

Deinstitutionalization of long stay patients in a psychiatric hospital in Rio de Janeiro

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Abstract *Critical Time Intervention (CTI) is a time-limited mental health intervention offered to people with mental disorders during critical/transition periods. This study assesses the impact of CTI-BR on social performance and quality of life within a population in the process of deinstitutionalization, after long-term hospitalization in a psychiatric institution. The study population was split into two groups, one of which received CTI plus the regular care. Results showed no advantage of the intervention compared to the regular programs provided by the institution. When study participants are analyzed as a group, we found positive improvement regarding their social functioning and self-perception of their mental-health. Results show that it is possible for elderly patients discharged from long-term psychiatric care to live in residential facilities in the community, supervised by clinical teams.*

Key words *Deinstitutionalization, Residential facilities, Mental health, Brazil, Critical time intervention*

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Introduction

The goal of this article is to analyze the process of deinstitutionalizing a group of patients with serious mental health disorders who had been under long-term care in a psychiatric institution, and were transferred to residential facilities in the community. The focus was on assessing the propriety of using a community mental health program - Critical Time Intervention (CTI BR) - in this specific context.

In Brazil, especially since the 1990s, government-provided psychiatric care has been marked by a deinstitutionalization policy characterized by a reduction in the number of beds in psychiatric hospitals and the concomitant implementation of a network of integrated options aimed at replacing the model centered in psychiatric hospital. This network is made up of psychosocial care centers (CAPS I, II, III, children and youth, drug and alcohol abuse centers), by the primary healthcare units that also provide mental healthcare, community day centers, wards in general hospital and residential facilities. Furthermore, there are services that focus specifically on drug and alcohol addicts, such as the welcome centers and the Residential Care services (including the so-called therapeutic communities)¹.

Residential Care services are of particular interest to this study. They were implemented in Brazil in 2000, as one of the elements of the Unified Healthcare System (SUS)². According to the Ministry of Health, these are residential units for mental health patients who are leaving in long-term psychiatric facilities, and have no social or family support to enable their re-insertion into society. This program highlights the importance of the clinical and social aspects of integration in residential units, where the multi-disciplinary support provided must take into consideration the uniqueness of each resident and attempt to re-insert him or her into the network of services available and develop social relationships within the community. In 2001 a new type of residential treatment facility was created (RT II), focusing on people who are highly dependent and require permanent specific care³.

In Brazil, two assessment studies outlined the clinical and demographic profiles of patients hospitalized in two major psychiatric facilities: Instituto Juliano Moreira, formerly Colônia Juliano Moreira in Rio de Janeiro, and Hospital São Pedro in Porto Alegre^{4,5}. Both studies found an elderly population of patients institutionalized for decades, with limited autonomy and significant

social behavior problems, posing major challenges for the deinstitutionalization programs. A 2008 census of psychiatric hospitals in the state of São Paulo to assess users who had been institutionalized for over one year corroborates these findings, revealing that of 6,349 patients meeting this criterion, 1,987 were over the age of 60⁶.

For the elderly with severe mental disorders who have spent much of their life in psychiatric institutions, moving to community facilities could prove a difficult transition. Among this population, the vulnerability found in other elderly is worsened due to their physical and mental health, and the debilitating and incapacitating effects of institutionalization, such as loss of independence and the skills required for daily life (disabilities), emotional, cognitive and behavioral impairment, and the disconnect with social and family ties, and with community life⁷.

In spite of the high prevalence of elderly patients in the long-term population of psychiatric hospitals, most studies that look at deinstitutionalizing people to community residential units excludes the elderly with mental disorders⁸. In addition, people who already live in such units may face new challenges as they age. Their care needs are specific and they often require additional clinical services related to their advancing age, rather than psychiatric and mental healthcare proper⁹.

In general, international studies that followed patients deinstitutionalized from psychiatric hospitals have found positive results in terms of their social behavior and self-referred quality of life. Patients appear to have a distinct preference for living in less restricted environments compared to the hospital care environment. In terms of psychiatric symptoms and creating new social networks to tackle the effects of isolation due to institutionalization, the results are ambiguous^{10,11}.

Among other dimensions, these studies normally look at aspects related to functioning or social behavior of those in the process of being deinstitutionalized. A substantial number of people with severe mental health problems, especially those diagnosed in the schizophrenia spectrum, suffer significant amounts of personal, domestic, family and labor disabilities. This finding has numerous implications for planning the services, which must provide broad and long-term programs¹².

The Brazilian experience with deinstitutionalizing patients, transferring them to residential facilities after long periods in institutions has not been the object of many follow up studies using

assessment tools. One exception is the study by Vidal et al.¹³ on patients exiting psychiatric hospitals in Barbacena, Minas Gerais, who were followed for two years after being discharged. This study showed satisfactory evolution in terms of their social functional limitations and independence and also revealed an improvement in social interactions.

The goal of that study was to analyze the impact of using CTI-BR on the functional performance and quality of life of a population of patients transitioning between a long period in a hospital environment and a new life in community residential facilities.

The CTI model

Critical Time Intervention (CTI) is a time-limited intervention for critical periods. It is normally offered to people in the process of being deinstitutionalized (for instance leaving shelters, hospitals or prisons), when there is a higher risk that the care required will be discontinued or not accessed.

CTI was initially developed and tested in a randomized study of people with mental disorders who were leaving homeless shelters in New York. This intervention was effective to keep these people from going back to living on the street. The long-term assessment showed that the positive results remained for a period of nine months following the end of the intervention¹⁴.

Although originally applied to the homeless moving from shelter to community housing, CTI has also been applied to people leaving psychiatric hospitals. Tomita and Herman¹⁵ studied a population of 150 people being released from two psychiatric hospitals in New York between 2002 and 2006. About half of them were selected for CTI, in addition to normal services. At the end of the follow-up period, the number of psychiatric hospitalizations was significantly smaller in the group submitted to CTI than in the other group.

CTI lasts for a specific period of time (in general nine months), and has two main goals. The first is to create stable links between those suffering from severe and persistent mental disorders and the formal and informal support systems available, especially with the social and family health and support networks. The second is to provide practical and emotional support during the critical transition period. This effort focuses on areas considered critical for patient stability and social insertion in the community, and is

performed by caseworkers and a clinical coordinator, with the support of a psychiatrist¹⁶.

Implementing CTI follows three consecutive steps: transition, experimentation and transfer of care, each lasting an average of three months. In the first step – transition –, CTI caseworkers provide more intense support, identify needs and the resources available, and draw up a 9-month intervention plan. CTI caseworkers should preferably start before the people move into the community. The second step - try out – is dedicated to testing and adjusting the support system developed in the first step. The third step - transfer of care -, aims to transfer care to the community facilities and devices that will provide long-term support to users, with the gradual exit of the caseworker from the care relationship developed over the course of nine months.

CTI has been adapted to the situation in Brazil, and has been re-named “Intervenção em saúde mental para períodos de transição” (CTI-BR). Its feasibility has been tested with people with schizophrenia-spectrum disorders treated at the Psychosocial Care Centers in the city of Rio de Janeiro¹⁷.

Methodology

Study location

In June 2012, it was implemented in Instituto Municipal Juliano Moreira (IMJM) a residential facility to house people who had remained in the hospital for a long time. The program's strategy was to design the homes as therapeutic residences, following the model recommended by the Ministry of health². It is located in the non-hospital grounds of the former Colônia Juliano Moreira, transformed into a city neighborhood by its intense residential occupancy in recent years.

This is a 10-home cluster (each capable of housing eight people). All of them are quite similar, with 4 bedrooms, a living room, kitchen and bathrooms. The patient care program is linked to the Psychosocial Care Center located close-by. One university-level professional is assigned to each home to monitor day-to-day patient activities. The rest of the team is made up of caregivers, secondary school level workers to work with patients directly in the home.

Having diagnosed the clinical status of the IMJM population, the care team decided the therapeutic residences would be split into low, moderate and intense, depending on the level

of care required by residents. The difference between these levels is essentially the team assigned. In low-intensity homes, the care-worker team is there only during “regular business hours”, meaning 8 hours a day, Monday through Friday. In medium intensity residences, there is 12 hours of coverage (daytime) seven days a week. In the high-intensity care unit, care is available 24 hours per day, seven days a week.

Study design

The research model used was longitudinal follow-up of the deinstitutionalized population with baseline assessments (immediately before leaving the hospital) and two more assessments - in month nine and in month 18 after the baseline assessment. This article discusses the baseline and nine-month assessments. To analyze the effects of the CTI intervention, the population was randomized by cluster (household). The population was split into two groups, one in which Critical Time Intervention was added to the institution’s program. The other group (control) received only the institution’s standard of care.

Between June and October 2012 the patients moved into the ten residential units, always in sets of two of equal intensity of care. Of each pair of units, one was randomly selected for CTI and the other received only the institution’s standard of care, resulting in 5 units with CTI and 5 without.

Instituto Juliano Moreira CTI program

The CTI design and implementation were kept as per the original intervention. The following intervention areas were considered critical for the population in this study: 1) Physical and mental health (user insertion and follow-up by general and mental health services) 2) Development of daily coping skills; 3) Network of family support, community resources and social protection; 4) Incentives to interact with other house residents and be involved in group problem solving and decision making.

A total of five CTI caseworkers (one per home) were chosen from among secondary-school workers with experience in caring for the mentally ill. After receiving preliminary specific training, they were supervised by two psychiatrists once a week for the entire nine-month effort.

Assessment tools

Clinical and sociodemographic characteristics

The clinical and sociodemographic data collected were gender, age, diagnostic, time in hospital and years of schooling.

Social Performance

The instrument used was the Personal and Social Performance (PSP) scale developed to assess the social performance of people with mental disorders in rehabilitation facilities¹⁸.

PSP is based on assessing four indicators: 1) socially useful activities, including work and study; 2) personal and social relationships; 3) self-care; 4) aggressive or disturbing behavior. These dimensions are analyzed using a six-point scale that goes from absent (0) to very severe (5). In addition, the interviewer assigns an overall score (overall PSP) on a 100-point scale, based on information gathered during the interview and other valid sources, with lower scores being associated with worse performances. In addition to patient interviews, we will also use data from other sources, such as family members, caregivers and team members. The Portuguese language version of the PSP was used, with reliability and validity positively tested by Brissos *et al.*¹⁹.

Health-related quality of life

To check quality of life we used the 12-Item Short-Form Health Survey (SF-12), a summary option to the 36-Item Health Survey (SF-36) developed previously²⁰. The Portuguese language version was validated in 2004, in a population with chronic obstructive pulmonary disease²¹.

SF-12 is a 12-item questionnaire that analyzes eight dimensions: health in general, physical capabilities, social functioning, limitations due to physical problems, and limitations due to emotional problems, mental health, vitality and body pain. Interviewee opinions regarding the past four weeks are considered.

These dimensions are totaled in two summaries: SF12 - physical component and SF12-mental component. Each summary is scored using a scale of 0 to 100, where higher scores are indicative of better health perception. To make up the global scores, questions assessing health in general, physical capability, limitations due to physical problems and body pains are more related to the physical summary, while social functioning, limitations

due to emotional problems, vitality and mental health are more related to the mental component.

Mini-Mental Health Status Test

To assess the cognitive status of study participants we used the MMSE (Mini Mental Status Examination), prepared by Folstein et al.²², one of the most widely used in the world. This is a semi-structured test with a maximum score of 30, where years of education and age affect test performance, decreasing with age and increasing with years of education, resulting in different cut-off points based on population profiles²³.

Methodological procedures and ethical issues

These tools were applied to patients and professionals by interviewers with past clinical experience caring for the mentally ill, and trained in using these scales. For PSP and SF-12, the same interviewers ran the baseline and nine-month assessments. SF-12 was administered orally during the course of an interview. In order to define the scores for the four dimensions of the PSP, we listened to both the patient and a team member. Baseline assessments were performed before the patients were moved to the therapeutic residences. Before the interview, each participant was told about the purpose of the study, the matter of confidentiality and the fact that participation was optional. Those agreeing to participate in the study signed the Free and Informed Consent Form (FICF). This survey has been submitted to the Research Ethics Committee of Escola Politécnica de Saúde Joaquim Venâncio, Fundação Oswaldo Cruz.

Statistical analysis

Initially we assessed the frequency distribution of the continuous and categorical variables. Attempts to normalize the continuous data were not successful, which is why non-parametric tests were used to assess the statistical significance of these variables.

We calculated the difference between baseline and re-assessment (9-month) scores for PSP and SF-12. The statistical significance was assessed using the Wilcoxon test. We also compared the differences between the groups with and without CTI (Mann-Whitney Test). Chi-squared tests were used to analyze the categorical variables. P values less than or equal to 0.05 were considered statistically significant, and those between 0.06 and 0.10 as borderline significant. SPSS (Statistical

Package for the Social Sciences) version 20 was used to process and analyze the data.

Results

The study population is made up of the eighty patients selected to live in the residences. Forty of them were randomized to receive CTI in addition to the institutional program. Before moving to the therapeutic residences, one of the patients in the CTI group died. The hospital discharge date for six of them was postponed due to their psychosocial status during the process of preparing for release (including their own personal desire) and they remained in the hospital on the limiting date for enrollment (four in the CTI group and two in the control group). After the move, one patient (CTI) died due to clinical causes and another belatedly reported he/she wanted to return to the hospital and opted to leave the program (PH). The population actually studied was made up of 71 patients. Of these, 34 were in the CTI group and 37 in the Control group. The follow of the study components is shown in Figure 1.

Clinical and socio-demographic characteristics

Table 1 shows the clinical and sociodemographic characteristics of study participants. The study population is elderly, relatively uneducated (only two users completed primary school), most (76.1) diagnosed as being schizophrenic, and hospitalized for a long period of time (81.7% had been institutionalized for more than 30 years). Regarding intensity of care, a bit more than twenty percent of the patients required high intensity care and the others moderate or low intensity care.

There was no statistically significant difference in terms of age, time in institution, years of schooling and diagnostic between the two groups (CTI and non-CTI). The two groups differed quite significantly in terms of gender, with the CTI group having proportionately fewer women - 29.4% vs. 56.8% in the non-CTI group ($\chi^2 = 4.26$; $p = 0.04$).

The results of the MMSE revealed a population with significantly compromised cognitive function. Of the 69 individuals submitted to the test, 55 (79.7%) scored below 18, and 14 (20.3%) had scores higher than 18, the cutoff point estimated for the population with little schooling.

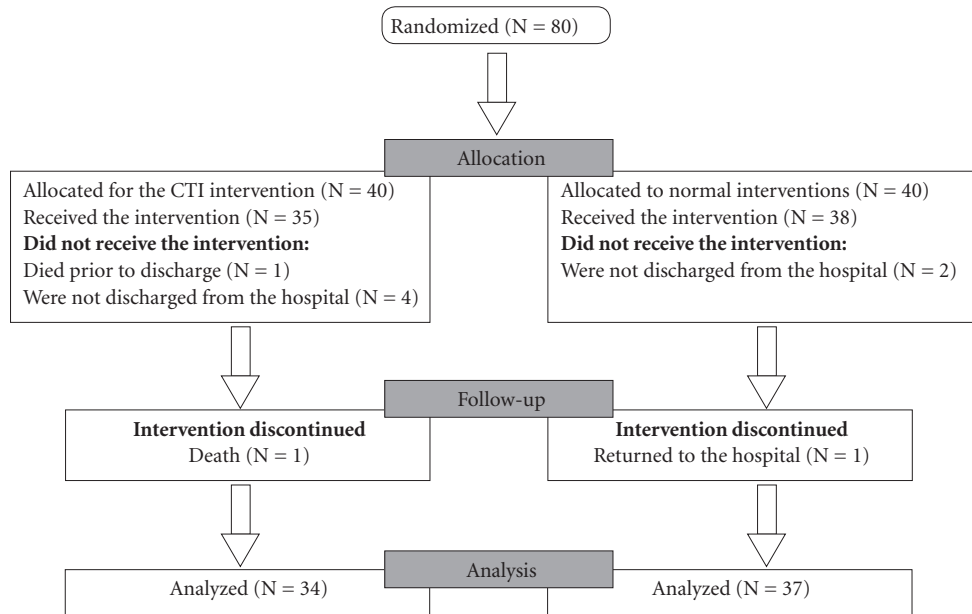


Figure 1. Flow-diagram for incorporating participants into the study.

Table 1. Sociodemographic and clinical characteristics of the study participants - in absolute numbers and percentages.

Characteristic	With CTI(n = 34)	Without CTI(n = 37)	Total(n = 71)
Female n (%)	11 (29.4%)	21(56.8 %)	32 (45.1%)
Age (mean (SD)) in years	67.53(9.9)	69.24(11.9)	68.42
How Long Institutionalized (years)			
1-9	1 (2.9 %)	2 (5.4%)	3 (4.2%)
10-29	7 (20.6 %)	3 (8.1 %)	10 (14.1 %)
30 or more	26 (76.5%)	32 (86.5 %)	58 (81.7 %)
Years of schooling			
None	21 (61.8 %)	24(64.9 %)	45(63.4%)
Incomplete Primary	12(35.3 %)	12 (32.4 %)	24(33.8%)
Primary and Incomplete Secondary	1(2.9 %)	1(2.7 %)	2(2.8%)
Diagnostic			
Schizophrenia	26 (76.5 %)	28 (75.7 %)	54 (76.1 %)
Mental Retardation	5 (14.7 %)	9 (24.3 %)	14(19.7%)
Epilepsy	3 (8.8 %)	0 (0 %)	3(4.2 %)
Intensity of care			
Low	14 (41.2 %)	14(37.8 %)	28 (39.4 %)
Moderate	13 (38.2 %)	15 (40.6 %)	28 (39.4 %)
High	7 (20.6 %)	8 (21.6 %)	15 (21.2 %)

Results of the PSP scale

An analysis of baseline PSP scores shows a group of patients with significant problems in

socially useful activities and social relationships, significant problems in personal care and less difficulty in disturbing and aggressive behavior (Table 2).

Table 2. Users with accentuated and severe problems in all 4 PSP dimensions at the baseline - in absolute numbers and percentages (N = 71).

PSP dimension	Users with accentuated and severe problems
Socially useful activities	48 (67.6%)
Social and personal relationships	45 (63.4%)
Self-care	28 (39.4%)
Disturbing and aggressive behavior	9 (12.7%)

* Wilcoxon Test.

Table 3 shows the PSP means and standard deviations for the entire sample of deinstitutionalized patients. Results show that, on average, patients demonstrated statistically significant progress in their social behavior in the dimensions assessed using the PSP scale: socially useful activities, personal and social behaviors, personal care and aggressive or disturbing behavior.

No significant association with the variables gender, diagnostic, years of schooling or time in institution for any of the dimensions. The variable age was inversely associated with a positive evolution of the overall PSP score in the two assessments ($p = .043$), which did not affect other dimensions of the scale. Low scores on the mini-mental scale did not influence the evolution of other scale results, with the exception of self-care, where p remained at 0.085 (borderline).

Results of the SF-12 scale

On the SF-12 scale, the physical component score did not change significantly between the two assessments ($p = .65$). Evolution of the component mental health was borderline ($p = .06$). Table 4 shows the means and standard deviations at the baseline and 9-month assessments. Four people did not answer the second questionnaire.

There was no significant association with either of the dimensions and the variables gender, diagnostic, years of schooling and time in institution. The same was true regarding the scores on the mini-mental scale. Regarding the SF-12 mental summary, the influence of age (a cut-off point of 70 was set), was statistically significant ($p = .05$).

Table 3. PSP Dimensions - Mean and standard deviation at the baseline and 9-month assessments (N = 71).

PSP dimension	Baseline	Month nine	P value BL/month 9*
Socially useful activities	2.85 (.980)	2.66 (.95)	.002
Social and personal relationships	2.65 (.83)	2.49 (.88)	.002
Self-care	2.11 (1.14)	1.89 (1.08)	.006
Disturbing and aggressive behavior	.90 (1.21)	.68 (1.00)	.040
PSP global	42.63 (13.92)	48.41 (14.17)	.000

* Teste de Wilcoxon.

Table 4. SF-12 - Mean and standard deviation at the baseline and 9-month assessments (N = 71).

SF-12 Dimensions	Baseline	Month nine	P value BL/month 9*
Physical dimension	47.48(9.62)	48.10(7.09)	.65
Mental dimension	51.17(10.65)	54.23(8.71)	.06

* Wilcoxon Test.

Results of the PSP and SF-12 scales in the population submitted to CTI and the population submitted only to the institution's standard of care

Following a statistical analysis of the deinstitutionalized patients, we analyze potential differences in performance along the variables included for the group receiving CTI-BR and the control group.

As shown in Table 5, the means for the PSP subscale evolved positively, as did the overall PSP (with a decrease in mean disabilities measured using the PSP scale). The results of the SF-12 scale show similar behavior in both dimensions. An analysis of the difference in the results of the two groups did not reveal any statistically significant results, showing that in the areas assessed, the CTI intervention showed no advantage over the institution standard of care alone.

Discussion

This study assessed patients discharged from a hospital that had been in existence for some 90 years. In 2012, there were about 350 patients who had been institutionalized for a long time. Most of the participants in this study are remnants from this group of people who had been in a psychiatric institution for decades.

As a result, the study population was quite elderly, with an average age of 68.42, and 82% had been institutionalized for 30 years or more. This profile actually allowed us to understand a population institutionalized before the creation

of psychosocial care centers as part of the government's mental health policy.

Patients of this profile are generally highly dependent and have a great deal of difficulty leaving the hospitals. They are normally in long-term wards with a large array of negative symptoms and severe social disabilities. They generally need the daily care of the institution's professionals, and over time, most of their family ties were lost. They normally require high-intensity social and care attention, such as residential units where they are constantly supervised and the presence of a team 24x7²⁴.

Critics of deinstitutionalizing this type of patient claim that the transition to community life, after they had become so well adapted to the institution, could result in stress and trauma, with dramatic results such as an increase in morbidity and mortality²⁵. In 1999, Desviat pointed out that closing psychiatric beds without creating community care and social support services could result in abandonment and lack of care due to the difficulty these patients had in caring for themselves independently in society²⁶.

Monitoring patients discharged from Instituto Municipal Juliano Moreira showed that, nine months after they had left the hospital, there had been no deaths due to accident, suicide, evasion or justice-related problems. One patient chose to return to the hospital, stating his/her dissatisfaction with the program. We must assess if this patient is representative of the population that remains hospitalized.

Analyzing the assessments of the 71 patients showed significant evolution in social and personal performance. The assessment using inter-

Table 5. Study population split between the group submitted to CTI and the control group.

Scales	With CTI		Without CTI		p value*
	Baseline	9-month assessment	Baseline	9-month assessment	
Socially useful activities	2.7 (1.095)	2.59 (1.019)	2.89 (.875)	2.73(.902)	.675
Social and personal relationships	2.59 (.925)	2.50(.961)	2.70 (.740)	2.49(.804)	.189
Self-care	2.35(1.098)	2.03(1.114)	1.89 (1.149)	1.76(1.038)	.435
Disturbing and aggressive behavior	.88(1.122)	.68(1.121)	.92(1.299)	.68(.884)	.515
PSP global	42.35(14.187)	47.65(14.979)	42.89(13.860)	49.11(13.550)	.684
SF 12 physical health	46.40(10.56)	48.75(6.74)	48.81(8.83)	54.43(7.62)	.716
SF 12 mental health	49.93(11.68)	54.01(9.89)	52.05(9.63)	54.44(7.62)	.474

* Teste de Mann-Whitney.

views took into consideration the limitations imposed by the life context of the patients over the years, and their age.

Thus, expectations regarding social performance did not focus on insertion into the job market or a systematic return to the education process. Regarding the job market, all of the patients at the nine-month assessment depended on government support, mostly (73%) through the continued enforcement of the Organic Social Services Law (BPC/LOAS).

In our assessment, we attempted to value initiatives more compatible with the possibilities of a new community life, such as using the neighborhood trade establishments, an expanded internal and external social network, leisure activities and additional domestic tasks.

Results showed a negative influence of age on the evolution of the overall PSP score, indicating that younger patients (under the age of 70) could benefit more from the deinstitutionalization program offered. Of borderline statistical significance, results of the mini-mental scale had a negative impact on the results of the group in the self-care dimension of the PSP.

Regarding health-related quality of life, results show that the concern with physical health remained unchanged between the time the patients exited the hospital and the nine-month assessment. This finding reinforces the considerations of Schiff et al.⁹ on the importance of health-related interventions in general in the deinstitutionalization of the elderly. Regarding the SF-12 mental summary, the influence of age (cut-off of 70 years) was statistically significant ($p = .05$), corroborating the overall PSP findings, where younger patients could benefit more from the program developed.

Care within therapeutic residences may be included in the concept of supportive housing proposed by Nelson et al.²⁷ and discussed by Furtado²⁸, where housing and psychosocial rehabilitation merge. The main rehabilitation effort is performed inside the residences, and is primarily the responsibility of the caregivers who remain in the house for 8 to 24 hours a day, depending on the intensity of care. University-level professionals allocated full-time to the residential program act as a reference for patient care. They arrange for third-party mental and clinical care, oversee the caregivers, handle day-to-day issues and any emotional instability demonstrated by the residents. These two groups – dedicated professionals and caregivers –, perform a major role in the care process developed.

The involvement of non-professional support workers in mental health services has been positively assessed. Users tend to feel non-specialized workers to be more in sync with their day-to-day needs. However, this requires quality supervision and suitable training, as well as clearly defined team roles²⁴.

The work of the CTI caseworkers focused on developing activities to improve resident physical and mental health, their ability to cope with day-to-day activities, the relationship between residents and their social relationship with their surroundings.

To focus on their physical and mental health, users were registered with the territorial health-care services network (primary care facilities and other units) in the CAPS of reference, and with the local leisure club and community center. The development of day-to-day skills focused on meal preparation, encouraging them to take care of themselves, the collective management of the units, drug administration and information about their effects, and encouragement for individual creative work. Daily relationships within the units were addressed with joint activities and systematic support for harmonious coexistence of the residents. Social relationships were developed with excursions for cultural events, beauty salons, restaurants, banks and other trade establishments. We also encourage contact with family members and aggregates, and measures to get government social benefits.

The CTI was created to complement and strengthen the network of healthcare services and social support, helping people engage and become stable in a continued care situation. CTI is by nature a time-bound intervention. In this particular study, for nine months the residents of five therapeutic units received the additional care of 5 caseworkers.

An assessment performed following the intervention period found no statistically significant differences between the two groups in the social performance and health-related quality of life scales. All study participants showed substantial improvement in social performance, and a discrete improvement in their perception of overall mental health. These results suggest the deinstitutionalization process now underway is effective in these dimensions.

It is worth considering that unlike other studies in which the CTI intervention was tested, in this case the subjects were in the same environment, the residential facilities, and therefore the caseworkers interventions did not take place in

users' homes with their families or in different territories or contexts that included other interactions.

We point out, however, that the results of this study may have been affected by the small sample size, yielding questions regarding future studies on the relevance of CTI programs for this type of population.

Conclusions

Unlike other countries, where there is a greater supply of residential facilities for people with severe mental disorders²⁹, Brazil has a significant deficit in accommodations. In 2013, Furtado²⁸ estimated the country needed 2,408 residential therapeutic units, whereas it only had 625 to handle an estimate of 12,000 patients living in hospitals²⁸.

Despite a strong trend towards reducing the role of psychiatric hospitals, in most countries long-term residential facilities for patients with mental disorders coexist with psychiatric hospitals in something of a dual system. In general, the more serious patients are referred to the hospitals³⁰. The absence of any consensus on what to do with the psychiatric hospitals is considered one of the main hurdles in the deinstitutionalization process. With no decision to definitely close the hospitals, emptying them of patients is only one option and many patients remain hospitalized³¹.

In Brazil there has been a sharp drop in the number of psychiatric beds with no significant increase in regular hospital beds to accommodate crises, or any real upsurge in long-term residential care facilities. At the same time, there is no final decision on the part of the Ministry of Health on whether or not psychiatric hospitals are actually needed as one of the facilities that compose the Brazilian mental healthcare system.

The results of this study seem to indicate that elderly patients exiting psychiatric hospitals after many years are capable of living in community residential facilities that are supervised by clinical follow-up teams. However, the model recommended by the Ministry of Health for therapeutic residential services limits the physical structure and minimum team composition for each service. One may assume that there is a lot of variation in how residential programs are implemented in each city. The organizational design of the cluster of residences makes this an unusual situation in terms of the Brazilian experience with residential facilities. One may speculate that this model could stress some of the undesirable institutional characteristics for other user populations. This makes it harder to generalize and compare the results of this study. Furthermore, the absence of any assessment of psychiatric symptoms and the use of the diagnosis in the patient files should be considered as study limitations.

Collaborations

PRF Silva, MCA Carvalho and MT Cavalcanti participated in all stages of preparation of the article. RC Echebarrena, AS Mello, CM Dahl, DB Lima and FM Souza participated in research and final writing.

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