

Therapeutic Communities in Latin America, Part II: An evaluation of the quality, effectiveness, and satisfaction with services in therapeutic communities throughout Latin America

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Abstract

Objective: Therapeutic Communities (TCs) are one of the most common methods available for the treatment of substance use disorders. Yet, research is lacking in Latin America to understand the effectiveness of treatments as well as the satisfaction among users of the TCs that offer a minimum standard of care.

Methods: Using a preliminary study of all registered TCs in five countries as a start off point, we identified and selected a sample of TCs that held a score of nine or above according to the De Leon criteria (De Leon G, editor. Community as method: therapeutic communities for special populations and special settings. Westport, Conn: Praeger; 1997). A descriptive and retrospective study was then carried out assessing both qualitative and quantitative components of the TCs in relation to resident characteristics and the activities offered at the institutions.

Results: Information was collected from 58 TCs and 1414 patients in the five participating countries. Most participants were male, single, and had previous treatments in TCs. The most commonly used substance in the 30 days prior to enrollment in the treatment program was marijuana. 78% of interviewed participants had drunk alcohol in the last six months before entering the program and the average age of drug initiation was 16 years. 79% of participants interviewed indicated they felt an improvement throughout their stay at the TC. Among De Leon's quality criteria, the least completed were "solicit professional qualification from former residents of the program" and "work as part of the therapeutic regimen." 44% of patients were estimated too have completed the full treatment regimen while 44% left the program early.

Conclusions: The satisfaction of users within the sampled TCs was generally high in relation to both the infrastructure and quality of services. Nonetheless, it is important that the process of collecting information for the TC databases be improved and standardized in order to capture more complete information regarding patient characteristics, reasons for entrance and exit from the programs, and other factors that will help better evaluate and strengthen the quality and effectiveness of these programs.

Key words: Therapeutic communities, substance abuse, satisfaction, drop-out

Introduction

Drug use is a problem that has generated great interest from governments around the globe due to its accompanying economic, political, social and health consequences. Chronic substance use can lead to neurological changes that may be reflected in behavioral and lifestyle changes that not only affect the individual but their family and the surrounding society as well (1). Moreover, substance abuse is often accompanied by increased risk for motor vehicle accidents as well as the transmission of HIV, hepatitis C and others (2-4).

A study conducted by the World Health Organization in several regions including all of Europe and the Americas evaluated the prevalence of alcohol and other drug use disorders in the past 12 months and found the prevalence ranged from 5.8% in Mexico to 13.2% in Germany (5). These are not dismissible numbers: it has been estimated that substance abuse accounts for 0.5 of total life years lost on a global scale, with the highest impact occurring in the age groups of 15-30 (6).

The financial impact and costs of these problems are significantly high, as was demonstrated in a study conducted by Caulkins et al., which found that costs generated by alcohol, tobacco, and other drug abuse exceeded 700 billion dollars in 2011 alone. These costs surpassed those of other chronic diseases including cancer, and diabetes, especially when including the indirect costs generated by substance use, including damage onto others, material damage, legal costs, loss of productivity, and more (4). Similarly high costs for substance use were found in a study conducted in Russia by Popapchik et al., in which government costs associated with treating substance-abusing patients came out to be a third of the government's gross expenditure on public health in the entire country (7).

Indeed, pharmacological and therapeutic treatments exist to help people who suffer from substance use disorders manage their conditions. However, before establishing proper treatment plans, governments must conduct studies to identify the most pressing issues in treatment in their countries, as we know even the kinds of drugs that are consumed vary depending on the region (8). In addition, it is important to conduct studies to identify the quantity, quality, and availability of treatment centers and which health professionals are available to help manage these psychiatric problems (9).

Among the wide range of treatments that exist, therapeutic communities (TCs) have demonstrated the potential to be effective in the treatment and management of substance use disorders (10–12). Still, until now very few studies have identified and described the characteristics of people who attend such facilities, their patterns of substance use and their satisfaction with and perception of the effectiveness of such treatments. For this reason, our research group conducted a preliminary study that identified TCs in five different countries of the region and examined the quality of care they provide.

As described, this study follows up on the first part of this research group's work on Latin America's therapeutic communities and aims to identify the effectiveness of programs, as well as the patterns and perceptions of patients in a sample of TCs in Latin America.

Methods

Of the TCs surveyed in the first part of this series conducted in Peru, Argentina, Colombia, Brazil and Mexico by our research group in 2013, those that met nine or more De Leon Criteria (see Table 1 for a detailed description of the criteria) were selected to participate in the second phase. Among these TCs, those that only provided outpatient care, were targeted only to youth, or who had less than 50 patients were excluded from the study. Once the sample of participating TCs was selected, random numbers were generated considering a simple distribution and a list was generated that allowed for the selection of the TCs with the highest scores in each country.

Once selected, the 58 TCs with the highest scores in each country were visited by a research staff member who conducted qualitative and descriptive surveys with patients to gather information on socio-demographic factors, perception of quality and effectiveness of the TCs, and patterns of substance use. Patients were eligible to participate in the survey if they had entered the TC between the start of 2009 and the end of 2012.

In addition, a retrospective analysis of information on former patients was performed using data provided by directors of the respective TCs. Information collected retrospectively related to admissions and discharges in the three years prior to the study start data. With the exception of three TCs in Argentina that were selected and refused to provide this information, the remaining 55 TCs did not have any issues in making this data accessible for research purposes.

Once all patient surveys and retrospective analyses were completed, data was integrated into databases using Microsoft Excel®, subsequently used to calculate relevant associations and generate the graphs and figures included below.

Table 1. Description of De Leon Criteria (Translated and Adapted, (13))

Component	Brief description
Planned duration of treatment	The duration of the process varies depending on each individual case, even though a minimum intensive period is necessary to assure the internalization of the teachings of the Therapeutic Community.
Separation from community	In the residential context, the patients remain distanced from the exterior community for 24 hours a day for several months, until they gain permission otherwise.
Communal activities	With the exception of personal counseling, all activities are planned as to be carried out collectively.
Role and function of personnel	Independent of the professionals' exact role, staff members form part of the community. Therefore, their mission is to use their rational

Component	Brief description
	authority to facilitate rules of action in a proportionate manner that is in line with the self-help methodology of the community.
Residents as role models	Members that demonstrate model conduct and reflect the values and needs of the community are used as role models. It is the goal that all members of the community reach the point of being a role model.
Structured days	The daily organized activities tackle the disordered lifestyles of these residents and distract them from negative thinking and boredom, factors that can predispose them to drug use.
Work as an educational and therapeutic tool	In concordance with the self-help methodology, all residents are responsible for the daily management of installations. The different working roles transmit essential educational and therapeutic effects.
A vision of recovery and of a righteous life	There exists a formal and informal repertoire to instruct the perspective of the Therapeutic Community, especially its concepts relating to recovery through self-help and its vision of a righteous life.
Meet up groups among residents	The minimum common denominator that all meet-up groups should abide by is their focus on strengthening participants' consciousness regarding attitudes and behaviors they should strive to modify.
Consciousness training	All therapeutic or educational interventions should involve a strengthening of individual consciousness regarding the impact of one's behavior and attitude on oneself and one's social circle, as well as understanding the impact of other people's behaviors and attitudes both on themselves and their environments.
Training of personal growth	It is necessary to instruct individuals regarding how to identify their emotions, express them appropriately and manage them in a constructive way, through the interpersonal and social demands of the communal lifestyle.
Community of care	Throughout the program, the vision of the righteous life and self-help based recovery and the networks of residents are utilized to enrich the use of vocational, educational, and mental health services, as well as other types of care needed in the phases of convalescence and readmission.

Results

I. Selected therapeutic communities and number of participants

Overall, 58 TCs were included in this study and a total of 1414 resident interviews were carried out. Some facilities in Argentina were missing large portions of resident information and were excluded from relevant analyses.

The country with the highest number of participating TCs was Brazil, with 20 communities (34% of our sample). The country with the lowest number of participating TCs was Colombia (12% of our sample). Most residents interviewed were male (92%) and were single (62%). 53% of those interviewed were employed prior to entering the TC and 46% were unemployed (see Table 2).

Table 2. Number of TCs and socio-demographic characteristics of participants per country

	N	%
Participating TCs per country		
Argentina	9	16
Brazil	20	34
Colombia	7	12
Mexico	10	17
Peru	12	21
Users interviewed per country		
Argentina	361	26
Brazil	300	21
Colombia	178	13
Mexico	300	21
Peru	275	19
Gender		
Male	1298	92
Female	116	8
Estado Civil*		
Single	673	64
Married	168	16
Separated	95	9
Widowed	11	1
Civil Union	95	9
No data available	11	1
Previous employment status*		
Employed	558	53
Unemployed	484	46
No data available	11	1

*The total number of patients was 1053, excluding Argentina

II. Age of initiation and previous treatment episodes

The age of drug use initiation varied widely between countries, with the lowest being in Mexico at four years. The oldest age of drug use initiation was in Brazil at 53 years. Despite the wide range of ages, the average age of initiation was similar among different countries and was generally between 15 y 16 years (see Table 3).

Table 3. Age of substance use initiation*

Age	Brazil	Colombia	Mexico	Peru	Average
Minimum	5	7	4	8	6
Maximum	53	45	46	48	48
Average	16.1	16	15	16	16

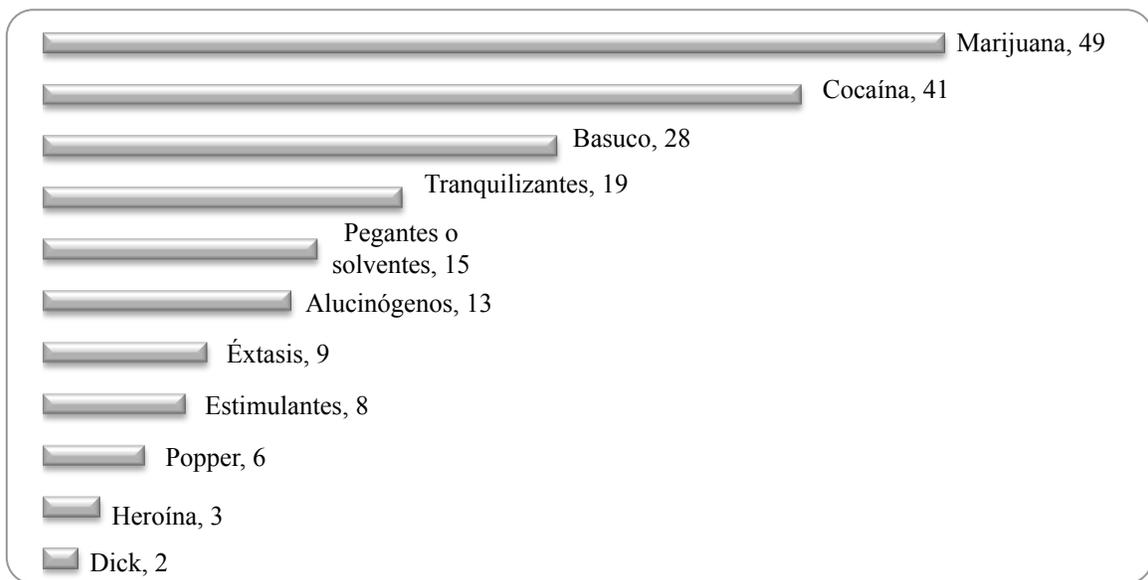
*No information was available from Argentina

In relation to previous treatment episodes, 684 residents (65%) reported not having previously been to treatment, 369 residents (35%) reported having been to treatment at least once before, and 295 (28%) responded that they had been to treatment over three times.

III. Substance use

Residents were asked about what psychoactive substance (other than alcohol) they had consumed in the 30 days previous to being admitted to the TC. The results from different countries were similar, with marijuana being most frequently used (49%), followed by cocaine (41%) and cocaine paste “basuco” (28%). The least reported drugs were heroin (3%) and Methylene chloride, known as “dick” - a chemical used to clean machinery (2%) (see Figure 1).

Figure 1. Substances consumed in order of frequency (excluded Argentina)



When asked about how many times they had drunk more than four alcoholic drinks (for women) or five alcoholic drinks (for men) in one day over the last six months, 21% reported not having used alcohol to this extent, 18% reported to have done so on one occasion, 60% reported to have done so on more than one occasion and 1% did not respond.

IV. User satisfaction questionnaire

The questionnaire about user satisfaction evaluated residents' opinions on several aspects including the admission process, the quality of information provided on the regulations of the TC, satisfaction with staff at the institution, and perception of improvement during treatment. When asked about the complexity of the admissions process in entering the TC, 76% of residents said it was not complicated at all. In addition, 88% reported that they had been given a thorough and detailed explanation of the rules and regulations of the institution. 68% of residents reported being satisfied with the time that has been dedicated to them by the medical staff (see Table 4). Below are data relating to the satisfaction of residents with TC personnel, including psychiatrists, psychologists, nurses, and other professionals, with which 76% of users were satisfied.

Table 4. Satisfaction among users

	N	%
Admission process		
Not complicated at all	785	56
Somewhat complicated	287	20
Very complicate	64	4
Quite complicated	50	4
Did not participate in admissions process	228	16
Time dedicated by physicians		
Sufficient	959	68%
Insufficient	455	32%
Information about norms of institution		
Yes	1258	89%
No	156	11%

Only 3% of interviewed residents perceived little or no improvement since the time they entered treatment, and this low number was consistent in most of the countries interviewed. Most TC residents across countries (79%) perceived a significant or total improvement in regards to their substance use problem (see Table 5).

Table 5. Perception of improvement by participants*

	Brazil		Colombia		Mexico		Peru		Total	
	n	%	n	%	n	%	n	%	n	%
Completely	83	29	68	38	52	16	55	20.0	258	25
Mostly	153	53.5	85	48	195	59.8	139	50.6	572	54
Somewhat	32	11.2	23	13	71	21.8	58	21.0	184	17
Little	13	4.5	2	1	5	1.5	6	2.2	26	2
None	5	1.7	0	0	3	0.9	6	2.0	14	1

* No information was available from Argentina

V. Essential elements of the TCs

We evaluated quality indicators for essential elements of these institutions, which included standardized and organized treatment programs, participation of family members in the treatment plan, self-evaluations by the therapeutic teams, and other related aspects (see evaluated indicators in Table 6). Most directors of TCs reported complying with most criteria, with Mexico reporting completing of 100% of them. In Colombia, the least abided by indicators were: a. using work as a therapeutic tool (71%) and b. users are encouraged to be themselves in order to develop more positive attitudes (71%). In Brazil, the least abided by indicator was former participants of the program are asked for professional qualification (50%). In Peru, the least abided by indicator was the therapeutic program includes capacitation for making personal decisions and developing social skills (67%). Among the residents surveyed in Argentina, no indicator in particular stood out as being less abided by than others.

Table 6. Completion of quality criteria by TCs

	Argentina		Brazil		Colombia		México		Peru		Total	
	n	%	n	%	n	%	n	%	n	%	n	%
Therapeutic program includes capacitation regarding making personal decisions and developing social skills	9	100	20	100	7	100	10	100	8	67	54	92
Recovery signifies the development of personal identity and a transformation in lifestyle	9	100	20	100	7	100	10	100	12	100	59	100
Users learn conflict resolution skills	9	100	20	100	7	100	10	100	11	92	58	98
Using work as a therapeutic tool	8	88	20	100	5	71	10	100	12	100	55	93
Users are encouraged to be themselves in order to develop more positive attitudes	9	100	19	95	5	71	10	100	11	92	55	93
Seminars are frequently available to help residents find a balance between emotional and cognitive experiences in the program	8	88	19	95	6	86	10	100	12	100	56	95

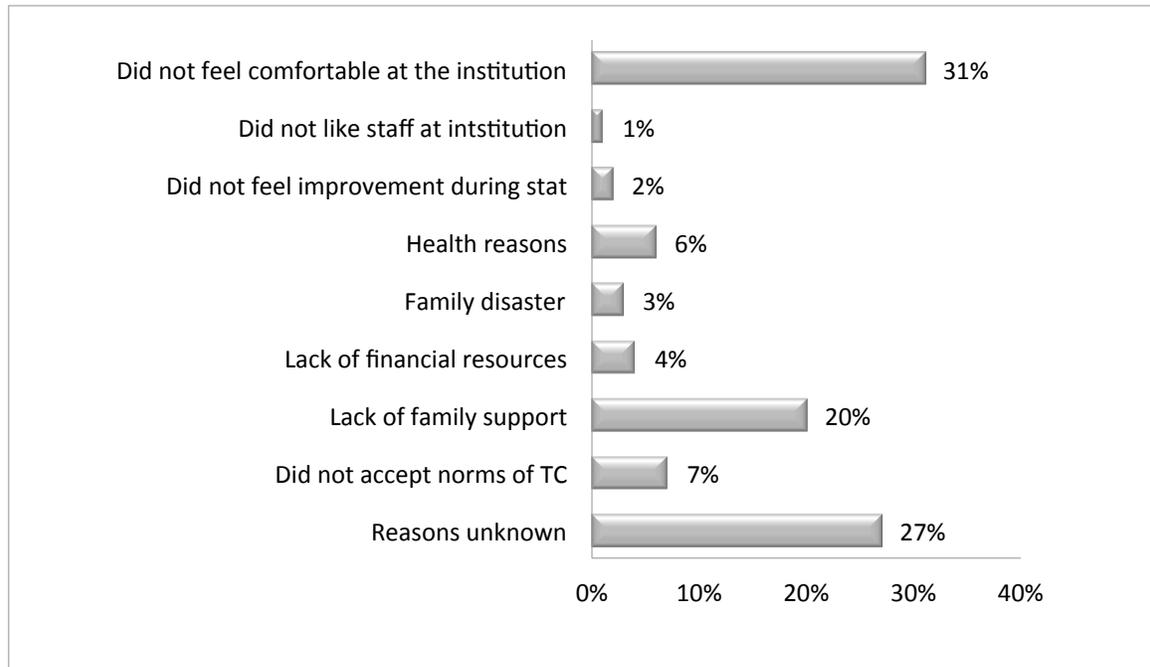
Former participants of the program are asked for professional qualification	8	88	10	50	6	86	10	100	11	92	45	76
Services are provided to assist the family members of the participant	9	100	20	100	7	100	10	100	12	100	59	100
The TC records clinical histories and information in order to continuously monitor and evaluate services	9	100	19	95	7	100	10	100	12	100	58	98
The TC uses orientation to develop an institutional climate of mutual trust and support; this includes written declarations of rights and responsibilities of the user	9	100	20	100	7	100	10	100	12	100	59	100
The role and function of different staff members of the TC is well organized, recognized and accepted by all	9	100	20	100	7	100	10	100	12	100	59	100
The TC periodically performs an evaluation of its efficacy, efficiency, and effectiveness, which includes the opinions and satisfaction of users	8	88	19	95	7	100	10	100	9	75	53	89

VI. Retrospective analysis of data

Information about former patients was collected from databases of TCs that agreed to participate in our study, including information about admissions and discharges of patients between the second half of 2009 and the first half of 2012. It is important to clarify that this retrospective analysis did not include TCs in Argentina. A register was obtained with 1522 patients, from which 87% were male and 13% were female. The ages of the participants in this part of the study ranged from 13 to 79 years of age with an average age of 30.

In regards to reasons for discharge, we obtained information about 3461 patients, of which 44% were discharged after full completion of their treatment regimen and 42% left treatment early. Data was missing about the reasons for discharge of 14% of patients. Primary reasons for leaving treatment early were available for 2814 patients: the most common reasons were not feeling comfortable at the institution, followed by unknown reasons (27%) and lack of family support (20%). The least common reasons for leaving treatment early were not liking the staff at the institution (1%) and not feeling any improvement during stay in treatment (2%) (see Figure 2).

Figure 2. Reasons for early termination of treatment



Lastly, data was collected about the current activities of 795 former patients, of which 51% of were found to be employed, 25% were students, 14% were unemployed, 10% were unknown and 1% couldn't be reached. Most information about patients (71%) was collected through phone calls, 23% through a personal consultation at the TC, and the rest was collected through email and home visits.

Discussion

Our research study was the first in Latin America to allow for the adequate description of therapeutic communities in the region. The fact that it is the first study to include all of these five countries allows us to identify these institutions and regulate their existence more systematically. One of the first findings that we observed was that 90% of residents interviewed were male, which may suggest that such programs principally target men or that men are more likely to use psychoactive substances, as was reported by the United Nations Office of Drug Control (UNODC) in 2014 (14). In addition, in a study conducted by Johnson and Johnson and collaborators in Thailand that evaluated 22 TCs, most users were also men (15).

Another major finding of our study was that most of the TC residents that were interviewed were single before entering the program. These results are consistent with those gathered by Fernandez-Montalvo (26), in which 72% of clients were single, but somewhat different from those found by Sadir et al. (17) in which only 48% of clients were single. In our study, most of those interviewed had been employed before entering the TC (53%). However, generally, the

percent of individuals that are employed before entering TCs ranges widely and has been reported to be as low as 17% in Australia and as high as 64% in Iran (17).

The average age of drug use initiation was 16.1, which is similar to that found in other studies in the region (18) and to that reported by UNODC (14). Most patients in our sample (68%) had never been previously treated at a TC, and only 28% reported having been to a TC three or more times: these rates are quite different from those reported by a study conducted in Iran (17), in which only 25% of participants had less than two previous treatment episodes at a TC and 75% had had three or more treatment episodes. Another study conducted by Darke and collaborators (19) found that up to 58% of interviewed patients had previously been treated at a TC.

In our study, the drug that was most frequently used in the past 30 days before entering the program (other than alcohol) was marijuana, followed by cocaine and then cocaine paste (“basuco”). But as was mentioned at the beginning of this article, the prevalence of drug use varies significantly by region. One recent study conducted in Thailand found the most frequently used drugs to be stimulants (ecstasy, speed, ice), followed by inhalants and marijuana (15). On the other hand, Darke et al. (19) found that the most frequently used drugs were benzodiazepines, followed by marijuana and heroin.

In evaluating the complexity of the admission process to the TC, most patients referred to the process as only somewhat complicated or not complicated at all. These findings are similar to those by López-Goñi and colleagues (20), in which interviewed clients reported a simple enrollment process into the TC. Another question evaluated by our study that we have not seen in previous research was the satisfaction of users with their medical care, and we found that only 68% of users were satisfied with the time allocated by health professionals to their care.

Up to 79% of those interviewed said they felt an improvement in their substance use problem after entering the TC, and less than 2% did not feel any type of improvement during their stay. These findings are different from those of a study conducted in Spain by Fernández et al. (16) in which only 54% of users felt positive improvement while the remaining 46% did not feel an improvement at all and even felt a deterioration in their health. These differences may be explained by the fact that these studies were conducted with two very different populations and institutions and had different sample sizes, among other factors.

The evaluation of the quality indicators of the TCs demonstrated that in Latin America, the TCs that participated in this study met most of the quality criteria. Still, “soliciting professional qualification from former residents of the program” and using “work as part of the therapeutic regimen” were the least met criteria. Although no other studies have evaluated TCs based on the same criteria used in this study, another questionnaire, the Survey of Essential Elements Questionnaire (SEEQ) was used in a study by Goethal et al. (21) to evaluate both traditional and reform TCs in Europe and the United States. According to this study, the criteria least met in Europe were “monitoring and evaluation of programs” and “an organized ranking of TC

members.” The criteria least met in the United States were “confronting the psychological problems that arise from drug abuse” and “the integration of the family in the user’s treatment.”

Data compiled about discharges from treatment indicated that both full completion and early termination had similar rates (44% and 42%, respectively). These are different from rates found in Australia (19) and Thailand (15) , in which, respectively, only 17% and 33% of patients terminated treatment early and 34% and 66% completed the treatment programs. The main reasons reported in our study for early termination were not feeling comfortable with the institution, followed by unknown reasons and lack of family support. The only similarity found with reasons for early termination reported by López-Goñi et al. (20) was that the most common reason for leaving was not liking the institution.

The follow up that was done with some former residents found that most were either working or studying, and information was missing for only 10% of the sample. These findings were similar to those found by a longitudinal study carried out in Spain (16), in which most TC users that were evaluated, whether they had completed the treatment program or not, were currently working.

Some of the strengths of this study included the efficient collaboration between several countries in Latin America as well as the large sample of TCs and users that were surveyed and which allowed for comparison of TCs across countries. Comparing factors such as what substances are most consumed, ages of initiation and other variables allow us not only to study each country separately, but also gather an approximation of the services available throughout the entire region.

One of the limitations of this study was only including the TCs that received a high score on the De Leon criteria from the first part of the study, as this may bias the interpretation of our quality measures. Moreover, this limits our findings to the experiences of residents at the most highly qualified TCs that may not reflect the experiences of residents in TCs that are less qualified. Another limitation was the large amount of missing data regarding discharges and reasons for terminating the program, as well as information on the current status of former residents.

Conclusion

Therapeutic communities are one of the treatment options that exist for people with substance use problems. The findings of this study allow us to better orient the development of such institutions based on quality evaluation and better address the needs of users. This study paves the road not only for future studies to be conducted to describe the conditions of these rehabilitation centers, but also to explore variables that modify the effectiveness of these TCs and their long term impacts on their participants.

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Bibliography

1. National Institute of Drug Abuse (NIDA). Drugs, Brains, and Behavior the science of addiction [Internet]. United States; 2010 [cited 2015 Jun 16]. Available from: <https://www.drugabuse.gov/sites/default/files/sciofaddiction.pdf>
2. Ferrando SJ, Freyberg Z. Neuropsychiatric aspects of infectious diseases. *Crit Care Clin.* 2008;24(4):889–919, x.
3. Schulden JD, Lopez MF, Compton WM. Clinical implications of drug abuse epidemiology. *Psychiatr Clin North Am.* 2012 Jun;35(2):411–23.
4. Caulkins JP PhD, Kasunic A MS, Lee MAC MS. Societal burden of substance abuse. *Int Public Health J.* 2014;6(3):269–82.
5. WHO International Consortium in Psychiatric Epidemiology. Cross-national comparisons of the prevalences and correlates of mental disorders. *Bull World Health Organ.* 2000;78(4):413–26.
6. Whiteford HA, Degenhardt L, Rehm J, Baxter AJ, Ferrari AJ, Erskine HE, et al. Global burden of disease attributable to mental and substance use disorders: findings from the Global Burden of Disease Study 2010. *Lancet.* 2013 Nov 9;382(9904):1575–86.
7. Potapchik E, Popovich L. Social Cost of Substance Abuse in Russia. *Value Health Reg Issues.* 2014;4:1–5.
8. Wu L-T. Substance abuse and rehabilitation: responding to the global burden of diseases attributable to substance abuse. *Subst Abuse Rehabil.* 2010;2010(1):5–11.
9. Jacob KS, Sharan P, Mirza I, Garrido-Cumbrera M, Seedat S, Mari JJ, et al. Mental health systems in countries: where are we now? *Lancet.* 2007;370(9592):1061–77.
10. Smith LA, Gates S, Foxcroft D. Therapeutic communities for substance related disorder. *Cochrane Database Syst Rev.* 2006;(1):CD005338.
11. Johnson K, Pan Z, Young L, Vanderhoff J, Shamblen S, Browne T, et al. Therapeutic community drug treatment success in Peru: a follow-up outcome study. *Subst Abuse Treat Prev Policy.* 2008;3:26.
12. Fiestas F, Ponce J. Eficacia de las comunidades terapéuticas en el tratamiento de problemas por uso de sustancias psicoactivas: una revisión sistemática. *Rev Perú med exp salud pública.* 2012;29(1):12–20.
13. De Leon G, editor. *Community as method: therapeutic communities for special populations and special settings.* Westport, Conn: Praeger; 1997. 309 p.

14. United Nations Office on Drugs and Crime. World drug report 2014 [Internet]. 2014 [cited 2015 Jul 7]. Available from:
http://www.unodc.org/documents/wdr2014/World_Drug_Report_2014_web.pdf
15. Johnson KW, Young L, Shamblen S, Suresh G, Browne T, Chookhare KW. Evaluation of the therapeutic community treatment model in Thailand: policy implications for compulsory and prison-based treatment. *Subst Use Misuse*. 2012;47(8-9):889–909.
16. Fernández-Montalvo J, López-Goñi JJ, Illescas C, Landa N, Lorea I. Evaluation of a therapeutic community treatment program: a long-term follow-up study in Spain. *Subst Use Misuse*. 2008;43(10):1362–77.
17. Sadir N, Shojaei M, Moadab K, Abbasi R, Bahrapour A, Nakhaee N. Outcome evaluation of therapeutic community model in iran. *Int J Health Policy Manag*. 2013;1(2):131–5.
18. Observatorio de Drogas de Colombia M de J y del D, MEN M de EN, MSPS M de S y PS, UNODC O de las NU contra la D y el D, CICAD CI para el C del A de D, OEA O de los EA. Estudio Nacional Consumo de Sustancias Psicoactivas en Población Escolar [Internet]. 2011. Available from:
<http://www.minsalud.gov.co/Documentos%20y%20Publicaciones/II%20Estudio%20Nacional%20de%20Consumo%20de%20Sustancias%20Psicoactivas%20en%20Escolares%202011.pdf>
19. Darke S, Campbell G, Popple G. Retention, early dropout and treatment completion among therapeutic community admissions. *Drug Alcohol Rev*. 2012;31(1):64–71.
20. López-Goñi JJ, Fernández-Montalvo J, Illescas C, Landa N, Lorea I. Razones para el abandono del tratamiento en una comunidad terapéutica. *Trastor Adict*. 2008;10(2):104–11.
21. Goethals I, Soyez V, Melnick G, De Leon G, Broekaert E. Essential elements of treatment: a comparative study between European and American therapeutic communities for addiction. *Subst Use Misuse*. 2011;46(8):1023–31.