only individuals who dropped out of all treatment modalities and provided reasons why were included in the analysis. If the respondent reported multiple reasons for not seeking help or for dropping out of treatment, each reason was coded positively. Several previous studies have already used the same methodology and questions from the WMH-CIDI to assess treatment dropout and/or barriers to treatment.

Statistical analyses

For this report, we used data from Part 2 of the WMHS-CIDI (n=2,942). The analyses included conventional methods of variance estimation with complex sample survey data according to the sample design. Part 2 data was weighted to adjust for undersampling of non-cases from Part I and differential within-household probability of selection, as well as for residual aggregate discrepancies between samples and populations. This post-stratification weighting allowed the sample distribution to be compared to population distribution in the 2000 Census regarding sociodemographic variables (see details in Viana et al.).

Logistic regression analysis evaluated the likelihood of sociodemographic correlates in relation to reasons for not seeking treatment. Sociodemographic variables and disorder severity were controlled for the number of disorders in the last 12-months. The proportion of barriers to seeking treatment among those who had any mental disorder 12 months before the interview and did not seek treatment was calculated. The same analysis was performed in the sub-sample of individuals with a perceived need for treatment. The treatment modalities received in the 12 months prior to the interview were consolidated into four categories: 1) psychiatrists; 2) other mental health professionals; 3) the general medical sector; and 4) human services. For each modality, the median number of visits, interquartile range of visits, and proportion of patients who completed, discontinued, or were still in treatment were determined. Multivariate logistic models were run for each outcome (number of visits and dropout according to treatment provider type). The predictors included the number of visits, age, sex, marital status, education, income, insurance status, previous mental health treatment, mental disorders, number of disorders, number of treatment providers, and the use of complementary and alternative medicine (CAM).

Ethics statement

The procedures were approved by the ethics and research committee of the Faculdade de Medicina, Universidade de São Paulo. The respondents were interviewed after the nature of the procedures was fully explained, total confidentiality was assured, and written informed consent was provided. The investigation was conducted according to Helsinki Declaration criteria.

Results

Of all the respondents (n=2,942), only 10% received any treatment for mental health problems in the 12 months prior to the interview. The most common treatment providers were psychiatrists (38.5%), other mental health professionals (33.3%), and general medical care services (33%). Human services and psychiatric care were the treatment settings most frequently reported by those still in treatment (78.9 and 66.6%, respectively).

CAM had the highest treatment adherence of any category (92.3%). Other mental health professionals (20.5%) and general medical treatment (20.3%) were more prevalent among treatment completers (Table 1). Dropout rates differed between groups, being more prevalent in general medical care (44.3%), and other mental health care providers (36.4%), and less prevalent among those receiving care in a human services setting (13.4%) and CAM (5.7%) (Figure 2).

Treatment was obtained by 23% of the sample who had any mental disorder. The proportion of treated respondents was significantly higher with increased severity (13% mild, 21.7% moderate, 35% severe; p < 0.0001). Treatment dropout occurred in 16.8% of those who received any type of treatment; there were significant differences among severity levels (Table 2).

Among respondents with a mental disorder of any severity level, the most common reason for not seeking treatment was a low perceived need for treatment (56%). This rate was significantly higher among those with milder
disorders than those with moderate disorders (70.1 vs. 52.3%), although the difference was not significant between those with moderate and severe disorders (52.3% vs. 40.3%). Among the psychological barriers to treatment (39.7%), the wish to handle the disorder on their own was the most prevalent (29.4%), and it increased with severity (20.4% mild vs. 39.1% severe disorders).

Structural barriers (14.2%) were also reported more frequently with increasing disorder severity (p = 0.013), with financial (10.9%) and availability (9.9%) being the most prevalent. Treatment availability increased between moderate and severe disorders (9.2 vs. 18.3%; p = 0.013), while financial increased between mild and moderate disorders (4.4 vs. 11.6%; p = 0.002) (Table S4, available as online-only supplementary material).

Among respondents who recognized their need for treatment, the main reasons for not obtaining treatment were psychological barriers (90.2%), the most common of which were the desire to handle the disorder on their own (66.7%), and the perceived ineffectiveness of the treatment (16.3%). There was no significant difference between severity levels.

The most frequent structural barriers (32.3%) were financial (24.7%), and availability (22.5%). The prevalence of any structural barrier was 22.5% for mild, 29.2% for moderate, and 42.1% for severe disorders (p < 0.032) (Table 3).

Correlates of treatment-seeking barriers and dropout

Table 4 shows the correlates for not seeking treatment. Disorder severity was the only predictor associated with all groups, being negatively associated with need barriers (OR = 0.4) and positively associated with structural barriers (OR = 2.5) and psychological barriers (OR = 2.5). Female sex was positively associated only with structural barriers (OR = 2.1).

Of the demographic correlates for treatment dropout among respondents with a disorder of any severity (Table 5), age (OR = 1.1) and education (OR = 1.5) were significant predictors of psychological barriers.

Discussion

Despite the high prevalence of mental disorders in the last 12 months (29.6%) in the São Paulo metropolitan area,28 few affected individuals obtained treatment, and fewer still completed the recommended treatment. Psychological barriers were the main obstacles to seeking and adhering to treatment. The perception that treatment is unnecessary and the desire to resolve the problem without professional help were the most commonly reported reasons.

Adherence was higher among respondents treated by psychiatrists, reinforcing the need for more specialized care for individuals with psychopathology. As a key implication for LMIC, improving mental health care...
| Table 1 | Mental health treatment type and status in the 12 months prior to the interview (n=2,942) |
|---------|------------------------------------------------------------------------------------------|
|         | Still in treatment | Number of visits | Premature termination | Completed treatment | Still in treatment |
|         | n  (%) (SE)   | Median | IQR | n  (%) (SE) | n  (%) (SE) | n  (%) (SE) |
| Among total sample | 2,942 (100.0) | 0.6 | - | - | - | - |
| Among service providers | | | | | | |
| Psychiatrist | 198 (38.5) | 2.8 | 3.8 (1.5-8.5) | 37 (19.6) | 3.7 | 26 (13.8) | 3.1 | 125 (66.6) | 3.7 |
| Other mental health providers | 133 (33.3) | 2.1 | 2.9 (1.2-11.0) | 40 (36.4) | 4.9 | 21 (20.5) | 3.4 | 72 (43.1) | 4.9 |
| General medical care | 174 (33.0) | 2.6 | 1.5 (1.0-2.0) | 81 (44.3) | 5.1 | 26 (20.3) | 5.2 | 67 (35.4) | 5.3 |
| Human services | 63 (14.8) | 2.5 | 1.8 (1.2-4.8) | 10 (13.4) | 5.4 | 7 (7.7) | 3.6 | 46 (78.9) | 7.9 |
| Complementary and alternative medicine | 56 (13.8) | 2.2 | 4.0 (2.1-20.0) | 4 (5.7) | 3.7 | 3 (2.0) | 1.3 | 49 (82.3) | 3.9 |
| Any<sup>2</sup> | 473 (100.0) | 0.0 | 3.3 (1.3-9.8) | 138 (29.5) | 2.5 | 63 (14.4) | 2.3 | 272 (56.1) | 2.5 |
| Significance tests | | | | | | |
| 4 df test across providers | - | 23.1 < 0.0001 | - | 19.8 | 0.001 | - | 68.5 < 0.0001 |
| 3 df test across providers excluding CAM<sup>1</sup> | - | 22.1 < 0.0001 | - | 6.3 | 0.097 | - | 66.5 < 0.0001 |

CAM = complementary and alternative medicine; df = degrees of freedom; IQR = interquartile range; SE = standard error.

* The three proportions in each row sum to 100%. Percentages are weighted to adjust for differences in selection probabilities, differential nonresponse, oversampling of Part II cases, and residual differences in sociodemographic variables between the sample and the population.

<sup>1</sup> Unweighted number of respondents who received treatment in each sector.

<sup>2</sup> The median number of visits in any sector represents the median across all sectors, not within any one sector, among patients treated in one or more sectors. The number who dropped out reported in this row represents those who dropped out of all sectors. Patients treated in multiple sectors over the 12-month period who were still in treatment in any of those sectors at the time of the interview were classified as still in treatment, and those no longer in any treatment who reported completing treatment in at least one sector were classified as having completed treatment.

<sup>3</sup> CAM was not included in the analysis due to the low drop-out rate.
training for teams involved in task-shifting programs could improve adherence to psychiatric treatment. Our findings also indicate a need for awareness programs in the general population to decrease stigmatization. Thus, fundamental components for increasing the use of health care services in LMIC include changing public opinion regarding psychopathologies and expanding the training of non-specialized personnel in primary care.

Health systems with structural and budget problems are common in LMIC. However, even among individuals who recognize their need for treatment, “cognitive barriers” (e.g., low perceived need and psychological barriers) were the main impediments to treatment. In this context, structural barriers play a secondary role. However, regardless of national income, underuse of health systems seems to be the norm for mental health. In the São Paulo metropolitan area, approximately one quarter of those with mental health problems received some care. Among other LMIC and upper-middle-income-countries, only Iraq (14.1%), Colombia (24.3%), and

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**Table 2** Prevalence of treatment for mental disorders in the past 12 months, including treatment dropout according to severity level

| Severity | Any severity | Severe | Moderate | Mild |
|----------|--------------|--------|----------|------|
| n (%)    | SE %        | SE %   | SE %     | SE % |
| Individuals who received treatment | 1,315 (23.0) | 1.0 | 35.0 | 2.1 |
| Individuals who dropped out of treatment | 286 (16.8) | 2.8 | 15.6 | 3.1 |
| χ²    | p-value |
| 61.3 | < 0.0001 |

SE = standard error.

**Table 3** Reasons for not seeking treatment among respondents who recognized they needed treatment in the past 12 months, according to disorder severity

| Reasons                        | Any severity (n=457) | Severe (n=179) | Moderate (n=160) | Mild (n=118) | χ² across all groups | χ² between severe, moderate | χ² between moderate, mild |
|--------------------------------|----------------------|----------------|------------------|-------------|----------------------|----------------------------|---------------------------|
| Structural barriers            |                      |                |                  |             | χ²                   | p-value                    | p-value                   |
| Financial                      | 24.7                 | 3.4            | 32.2             | 4.7         | 24.4                 | 4.9                        | 14.7                      | 4.6                       | 12.8                      | 0.006                    | 1.2                       | 0.288                    | 4.5                       | 0.044                    |
| Availability                   | 22.5                 | 2.4            | 30.6             | 4.3         | 19.3                 | 3.2                        | 15.2                      | 4.4                       | 6.7                       | 0.051                    | 4.1                       | 0.054                    | 0.5                       | 0.494                    |
| Transportation                 | 9.7                  | 1.5            | 16.0             | 3.1         | 8.2                  | 3.4                        | 3.0                       | 1.3                       | 18.5                      | 0.001                    | 2.3                       | 0.144                    | 1.7                       | 0.198                    |
| Inconvenience                  | 7.7                  | 1.5            | 13.4             | 3.5         | 6.0                  | 2.3                        | 2.0                       | 1.2                       | 9.4                       | 0.018                    | 2.6                       | 0.119                    | 2.7                       | 0.115                    |
| Any structural barrier         | 32.3                 | 3.7            | 42.1             | 4.9         | 29.2                 | 5.4                        | 22.5                      | 5.4                       | 7.9                       | 0.032                    | 3.3                       | 0.081                    | 1.3                       | 0.268                    |
| Psychological barriers         |                      |                |                  |             |                      |                            |                           |                           |                           |                            |                            |                            |                            |                           |
| Wanted to handle on own        | 66.7                 | 2.8            | 65.5             | 7.5         | 66.9                 | 6.1                        | 68.2                      | 5.5                       | 0.1                       | 0.948                    | 0.0                       | 0.912                    | 0.0                       | 0.851                    |
| Perceived ineffectiveness      | 16.3                 | 2.4            | 19.7             | 4.8         | 14.3                 | 3.9                        | 14.1                      | 5.8                       | 0.7                       | 0.698                    | 0.6                       | 0.441                    | 0.0                       | 0.980                    |
| Stigma                         | 7.5                  | 1.1            | 12.1             | 2.4         | 6.3                  | 1.7                        | 2.7                       | 1.3                       | 9.5                       | 0.018                    | 3.6                       | 0.069                    | 3.4                       | 0.078                    |
| Thought would get better       | 6.5                  | 1.1            | 12.0             | 2.4         | 6.9                  | 1.7                        | 2.3                       | 0.7                       | 18.1                      | 0.001                    | 4.2                       | 0.051                    | 5.5                       | 0.027                    |
| Problem was not severe         | 6.4                  | 1.1            | 9.0              | 2.1         | 7.2                  | 1.9                        | 4.0                       | 1.5                       | 4.7                       | 0.114                    | 0.4                       | 0.546                    | 1.9                       | 0.177                    |
| Any psychological barrier      | 90.2                 | 1.9            | 89.0             | 3.0         | 92.3                 | 3.0                        | 89.2                      | 3.9                       | 0.7                       | 0.724                    | 0.5                       | 0.472                    | 0.4                       | 0.527                    |

SE = standard error.
Mexico (25.8%) had lower rates of individuals with severe disorders who are not receiving treatment. However, this rate was also lower in the following high-income-countries: Japan (24.1%), Israel (33.6%), and Portugal (39.4%).

The difference in low perceived need among respondents with mild-to-moderate disorders but not in moderate-to-severe disorders suggests that individuals tolerate mild but not moderate/severe impairment. More severe disorders cause increasing difficulties and functional limitations. Thus, since manuals such as the DSM require that clusters of symptoms which produce clinically significant distress or impairment be considered disorders, the criterion significant impairment could lead to increased sensitivity and generate false-positive diagnoses. In fact, the perceived need for treatment is influenced and

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### Table 4 Demographic correlates for treatment-seeking barriers in the past 12 months among those with disorders of any severity (n=2,942)

|                          | Any need barrier | Any structural barrier | Any psychological barrier |
|--------------------------|------------------|------------------------|--------------------------|
|                          | OR (95%CI)       | χ² p-value             | OR (95%CI)               | χ² p-value             | OR (95%CI)               | χ² p-value             |
| Age, years               |                  |                        |                          |                          |                          |                          |
| 18-34                    | 0.5 (0.2-1.6)    | 1.6 0.660              | 1.4 (0.6-3.1)            | 2.1 0.352              | 2.3 (0.8-6.7)            | 2.9 0.413              |
| 35-49                    | 0.6 (0.2-1.8)    | -                      | 1.5 (0.8-2.9)            | -                      | 2.2 (0.8-6.5)            | -                      |
| 50-64                    | 0.6 (0.2-1.9)    | -                      | -                        | -                      | 1.9 (0.7-5.1)            | -                      |
| Sex                      |                  |                        |                          |                          |                          |                          |
| Female                   | 0.7 (0.5-1.2)    | 1.7 0.192              | 2.1 (1.0-4.5)            | 4.3 0.039              | 1.1 (0.7-1.8)            | 0.3 0.580              |
| Education, years         |                  |                        |                          |                          |                          |                          |
| 0-4                      | 1.0 (0.4-2.5)    | 2.2 0.540              | 0.8 (0.3-2.6)            | 11.1 0.011             | 1.1 (0.4-2.9)            | 1.2 0.755              |
| 5-8                      | 0.7 (0.3-1.5)    | -                      | 1.0 (0.3-3.3)            | -                      | 1.3 (0.6-2.7)            | -                      |
| 9-11                     | 0.8 (0.4-1.7)    | -                      | 2.0 (0.7-5.8)            | -                      | 1.2 (0.6-2.4)            | -                      |
| Income                   |                  |                        |                          |                          |                          |                          |
| Low                      | 0.8 (0.5-1.3)    | 1.6 0.670              | 2.0 (0.9-4.7)            | 3.9 0.277              | 0.8 (0.5-1.5)            | 2.6 0.461              |
| Lower-middle             | 1.0 (0.7-1.7)    | -                      | 2.0 (0.8-5.2)            | -                      | 0.7 (0.5-1.2)            | -                      |
| Upper-middle             | 1.0 (0.6-1.7)    | -                      | 1.4 (0.7-3.1)            | -                      | 1.0 (0.5-1.8)            | -                      |
| Marital status           |                  |                        |                          |                          |                          |                          |
| Married/cohabitating     | 0.8 (0.4-1.5)    | 0.9 0.637              | 1.6 (0.8-3.3)            | 3.4 0.184              | 1.2 (0.6-2.2)            | 0.3 0.853              |
| Separated/widowed/divorced| 0.8 (0.4-1.4)   | -                      | 1.9 (0.9-3.9)            | -                      | 1.1 (0.6-2.3)            | -                      |
| Severity                 |                  |                        |                          |                          |                          |                          |
| Severe                   | 0.4 (0.2-0.6)    | 17.5 0.000             | 2.5 (1.3-5.0)            | 7.9 0.019              | 2.5 (1.6-4.0)            | 17.5 0.000             |
| Moderate                 | 0.6 (0.3-1.0)    | -                      | 1.6 (0.8-3.2)            | -                      | 1.7 (1.0-3.2)            | -                      |

95%CI = 95% confidence interval; OR = odds ratio.

Controlled for the number of mood disorders, anxiety disorders, substance disorders, and externalizing disorders in the last 12 months.

### Table 5 Demographic correlates of reasons for treatment dropout among respondents with disorders of any severity

|                          | Any need barriers | Any structural barriers | Any psychological barriers |
|--------------------------|------------------|------------------------|--------------------------|
|                          | OR (95%CI)       | χ² p-value             | OR (95%CI)               | χ² p-value             | OR (95%CI)               | χ² p-value             |
| Age                      | 1.0 (0.9-1.1)    | 0.0 0.838              | 1.0 (0.9-1.0)            | 1.3 0.256              | 1.1 (1.0-1.2)            | 6.0 0.014              |
| Sex                      |                  |                        |                          |                          |                          |                          |
| Female                   | -                | -                      | 0.3 (0.0-2.4)            | 1.5 0.219              | 3.3 (0.2-47.9)           | 0.9 0.350              |
| Education                |                  |                        |                          |                          |                          |                          |
| As a continuous variable | 1.2 (0.8-1.9)    | 0.6 0.439              | 1.0 (0.8-1.3)            | 0.0 0.883              | 1.5 (1.0-2.3)            | 4.4 0.036              |
| Income                   |                  |                        |                          |                          |                          |                          |
| As a continuous variable | 0.9 (0.5-1.7)    | 0.1 0.734              | 1.0 (0.7-1.3)            | 0.0 0.904              | 1.3 (0.9-1.8)            | 1.6 0.211              |
| Marital status           |                  |                        |                          |                          |                          |                          |
| Married/cohabitating     | 1.1 (0.2-7.9)    | 0.0 0.914              | 0.9 (0.1-8.0)            | 0.0 0.957              | 4.0 (0.6-27.6)           | 2.2 0.142              |
| Separated/widowed/divorced| -                | -                      | -                        | -                      | -                        | -                      |
| Severity                 |                  |                        |                          |                          |                          |                          |
| Severe                   | 0.5 (0.0-7.1)    | 0.2 0.631              | 0.4 (0.0-4.0)            | 0.7 0.395              | 0.5 (0.1-3.5)            | 0.5 0.493              |
| Moderate                 | -                | -                      | -                        | -                      | -                        | -                      |

Controlled for the number of mood disorders, anxiety disorders, substance disorders, and externalizing disorders in the last 12 months. 95%CI = 95% confidence interval; OR = odds ratio.
constructed by one’s perception of symptom severity and one’s feelings about treatment. 32

Low perceived need for treatment is a complex behavior related to personal attitudes and beliefs, subjective social norms, past experience, and social standards. 32 Present worldwide, 2 this phenomenon occurs in distinct cultural and economic backgrounds, such as South Africa, 15 Japan, 33 or the United States. 24

It should be pointed out that the subgroup who “recognized their need for treatment,” perceived ineffectiveness of treatment was the most commonly reported psychological barrier. This finding is remarkable, since positive past treatment was negatively associated with low perceived need. 34 This indicates that the initial treatment should be the most effective available one, since the perceived effectiveness of treatment would lead to better adherence rates. 35

The respondents’ perception that they “did not need treatment” and their desire to deal with the problem themselves indicates that people tend to handle mental disorders differently from other chronic diseases, such as diabetes (i.e., cognitive bias). Despite the psychiatric reform in Brazil in late 20th century 36 and the advances in mental health care, misconceptions regarding psychiatric treatment still persist. For example, some individuals still believe that mental health treatment is harsh and coercive and could worsen a patient’s condition. 37 Brazil has a history of uprisings against treatments considered coercive, such as the Vaccine Revolt of 1904, 38 and this cultural aspect could deeply affect the population’s treatment-seeking behavior.

Our results should be interpreted in light of some important limitations. First, the cross-sectional design could not account for the complexity of treatment-seeking behavior, since it cannot determine the direction of the association. 39 Second, since the analysis combined different 12-month disorders into new groups, no disorder-specific needs were assessed. Nevertheless, the perceived need could differ across disorders. 40 Moreover, some of the most disabling disorders (e.g., schizophrenia) were not evaluated. Third, the perceived need for treatment and treatment barriers could be related to the severity of some psychopathologic conditions. 41 Fourth, treatment barriers and the reasons for dropout were investigated through a structured interview, which limited comprehension of anything beyond low perceived need for treatment, possibly underestimating such reasons. Furthermore, no additional questions probed for the reasons behind the respondents’ answers. Such deeper motives could provide valid reasons for treatment dropout. Nevertheless, despite these limitations, this study has shed light on the complex issue of treatment compliance.

In conclusion, psychological barriers were the main reason for not seeking treatment, even among individuals who recognized their need for treatment. Despite health funding and structural issues, the patients’ desire to resolve their mental health problems themselves is the main reason for avoiding treatment. These findings suggest that investing in treatment awareness, along with providing better services and more highly trained professionals, are fundamental steps toward improving access to mental health care. Campaigns to promote mental health and achieve better psychiatric treatment adherence must modify cultural aspects resistant to mental health treatment.

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Disclosure

The authors report no conflicts of interest.

References

1 Bonadiman CS, Passos VM, Mooney M, Naghavi M, Melo AP. The burden of disease attributable to mental and substance use disorders in Brazil: global burden of disease study, 1990 and 2015. Rev Bras Epidemiol. 2017;20 Suppl 1:191-204.
2 Vigo D, Thornicroft G, Atun R. Estimating the true global burden of mental illness. Lancet Psychiatry. 2016;3:171-8.
3 Jorm AF. ‘Unmet need’ and ‘met un-need’ in mental health services: artefacts of a categorical view of mental health problems. Epidemiol Psychiatr Sci. 2017;26:607-8.
4 Saxena S, Thornicroft G, Knapp M, Whiteford H. Resources for mental health: scarcity, inequity, and inefficiency. Lancet. 2007;370:878-89.
5 Bloom DE, Caferio ET, Jané-Llopis E, Abrahams-Gessel S, Bloom LR, Fathima S, et al. The global economic burden of noncommunicable diseases [Internet]. 2011 Sep [cited 2021 Jan 28]; www3.weforum.org/docs/WEF_Harvard_HE_GlobalEconomicBurdenOnNonCommunicableDiseases_2011.pdf
6 Prins MA, Verhaar PF, Bensing JM, van der Meer K. Health beliefs and perceived need for mental health care of anxiety and depression—the patients’ perspective explored. Clin Psychol Rev. 2008;28:1038-58.
7 Andrade LH, Alonso J, Mneimneh Z, Wells JE, Al-Hamzawi A, Borges G, et al. Barriers to mental health treatment: results from the WHO World Mental Health surveys. Psychol Med. 2014;44:1303-17.
8 Se Dad S, Stein DJ, Herman A, Kessler R, Sonnega J, Heeringa S, et al. Twelve-month treatment of psychiatric disorders in the South African Stress and Health Study (World Mental Health Survey Initiative). Soc Psychiatry Psychiatr Epidemiol. 2008;43:889-97.
9 Khazaie H, Rezaie L, de Jong DM. Dropping out of outpatient psychiatric treatment: a preliminary report of a 2-year follow-up of 1500 psychiatric outpatients in Kermanshah, Iran. Gen Hosp Psychiatry. 2013;35:314-9.
10. Wells JE, Browne MO, Aguilar-Gaxiola S, Al-Hamzawi A, Alonso J, Angermeyer MC, et al. Drop out from out-patient mental healthcare in the World Health Organization’s World Mental Health Survey initiative. Br J Psychiatry. 2013;202:42-9.

11. Lora A, Hanna F, Chisholm D. Mental health service availability and delivery at the global level: an analysis by countries’ income level from WHO’s Mental Health Atlas 2014. Epidemiol Psychiatr Sci. 2017 Mar 13-12. doi: http://dx.doi.org/10.1017/S2045796017000075. Online ahead of print.

12. Wang YP, Nunes BP, Coelho BM, Santana GL, do Nascimento CF, Lora A, Hanna F, Chisholm D. Mental health service availability. Br J Psychiatry. 2013;202:42-9.

13. Mulder R, Rucklidge J, Wilkinson S. Why has increased provision of psychiatric treatment not reduced the prevalence of mental disorder? Aust N Z J Psychiatry. 2017;51:1176-7.

14. Sareen J, Jagdeo A, Cox BJ, Clara I, ten Have M, Belik SL, et al. Perceived barriers to mental health service utilization in the United States, Ontario, and the Netherlands. Psychiatr Serv. 2007;58:357-64.

15. Bruwer B, Sorsdahl K, Harrison J, Stein DJ, Williams D, Seedat S. Barriers to mental health care and predictors of treatment dropout in the South African Stress and Health Study. Psychiatr Serv. 2011;62:771-7.

16. Andersson HW, Steinsbekk A, Walderhaug E, Otterholt E, Nordfjærn T. Predictors of dropout from inpatient substance use treatment: a prospective cohort study. Subst Abuse. 2018;12:1178221818760551.

17. Cruz MS, Andrade T, Bastos FI, Leal E, Bertoni N, Lipman L, et al. Patterns, determinants and barriers of health and social service utilization among young urban crack users in Brazil. BMC Health Serv Res. 2013;13:536.

18. Viana MC, Teixeira MG, Beraldi F, Bassani IS, Andrade LH. Sao Paulo Megacity Mental Health Survey - a population-based epidemiological study of psychiatric morbidity in the Sao Paulo metropolitan area: aims, design and field implementation. Braz J Psychiatry. 2009;31:375-86.

19. Simon GE, VonKorff M. Recall of psychiatric history in cross-sectional surveys: implications for epidemiologic research. Epidemiol Rev. 1995;17:221-7.

20. Kessler RC, Berglund P, Demler O, Jin R, Merikangas KR, Walters EE. Lifetime prevalence and age-of-onset distributions of DSM-IV disorders in the National Comorbidity Survey Replication. Arch Gen Psychiatry. 2005;62:593-602.

21. Leon AC, Olsson M, Portera L, Farber L, Sheehan DV. Assessing psychiatric impairment in primary care with the Sheehan Disability Scale. Int J Psychiatry Med. 1997;27:93-105.

22. Endicott J, Andreasen N, Spitzer RL. Family history research diagnostic criteria. New York: New York State Psychiatric Institute; 1978.

23. Fernandez D, Vigo D, Sampson NA, Hwang I, Aguilar-Gaxiola S, Al-Hamzawi AO, et al. Patterns of care and dropout rates from outpatient mental healthcare in low-, middle- and high-income countries from the World Health Organization’s World Mental Health Survey Initiative. Psychiatr Med. 2020 Apr 281-13. doi: http://dx.doi.org/10.1017/S0033291720000884. Online ahead of print.

24. Motjafari R, Olsson M, Sampson NA, Jin R, Druss B, Wang PS, et al. Barriers to mental health treatment: results from the National Comorbidity Survey Replication. Psychiatr Med. 2011;41:1751-61.

25. Lemer Y, Levinson D. Dropout from outpatient mental health care: results from the Israel National Health Survey. Soc Psychiatry Psychiatr Epidemiol. 2012;47:949-55.

26. Heeringa SG, Wells EJ, Hubbard F, Mneimneh ZN, Chiu WT, Sampson NA, et al. Sample designs and sampling procedures. In: Kessler RC, Ustün TB, editors. The WHO world mental health surveys: global perspectives on the epidemiology of mental disorders. New York: Cambridge University Press; 2008 p. 14-32.

27. Research Triangle Institute. SUDAAN. Professional Software for Survey Data Analysis. NC: Research Triangle Park; 2002.

28. Andrade LH, Wang YP, Andreoni S, Silveira CM, Alexandrino-Silva C, Sru ER, et al. Mental disorders in megacities: findings from the Sao Paulo megacity mental health survey, Brazil. PLoS One. 2012;7:e31879.

29. Massuda A, Hone T, Leles FA, de Castro MC, Atun R. The Brazilian health system at crossroads: progress, crisis and resilience. BMJ Glob Health. 2018;3:e000829.

30. Spitzer RL, Wakefield JC. DSM-IV diagnostic criterion for clinical significance: does it help solve the false positives problem? Am J Psychiatry. 1999;156:1856-64.

31. American Psychiatric Association. Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM-5). Arlington: American Psychiatric Publishing; 2013.

32. Van Voorhees BW, Fogel J, Houston TK, Cooper LA, Wang NY, Ford DE. Beliefs and attitudes associated with the intention to not accept the diagnosis of depression among young adults. Ann Fam Med. 2005;3:38-46.

33. Kanehara A, Umeda M, Kawakami N, World Mental Health Japan Survey Group. Barriers to mental health care in Japan: results from the World Mental Health Japan Survey. Psychiatry Clin Neurosci. 2015;69:523-33.

34. Van Voorhees BW, Fogel J, Houston TK, Cooper LA, Wang NY, Ford DE. Attitudes and illness factors associated with low perceived need for depression treatment among young adults. Soc Psychiatry Psychiatr Epidemiol. 2006;41:746-54.

35. Rush AJ, Trivedi MH, Wisniewski SR, Nierenberg AA, Stewart JW, Warden D, et al. Acute and longer-term outcomes in depressed outpatients requiring one or several treatment steps: a STAR*D report. Am J Psychiatry. 2006;163:1905-17.

36. Amarante P. Loucos pela vida: a trajetória da reforma psiquiátrica no Brasil. Rio de Janeiro: Editora Fiocruz; 1995.

37. Monteiro VB, dos Santos JQ, Martin D. Patients’ relatives delayed psychiatric treatment not reduced the prevalence of mental disorder? Aust N Z J Psychiatry. 2017;51:e31879.

38. Needell JD. The revolta contra vacina de 1904: the revolt against "modernization" in Belle Epoque Rio de Janeiro. Hisp Am Hist Rev. 1911;67:233-69.

39. Mechanic D. Removing barriers to care among persons with psychiatric symptoms. Health Aff (Millwood). 2002;21:137-47.

40. Motjafari R, Olsson M, Mechanic D. Perceived need and help-seeking in adults with mood, anxiety, or substance use disorders. Arch Gen Psychiatry. 2002;59:77-84.

41. Kessler RC, Little RJ, Groves RM. Advances in strategies for minimizing and adjusting for survey nonresponse. Epidemiol Rev. 1995;17:192-204.