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ORIGINAL ARTICLE

FACTORS ASSOCIATED WITH NON-ADHERENCE TO DRUG THERAPY IN PEOPLE WITH SUBSTANCE-RELATED DISORDERS[1]

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ABSTRACT

Objective: to identify the factors associated with non-adherence to drug therapy by people with substance-related disorders in treatment at Centers for Psychosocial Attention of alcohol and other drugs III. **Method:** a cross-sectional observational study conducted from April to November 2018, with 89 people (78 men and 11 women) with substance-related disorders. The data were collected by structured interview with application of the instruments: Measure of Adherence to Treatment, Addiction Severity Index Version 6, Level of knowledge, Medication Regimen Complexity Index and own elaboration; were submitted to descriptive and inferential quantitative analysis. **Results:** of the total number of participants, 56.2% did not adhere to drug therapy. Non-adherence was more frequent in people with clinical and psychiatric comorbidities, depressive symptoms, anxiety and altered sense perception. There was significance between non-adherence and history of treatment numbers and higher frequency of substance use. **Conclusion:** non-adherence to drug therapy was higher than expected and is associated with sociodemographic, clinical, mental and pharmacological factors. In substance-related disorders, non-adherence is complex due to the common characteristics of this condition, such as compulsion, cleavage and lack of insight.

Keywords: Substance use disorders. Adherence to medication. Mental health.

INTRODUCTION

Adherence to drug therapy is a multifactorial and complex phenomenon, it is not restricted to the individual's submission to the prescriptions of health professionals. Although most research focuses on adherence as the correct or incorrect use of a drug[1,2], it is important to understand it as a process that extrapolates this concept, since it encompasses behaviors related to the individual, professionals, health system and society[3,4].

Thus, adherence or non-adherence must proceed from a simplistic thought that the person is solely responsible for the continuity of their treatment. It is necessary to understand the different related factors, develop an expanded view of the therapeutic process considering the individual limits and the social context in which the individual is inserted[3-5].

Regarding the person with substance-related disorders, drug therapy is presented as a resource that aims to act on the balance of psychic functions and, consequently, in their behavior[2,6]. Substance-related disorders comprise a set of physical, cognitive and behavioral changes resulting from the continuous use of one or more psychoactive substances, such as alcohol, stimulants, cannabis, inhalants, opioids, sedatives, hypnotics and anxiolytics. Thus, continuous use occurs despite the person experiencing problems due to the substances[7].

Thus, in the context of psychosocial treatment, the regular use of psychotropic drugs in the treatment of people who have problems due to alcohol and other drugs shows benefits as the reduction of mental health symptoms and psychiatric comorbidities, of withdrawal syndrome and even relapse[8].

Although substance-related disorders are understood as a serious public health problem and

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drug therapy is viewed as an important therapeutic resource in psychosocial treatment, the literature shows that non-adherence is frequent in this population, causing significant short- and long-term losses[9,10]. A study of 119 women with mental health diagnoses in treatment at an African psychiatric service showed that the abusive use of alcohol, characterized by a pattern of consumption that causes adverse health risks, was significantly associated with the higher probability of non-adherence to drug therapy[11].

Adherence may be a challenge in the context of substance-related disorders, when faced with the difficulty of completing the indicated treatment[12,13], especially when considering factors related to the consumption of substances, such as the lack of insight and deleterious characteristics of this consumption, which basically generates brain alterations that can persist even when detoxification occurs, leading to constant relapses and intense craving, potentiated when they are exposed to different stimuli[2,5].

In addition to individual factors, the literature shows that non-adherence to drug therapy is shown as a multicausal process that suffers influences from sociodemographic aspects such as age, employment, schooling and gender. Also the factors of treatment as to other therapeutic activities, the drug schedule, side effects, access to treatment and support from health professionals[5].

Systematic review study with 11 articles on people with clinical conditions of mental health, showed that housing can be a protective factor, considering that people in street situation have a greater difficulty for the drug therapy for mental comorbidities[14]. They also mention strategies to promote adherence as an assertive community treatment, assisted therapy monitoring, use of long-acting injectable drugs and access to housing[14].

In the management of long-term chronic health conditions, adherence to prescribed medicines and maintenance of regular use to obtain the desired benefits are daily challenges for the person and for health professionals. Thus, there is a need to understand and use new strategies that can increase adherence, including greater involvement of health professionals to identify the factors associated with non-adherence[15].

An integrative review study shows the scarcity of Brazilian scientific publications on non-adherence to drug therapy in mental health[5]. Thus, investigating the factors that involve this theme can provide subsidies for the practice of professionals working in mental health, favoring the development of interventions and therapeutic strategies focused on the reality investigated and more effectively in the psychosocial treatment of people with substance-related disorders. This research has as a guiding question: What are the factors associated with non-adherence to drug therapy by people with substance-related disorders in treatment at Alcohol and other Drugs III Psychosocial Care Centers; and as an objective to identify the factors associated with non-adherence of drug therapy by people with substance-related disorders in treatment at Centers for Psychosocial Care of alcohol and other drugs III.

METHOD

Cross-sectional observational study conducted in three Alcohol and Other Drugs III Psychosocial Care Centers of a capital city in the southern region of Brazil, between April and November 2018, with people with substance-related disorders. 89 people (78 men and 11 women) with substance-related disorders participated. We included in the study, people over 18 years of age, with at least 30 days of prescription medication in their medical record and Singular Therapeutic Plan (STP). Excluded those who presented cognitive impairment identified from the record in medical records.

The sampling was not probabilistic, so those people who were available at the collection sites during the two-month period in each service were selected. The choice of this type of sampling occurred due to the frequent characteristic of this population regarding ambivalent thinking about treatment, compulsion for use and constant relapses, factors that contribute to high rates of absence from the health service and/or abandonment of treatment, so it was possible to address only those present in the service. It should be noted that the two-month collection period for

each service was established by the management of these health services.

For the recruitment, initially, participants were informed about the survey during the assembly, which takes place weekly in CAPS with all users present. Subsequently, in order not to harm the treatment, they were approached individually and invited to participate when they were not performing therapeutic activities. It is emphasized that all people treated in this specialized service had a Singular Therapeutic Plan and were accompanied by a multiprofessional team.

In the period of data collection, there were 1013 people registered in joint treatment of the three CAPS AD III, out of those who were, 175 were approached for participation in the interview, however, 47 were not included due to lack of prescription and three for prescription with a time less than 30 days. Of these 125 people, 24 refused to participate even after three invitations on different days, three started the interview and dropped out in the process, nine were excluded because they presented cognitive impairment recorded in medical records. Thus, the sample was established with 89 participants, distributed in 28 in CAPS AD III (A), 30 in CAPS AD III (B) and 31 in CAPS AD III (C).

The collection team consisted of a total of seven researchers, among them five nurses, three students of Postgraduate in Nursing, two nurses who participated in the research group and two students of the scientific initiation program. All the interviewers participated in a training held by the researchers responsible for the project, with a workload of 25 hours, in order to deepen the knowledge of the application of the instruments and the way of approaching the participants.

After training, in January 2018, a pilot test was carried out with 15 people under treatment in a service analogous to the data collection sites, these interviews did not include the study sample. The application aimed to standardize data collection procedures, minimize failures and improve data collection. As weaknesses were identified, the extensive durability of the interview that allowed to assume the number of interviews in relation to the collection time available in each service and the impression of the Likert scale of an instrument for better visualization by the participant.

Data collection occurred between the period of April and November 2018, two months in each service, being divided between April and June in CAPS AD III (A), between June and August in CAPS AD III (B) and between September and November in CAPS AD III (C). Individual structured interviews were conducted by the interviewing team in all services, with data supplemented with a search of the medical record authorized by the participant and the service.

The interviews had an average duration of 60 minutes and were carried out predominantly in a single moment, however, considering the average time spent on each application it was possible to some participants to carry out in two moments within the period of one week. Also, the interviews were conducted in a room reserved in the services, with privacy and absence of external interference.

The data were collected by applying five instruments: the Addiction Severity Index Version 6 (ASI-6), Treatment Adherence Measure (MAT), the Level of Knowledge, Medication Regimen Complexity Index, and an instrument developed by the researchers.

The ASI-6 covers objective and subjective issues related to the severity of seven distinct areas in the life of the person who uses alcohol and other drugs: medical, employment, alcohol, other drugs, legal, family/social and psychiatric. ASI-6 was psychometrically validated for the Brazilian population from application to 740 people in treatment by use of substances, had good reliability and validity with Cronbach's alpha for subscales between 0.64 and 0.95[16].

The MAT instrument evaluates the person's behavior regarding adherence to drug therapy and was translated and validated for the Brazilian culture from the application to 300 people with mental disorders under treatment, obtaining a general Cronbach alpha of 0.74[17]. The scale has seven items, whose answers are presented in a Likert scale with the following scores: always (1), almost always (2), frequently (3), sometimes (4), rarely (5) and never (6). The level of adherence is obtained by simple arithmetic average of the sum of all items. Non-adherents are considered average from 1 to 4 and adherent averages between 5 and 6[17].

The Level of Knowledge instrument was developed by Brazilian researchers and includes

16 questions that evaluate the level of knowledge regarding the identification and administration of the drug, i.e., name of the drug, form, frequency of administration, duration of treatment, adverse effect, drug interaction and what to do in case of forgetting the administration[18]. A score of less than eight indicates 'Insufficient level', that is, the participant does not have conditions to use the drug safely[18].

The Medication Regimen Complexity Index is an instrument created by George and collaborators, translated and validated in Brazil[19], which was not applied to participants because it was used only for the analysis of the complexity of the therapeutic regime, in this case, the data was also confronted with information from the medical record. This instrument has three sessions and measures the complexity of drug prescription, considering aspects about form, dosage, frequency and additional information on schedules. It was completed by the researchers from consultation with the medical records regarding the prescription of medicines. Its score is defined as low complexity of the therapeutic regimen up to seven points and above seven points the complexity is high[19].

Finally, the instrument developed by the researchers contains complementary questions about the treatment regarding the place of dispensing of medicines, difficulty in obtaining the medicine, motivation to continue with the drug therapy, perception of pleasant and unpleasant change with the drug, family incentive in drug therapy. This instrument also presented questions for consultation in medical records: prescription drugs, the amount of medicines, diagnosis of substance-related disorders and psychiatric comorbidity.

The dependent variable (outcome) corresponds to the non-adherence to drug therapy from the application of MAT, while the independent variables were extracted from the other four instruments. Furthermore, it is noteworthy that descriptive variables were also used to characterize the sociodemographic data such as sex, age, race, marital status, schooling and employment situation.

The data were tabulated in the computer program Excel®, with double typing and checking on the REDCap® platform, after both were transported for analysis in the Stata® computer program, version 12 and SPSS version 20. In the descriptive analysis, absolute and relative frequencies were extracted for categorical variables and measures of central trends (mean and median), dispersion (standard deviation, interquartile interval minimum and maximum value) for continuous variables. The outcome (non-adherence to drug therapy) was estimated with a 95% confidence interval (95%CI).

For the categorization of continuous variables, the linearity of the quantitative gradient was taken into account (e.g. tertiles, quartiles and quintiles). For the qualitative variables, their categories were grouped according to the absolute and relative frequencies presented after the initial descriptive analysis. For both continuous and categorical variables, current literature on the subject was considered, in addition to the distribution of data.

In the initial inferential analysis, contingency tables were used and the associations of the proportions between the dependent and independent variables were tested with the chi-square Pearson test, as well as the exact Fisher test and the Mann-Witney according to the observed distributions, being considered significant those that obtained the value of $p < 0.05$.

To estimate the measure of effect, we used the calculation of the Prevalence Ratio (PR) with 95% CI with Poisson regression between the dependent variable (non-adherence to treatment) and the independent ones that obtained in the associations p value < 0,2, were considered significant those that obtained the value of $p < 0.05$.

The matrix study was approved by the Research Ethics Committee of the signatory institution (CAAE 66929617.0.0000.0102) and developed in accordance with current research ethics guidelines. All participants signed the Informed Consent Form.

RESULTS

Of the total of 89 participants, 87.6% were male, 46.1% were between 30 and 49 years old, 50.6% were white, 80.9% had no marital relationship, 37% had elementary school education, 77.5% were unemployed or out of the labor market; and, 56.2% did not adhere to the drug therapy.

There was no significant association between non-adherence to drug therapy and the variables of clinical and psychological aspects. However, there was a predominance of non-adherence among those who had a prescription for clinical comorbidity and those who did not use the recommended clinical medications. Moreover, there was a higher frequency of non-adherence among those who had difficulty sleeping, symptoms of depressed mood, anxiety and changes in sense perception.

Table 1. Distribution according to clinical and psychological data – Curitiba, PR, Brazil, 2018

Variable	Adherence (n= 89)		p-value	PR	[95%] CI α
	Yes	No			
Clinical comorbidity			0,278¥		
No	15 (37.5)	25 (62.5)			
Yes	24 (48.9)	25 (51.0)			
Description of clinical comorbidity				[1]+	
Neurological	6 (33.3)	12 (66.6)	0.063¥	1.55	(0.75; 3.20)
Respiratory	21 (51.2)	20 (48.7)	0.094*	1.84	(0.66; 5.13)
Hepatic	12 (40.0)	18 (60.0)	0.225*	1.87	(0.73; 4.74)
Medication for clinical comorbidity			0.182*		
No	32 (50.0)	32 (50.0)		[1]	
Yes	5 (31.2)	11 (68.7)		1.37	(0.69; 2.72)
Yes, but not using	2 (22.2)	7 (77.7)		1.55	(0.68; 3.52)
Psychiatric comorbidity			0.992¥		
Yes	14 (43.7)	18 (56.2)			
No	25 (43.8)	32 (56.1)			
Description of psychiatric comorbidity			0.714*		
Mood disorders	11 (44.0)	14 (56.0)			
Personality disorders	0.0	2 (100.0)			
Anxiety disorders	0.0	2 (100.0)			
Psychotic disorders	1 (50.0)	1 (50.0)			
No comorbidity	39 (43.8)	50 (56.1)			
Use of medication for psychological/psychiatric problems			0.271*		
No	28 (48.2)	30 (51.7)		[1]	
Yes	11 (35.4)	20 (64.5)		2.85	(0.33; 2.44)
Difficulty sleeping			0.780*		
No	10 (41.6)	14 (58.3)			
Yes	27 (43.5)	35 (56.4)			
Yes, but using PAS	2 (66.6)	1 (33.3)			
Symptoms of depressed mood			0.295¥		
No	9 (60.0)	6 (40.0)			
Yes	24 (38.7)	38 (61.2)			
Yes, but using PAS	6 (50.0)	6 (50.0)			
Anxiety symptoms			0.118*		
No	6 (37.5)	10 (62.5)		[1]	
Yes	25 (40.3)	37 (59.6)		0.95	(0.47; 1.92)
Yes, but using PAS	8 (72.7)	3 (27.2)		0.43	(0.12; 1.92)
Alteration of sense perception			0.896¥		
No	15 (46.8)	17 (53.1)			
Yes	14 (41.1)	20 (58.8)			
Yes, but using PAS	10 (43.4)	13 (56.5)			
Suicidal Ideation			0.197*		
No	18 (52.9)	16 (47.0)		[1]	
Yes	16 (34.7)	30 (65.2)		1.29	(0.68; 2.44)
Yes, but using PAS	5 (55.5)	4 (44.4)		1.18	(0.39; 3.55)
Suicide attempt			0.609*		
No	23 (47.9)	25 (52.0)			
Yes	14 (42.4)	19 (57.5)			
Yes, but using PAS	2 (28.5)	2 (71.4)			

Psychiatric comorbidity. ¥ p-value in Pearson's chi-square test; * p-value in Fisher's exact test; α Poisson regression.

Table 2 shows that there was a statistical correlation between non-adherence to treatment and the amount of treatments performed, characterized by the number of different times that the participant received treatment for his use of alcohol and/or other drugs. Thus, it was evidenced that those who had a history of more than seven treatments had 1.85 times more chance of not adhering to the drug therapy when compared to those who did not have a history of previous treatment.

Furthermore, regarding the frequency of consumption of illicit substances, those who consumed between one and six times a week and daily presented, respectively, 1.87 and 1,54 times more chance of not adhering to the drug therapy when contrasted those who were without use of the substance.

In a descriptive way, regarding the problems with the use of illicit substances and alcohol use, 82.1% (n:23) and 70.5% (n:24) of the participants, respectively, who perceived problems in their life due to consumption did not adhere to drug therapy. Among those who presented withdrawal symptoms due to the use of illicit substances and alcohol, there was a higher frequency of non-adherence to the use of drugs, being 74.2% (n:23) and 68.7% (n:11), respectively.

Table 2. Distribution according to data on substance-related disorders – Curitiba, PR, Brazil, 2018

Variable	Adherence (n= 89)		p-value	PR	[95%] CI[α]
	Yes N (%)	No N (%)			
Diagnosis of Substance-Related Disorders			0.279[¥]		
F 10.2[+]	20 (51.3)	19 (48.7)			
F 15.2[++]	8 (47.1)	9 (52.9)			
F 19.2 [+++]	11 (33.3)	22 (66.6)			
Number of treatments performed for alcohol and/or other drug use			**0.021[¥]**		
Zero	22 (59.4)	15 (40.5)		[1]	
1 – 7	10 (41.7)	14 (58.3)		1.43	(0.69; 2.98)
> 7	7 (20.0)	21 (75.0)		1.85	(0.95; 3.58)
Substance considered primary problem			0.431[¥]		
Alcohol	22 (47.8)	24 (52.1)			
Cocaine/Crack	17 (39.5)	26 (60.4)			
Years of using illicit substances			0.081[¥]		
Zero	16 (59.2)	11 (40.7)		[1]	
1 – 10 years	6 (27.2)	16 (72.7)		1.78	(0.82; 3.84)
> 10 years	17 (44.7)	21 (55.2)		1.35	(0.65; 2.81)
Years of alcohol use			0.186[¥]		
Zero	7 (36.8)	12 (63.1)		[1]	
One	6 (28.5)	15 (71.4)		1.13	(0.52; 2.41)
Two	13 (65.0)	7 (35.0)		0.55	(0.21; 1.40)
Three	5 (50.0)	5 (50.0)		0.79	(0.27; 2.24)
Four or more	8 (42.1)	11 (57.8)		0.91	(0.40; 2.07)
Frequency of use of illicit substances			**0.045***		
Zero	10 (55.5)	8 (44.4)		[1]	
1 – 6 time a week	3 (16.6)	15 (83.3)		1.87	(0.79; 4.42)
Daily	5 (31.2)	11 (68.7)		1.54	(0.62; 3.84)
Frequency of alcohol use			0.671*		
Zero	12 (54.5)	10 (45.4)			
1 – 3 times a month	4 (50.0)	4 (50.0)			
1 – 2 times a week	3 (33.3)	6 (66.6)			
3 – 6 times a week	5 (50.0)	5 (50.0)			
Daily	15 (37.5)	25 (62.5)			
Problems with the use of illicit substances			0.111[¥]		
No	5 (41.6)	7 (58.3)		[1]	
Yes	5 (17.8)	23 (82.1)		1.40	(0.60; 3.28)
Problems with alcohol use			0.157[¥]		
No	8 (50.0)	8 (50.0)		[1]	

Yes	10 (59.4)	24 (70.5)		1.41	(0.63; 3.14)
Withdrawal symptoms of the illicit substance			0.795¥		
No	3 (30.0)	7 (70.0)			
Yes	8 (25.8)	23 (74.2)			
Alcohol Withdrawal Symptoms			0.631¥		
No	13 (38.2)	21 (61.7)			
Yes	5 (31.2)	11 (68.7)			
Difficulty in controlling the use of illicit substances			0.361*		
No	3 (42.8)	4 (57.1)			
Yes	8 (23.5)	26 (76.4)			
Difficulty controlling alcohol use			0.880¥		
No	6 (37.5)	10 (62.5)			
Yes	12 (35.2)	22 (64.7)			
Concern about the use of the illicit substance			0.092*		
None	0.0	2 (100.0)			
Mild	2 (100.0)	0.0			
Moderate	1 (100.0)	0.0			
Considerably	1 (16.6)	5 (83.3)			
Extremely	9 (30.0)	21 (70.0)			
Concern about alcohol use			0.714*		
None	1 (33.3)	2 (66.6)			
Mild	1 (50.0)	1 (50.0)			
Moderate	1 (16.6)	5 (83.3)			
Considerably	2 (40.0)	3 (60.0)			
Extremely	14 (48.2)	15 (51.7)			
Importance of treatment for illicit substance use			0.347¥		
None	3 (60.0)	2 (40.0)			
Mild	1 (100.0)	0.0			
Moderate	1 (33.3)	2 (66.6)			
Considerably	0.0	3 (100.0)			
Extremely	18 (38.3)	29 (67.7)			
Importance of treatment for alcohol use			0.748*		
None	12 (40.0)	18 (60.0)			
Mild	1 (100.0)	0.0			
Moderate	1 (25.0)	3 (75.0)			
Considerably	3 (37.5)	5 (62.5)			
Extremely	22 (47.8)	24 (52.1)			
Importance of achieving abstinence from the illicit substance			0.316*		
None	4 (50.0)	4 (50.0)			
Mild	2 (100.0)	0.0			
Moderate	0.0	1 (100.0)			
Considerably	1 (50.0)	1 (50.0)			
Extremely	16 (34.7)	32 (65.2)			
Importance of achieving abstinence from alcohol			0.713*		
None	11 (40.7)	16 (59.2)			
Mild	0.0	1 (100.0)			
Moderate	1 (20.0)	4 (80.0)			
Considerably	3 (42.8)	4 (57.1)			
Extremely	24 (48.9)	25 (51.2)			
History of overdose			0.111¥		
Yes	8 (30.7)	18 (69.2)		0.73	(0.41; 1.30)
No	31 (49.2)	32 (50.7)		[1]	

¥P-value in Pearson's chi-square test

* p-value in Fisher's exact test

α Poisson regression

+Mental and behavioral disorders due to alcohol use – dependence syndrome.

++ Mental and behavioral disorders due to cocaine use – dependence syndrome.

+++ Mental and behavioral disorders due to polydrug use and use of other psychoactive substances – dependence syndrome.

In Table 3, it is evident that among those with low level of knowledge about drug therapy, there was a higher frequency of non-adherence, with predominance among those who did not know the name of the drug, its indication, prescribed dose, restrictions associated with the use of the drug and unpleasant reactions. It should be noted that half of the non-adherents answered not need information on drug therapy. Also, those who had prescription drugs considered as high complexity presented a higher frequency of non-adherence.

Table 3. Distribution according to data on the level of knowledge and complexity of drug therapy – Curitiba, PR, Brazil, 2018

Variable	Adherence (n= 89)		p-value	PR	[95%] CI[α]
	Yes N(%)	No N(%)			
Knowledge level score			0.965[¥]		
Low	15 (44.1)	19 (55.8)			
High	24 (43.6)	31 (56.3)			
Safe Usage Level Score			0.995[¥]		
Insufficient	15 (44.1)	19 (55.8)			
Fair	15 (44.1)	19 (55.8)			
Good	9 (42.8)	12 (57.4)			
Complexity Level Score			0.055[¥]		
Low	15 (60.0)	10 (40.0)		[1]	
High	24 (37.5)	40 (62.5)		1.56	(0.78; 3.12)
Name of prescribed medication			0.518[¥]		
Unable to answer	13 (39.3)	20 (60.6)			
Able to answer	26 (46.4)	30 (53.5)			
Therapeutic indication			0.252[¥]		
Unable to answer	14 (36.8)	24 (63.1)		0.74	(0.41; 1.34)
Able to answer	25 (49.0)	26 (50.9)		[1]	
Medication dose			0.904[¥]		
Unable to answer	20 (44.4)	25 (55.5)			
Able to answer	19 (43.1)	25 (56.8)			
Administration schedule			0.799[¥]		
Unable to answer	20 (42.5)	27 (57.4)			
Able to answer	19 (45.2)	23 (54.7)			
Usage time			0.513[¥]		
Unable to answer	10 (38.4)	16 (61.5)			
Able to answer	29 (46.3)	34 (53.7)			
How to use			0.397[¥]		
Unable to answer	2 (28.5)	5 (71.4)			
Able to answer	37 (45.1)	45 (54.8)			
What to do if you forget to take your medicine			0.209[¥]		
Unable to answer	15 (53.5)	13 (46.4)			
Able to answer	24 (39.3)	37 (60.6)			
Restriction associated with the use of the drug			0.164[¥]		
Unable to answer	13 (35.1)	24 (64.8)		0.77	(0.44; 1.34)
Able to answer	26 (50.0)	26 (50.0)		[1]	
Unpleasant reactions			0.579*		
Unable to answer	16 (43.2)	21 (56.7)			
Able to answer	2 (66.6)	1 (33.3)			
Need more information?			0.116[¥]		
Yes	9 (32.1)	19 (67.8)		[1]	
No	30 (50.0)	30 (50.0)		0.73	(0.41; 1.30)

[¥]p-value in Pearson's chi-square test; * p-value in Fisher's exact test; Poisson regression

In Table 4, those who had a higher amount of prescribed drugs showed no adherence to drug therapy, with 61.5% (n:16) of non-adherence among those who used three drugs and 59.3% (n:19) of four or more. The classes of drugs most cited were anxiolytics, antidepressants, mood

stabilizers and antipsychotic and in all, there was a higher frequency of non-adherence. Among those who reported some difficulty in obtaining the drugs, 55.5% (n:25) did not adhere.

Although 74 participants reported feeling motivated to continue the drug therapy, 52.7% (n:39) did not adhere to this therapy. Non-adherence was also frequent among those who felt pleasant changes from the use of medicines, 52.7% (n:39) and who received family incentive 59.2% (n:32).

Table 4. Descriptive distribution according to pharmacotherapeutic data - Curitiba, PR, Brazil, 2018

Variable	Adherence (n= 89)		p-value	PR	[95%] CI$^{\alpha}$
	Sim N(%)	Não N(%)			
Amount of medication prescribed			0.744¥		
One	8 (53.3)	7 (46.6)			
Two	8 (50.0)	8 (50.0)			
Three	10 (38.4)	16 (61.5)			
Four or more	13 (40.6)	19 (59.3)			
Drug class				[1]	
Anxiolytic	10 (33.3)	20 (66.6)	0.138¥	1.33	(0.75; 2.36)
Antidepressant	13 (41.9)	18 (58.0)	0.752¥		
Mood stabilizer	24 (40.6)	35 (59.3)	0.333¥		
Antipsychotic	19 (48.7)	20 (51.2)	0.441¥		
How do you get the medication?			0.077*		
CAPS	2 (15.3)	11 (84.6)			
BHU/FHS	34 (48.5)	36 (51.4)			
Public pharmacy	1 (100.0)	0.0			
Own resources	2 (33.3)	3 (66.6)			
Difficulty in obtaining medication			0.881¥		
Yes	20 (44.4)	25 (55.5)			
No	18 (42.8)	24 (57.1)			
Feel motivated to continue treatment			0.104¥		
Yes	35 (47.3)	39 (52.7)		[1]	
No	3 (23.0)	10 (76.9)		1.45	(0.72; 2.92)
Feel a pleasant change with the medication			0.309*		
Yes	35 (47.3)	39 (52.7)			
No	3 (23.0)	10 (76.9)			
Feel unpleasant change with medication			0.339¥		
Yes	11 (36.6)	19 (63.3)			
No	27 (47.3)	30 (52.6)			
Family encouragement			0.480¥		
Yes	22 (40.7)	32 (59.2)			
No	16 (48.4)	17 (51.5)			

¥p-value in Pearson's chi-square test; * p-value in Fisher's exact test; $^{\alpha}$ Poisson regression

DISCUSSION

The non-adherence to drug therapy of people with substance-related disorders causes a great impact on the treatment of chronic health conditions and has multifactorial cause that is mainly related to the characteristics of mental disorder, the prescribed drug therapy itself and the subjectivity of the individual[5,20]. These factors can directly influence the failure of treatment, which in turn contributes to a worse prognosis and chronic disease[2].

The fact that 56.2% of the participants in this study did not adhere to drug therapy is a cause for concern, since this index is higher than that estimated by the World Health Organization, that 50% of all people who require drug treatment for chronic or acute conditions do not adhere to the proposal[4].

It is important to consider that the method, indirect, through self-report, used for the assessment of adherence in this research, although more accessible, are more susceptible to bias, since real adherence cannot be guaranteed, given that false statements of overestimation of use may

be provided by the individual when questioned about the correct use of medication[21]. Thus, it is believed that this quantity may be even higher than the one found in research using such method.

The sociodemographic profile of the participants in this study is similar to other studies that studied adherence to mental health, and most of them were young adults, single, with low schooling and unemployed[22,23].

A portion of the participants in this study who did not maintain abstinence from substances of preference showed a higher frequency of non-adherence to drug therapy. In accordance with this perspective, an integrative review of the literature on treatment adherence in people with substance-related disorders showed that abstinence was one of the most cited aspects in the literature as protective factors for treatment adherence and decreased abandonment[5]).

The clinical and mental comorbidities did not show statistical association with non-adherence to drug therapy, however, it is known that it is common to have a chronic or acute aggravation due to the continuous use of psychoactive substances. It should be considered that the more comorbidities or severe they become and the more medications are prescribed, adherence is more challenging due to the complexity of the therapeutic regimen[2].

In this study, the higher frequency of substance use and more treatment histories for substance-related disorders showed an association with non-adherence to treatment. Scientific evidence shows that therapeutic approaches aimed at people with problems due to alcohol and other drugs should be adjusted according to the severity of symptoms and disorder, with a view to better treatment results, thus, the use of more intensive approaches is essential in cases of increased severity[24].

The complexity of the drug scheme showed in a descriptive way that there was a higher frequency of non-adherence among those who had a high complexity of prescribing drugs. The complexity of drug prescription is understood from multiple criteria, in addition to the quantity, the name of the medication, the different times and the mode of use[18, 19, 25].

The literature points out that the complexity of the drug scheme is a relevant risk factor for low adherence and errors in administration, favoring increased mortality, hospital admissions and health costs[26]. A study conducted in a hospital in Japan with 1,057 people who were using drugs for chronic health conditions showed that the complexity of the drug regimen, not the amount of drugs, was correlated with adherence to drug therapy[27].

The complexity of the therapeutic regimen contributes to the difficulty of understanding the purpose and the form of administration of each medication, causing important consequences such as administration errors and non-adherence, which leads to a worsening of the health status. It is noteworthy that knowledge is related to the individual's knowledge about a certain object or situation. It is the act of perceiving or understanding something through reason and/or experience, it is more than obtaining information, it is an act or ability of thought to apprehend through cognitive mechanisms that subsidizes the person in decision making[18,19].

In this perspective, a study conducted with 300 people under treatment at Psychosocial Care Centers in the city of Curitiba showed that 64% of people with mental disorder had insufficient knowledge about the name of medicines, as well as insufficient information about the dosage in 91.9%. Furthermore, there was a correlation between insufficient knowledge about drug therapy with comorbidity, unawareness of its diagnosis, administration alone of the drugs, depressive disorder and higher age group[13].

In the drug therapy of people with substance-related disorders, this capacity for apprehension is of paramount importance, since efficacy is directly related to the correct use of the drug. This problem can be a result of cognitive difficulties that make it impossible to understand, but also the lack of information. In this sense, nursing care should pay attention to cultural and language differences and difficulties of knowledge and learning that may exist adapting technical terms-scientists to achieve understanding through the use of strategic resources of health education[18].

In this study, although participants reported that they felt pleasant changes with the use of medication and that they are encouraged by family members, there was discontinuity of treatment by most of them. In drug therapy, the protective network such as the family can be considered a positive factor for adherence[9].

Drug therapy is an effective resource in the treatment of people with substance-related disorders, however when facing a long period of treatment, adverse reactions, numerous side effects, the abandonment of treatment becomes a reality in this clientele even when there is family and professional support[5,28].

In order to minimize the low adhesion, a study that systematically summarized the scientific evidence of multiple systematic reviews that evaluated interventions related to non-adherence showed that some strategies are effective in the practice of health professionals, how to simplify the doses of the therapeutic regimen, intensify health education, use reminders to recall the person and incentives to reduce the person's expenses with medicines[29].

Regarding health education, the Autonomous Management of Medication stands out as an important therapeutic resource often used in Psychosocial Care Centers, use strategies to strengthen the protagonism and active participation of people who make use of psychotropic drugs in their mental health treatment, favoring the integrality of care, the understanding of subjectivity, sharing care and enhancing the autonomy of the person in treatment, especially drug therapy[30].

CONCLUSION

In this study, the frequency of non-adherence to drug therapy by people with substance-related disorders was higher than expected and showed a statistical association with a greater amount of treatment history for the use of alcohol and/or other drugs and Frequency of use of illicit substances.

Although non-adherence is a challenge in all health conditions, in substance-related disorders, the failure to follow medication therapy is more complex due to common characteristics of this mental disorder such as compulsion, cleavage and lack of insight.

This research presents as a limitation the cross-sectional design, because it is difficult to identify changes in the health status of the person; non-probabilistic sampling for convenience, the indirect method of data collection, the treatment period from 30 days and the small number of participants.

This study contributed to the identification of the prevalence of non-adherence in people with substance-related disorders, as well as subsidies for the development of therapeutic strategies from the factors related to non-adherence presented.

FATORES ASSOCIADOS À NÃO ADESÃO DA TERAPÊUTICA MEDICAMENTOSA EM PESSOAS COM TRANSTORNOS RELACIONADOS A SUBSTÂNCIAS

RESUMO

Objetivo: identificar os fatores associados à não adesão da terapêutica medicamentosa por pessoas com transtornos relacionados a substâncias em tratamento nos Centros de Atenção Psicossocial de álcool e outras drogas III. **Método**: estudo observacional transversal conduzido de abril a novembro de 2018, com 89 pessoas (78 homens e 11 mulheres) com transtornos relacionados a substâncias. Os dados foram coletados por entrevista estruturada com aplicação dos instrumentos: Medida de Adesão ao Tratamento, *Addiction Severity Index Version 6,* Nível de conhecimento, *Medication Regim Complexity Index* e de elaboração própria; posteriormente, foram submetidos a análise quantitativa descritiva e inferencial. **Resultados:** do total de participantes, 56,2% não aderiram à terapêutica medicamentosa. A não adesão foi mais frequente em pessoas com comorbidades clínicas e psiquiátricas, com sintomas depressivos, ansiosos e de alteração de sensopercepção. Houve significância entre a não adesão e histórico de números de tratamentos e maior frequência de uso de substância. **Conclusão**: a não adesão à terapêutica medicamentosa foi acima do esperado e está associada a fatores sociodemográficos, clínicos, mentais e farmacológicos. Nos transtornos relacionados a substâncias, a não adesão se mostra complexa devido às características comuns desta condição, como compulsão, fissura e falta de insight.

Palavras-chave: Transtornos relacionados ao uso de substâncias. Adesão à medicação. Saúde mental.

FACTORES ASOCIADOS A LA NO ADHESIÓN A LA TERAPIA FARMACOLÓGICA POR PERSONAS CON TRASTORNOS RELACIONADOS CON SUSTANCIAS

RESUMEN

Objetivo: identificar los factores asociados a la no adhesión de la terapia farmacológica por personas con trastornos relacionados con sustancias en tratamiento en los Centros de Atención Psicosocial de alcohol y otras drogas III. **Método**: estudio observacional transversal realizado de abril a noviembre de 2018, con 89 personas (78 hombres y 11 mujeres) con trastornos relacionados con sustancias. Los datos fueron recolectados por entrevista estructurada con aplicación de los instrumentos: Medida de Adhesión a los Tratamientos, *Addiction Severity Index Version 6*, Nivel de conocimiento, *Medication Regim Complexity Index* y de elaboración propia; posteriormente, fueron sometidos a análisis cuantitativo descriptivo e inferencial. **Resultados**: del total de participantes, el 56,2% no se adhirió a la terapia farmacológica. La no adhesión fue más frecuente en personas con comorbilidades clínicas y psiquiátricas, con síntomas depresivos, ansiosos y de alteración de sensopercepción. Hubo significación entre la no adhesión y el historial de números de tratamientos y mayor frecuencia de uso de sustancia. **Conclusión**: la no adhesión a la terapia farmacológica fue superior a lo esperado y está asociada a factores sociodemográficos, clínicos, mentales y farmacológicos. En los trastornos relacionados con sustancias, la no adhesión se muestra compleja debido a las características comunes de esta condición, como compulsión, *craving* y ausencia de *insight*.

Palabras clave: Trastornos relacionados con el uso de sustancias. Adhesión a la medicación. Salud mental.

REFERENCES

1. Bozkurt M. Neuroscientific Basis of Treatment for Substance Use Disorders. Noro Psikiyatr Ars. 2022 dec; 59 (1): 75-80. Doi: 10.29399/npa.28172.

2. Shuey B, Suda KJ, Halbisen A, Wen H, Wharam JF, Rosland AM, et al. Anti-hypertensive medication use among people with and without substance use disorders. Journal of general internal medicine. 2024 fev; 39(3): 508 - 510. Doi: 10.1007/s11606-023-08543-3.

3. Elowe J, Vallat J, Castelao E, Strippoli MF, Gholam M, Ranjbar S, et al. Psychotic features, particularly mood incongruence, as a hallmark of severity of bipolar I disorder. Int J Bipolar Disord. 2022 dec; 10 (1): 31. Doi: 10.1186/s40345-022-00280-6.

4. World Health Organization. Adherence to long-term therapies. Evidence for action [Internet]. Geneva: WHO; 2003. [Cited 2022 Mar 17]. Available from: http://www.who.int/chp/knowledge/publications/adherence_report/en/.

5. Capistrano FC, Maftum MA, Alcântara CB, Ferreira ACZ, Maftum GJ. Dimensões que interferem na adesão à medicação nos transtornos relacionados às substâncias: revisão integrativa. Cogitare Enferm. 2019; 24: e58170. Doi: http://dx.doi.org/10.5380/ce.v24i0.58170.

6. Cordioli AV, Gallois CB, Isolan L. Psicofármacos: Consulta rápida. 6a ed. Porto Alegre: Armed; 2023.

7. American Psychiatric Association. DSM V. Manual diagnóstico e estatístico de transtornos mentais - DSM-5. 5° ed. Porto Alegre: Artmed: 2014.

8. Soares RG da S, Araújo G de L, Santos MX dos, Melo LR de, Martinho NJ. Association of psychopharmaceuticals with other therapies: The care of the chemical dependent from an interprofessional perspective. Braz. J. Hea. Rev. 2020 jul; 3(4):8919-37.Doi: 10.34119/bjhrv3n4-137.

9. Di Lorenzo R, Perrone D, Montorsi A, Balducci J, Rovesti S, Ferri P. Atitude em relação à terapia medicamentosa em um centro comunitário de saúde mental avaliada pelo Drug Attitude Inventory. Adesão preferencial do paciente . 2020;14:995-1010. Doi: https://doi.org/10.2147/PPA.S251993.

10. Bidargaddi N, Schrader G, Myles H, Schubert KO, Kasteren Y van, Zhang T, et al. Demonstration of automated non-adherence and service disengagement risk monitoring with active follow-up for severe mental illness. Aust N Z J Psiquiatria. 2021 oct; 55(10): 976-982. Doi: 10.1177/0004867421998800.

11. Mgweba-Bewana L, Belus JM, Ipser J, Magidson JF, Joska JA. Examining the association of alcohol use and psychotropic medication adherence among women with severe mental illness in South Africa. Psychiatry Research. 2021 oct; 304:114127. Doi: https://doi.org/10.1016/j.psychres.2021.114127.

12. Carvalho LF, Rodrigues LA, Pandossio JE, Galassi AD. Análise Crítica Sobre Medicamentos Prescritos para o Uso Problemático de Crack. Psic: Teor e Pesq. 2021; 37: e372515. Doi: https://doi.org/10.1590/0102.3772e372515.

13. Alcântara CB de, Ferreira ACZ, Capistrano FC, Kaled M, Vale CCF., Maftum MA. Conhecimento da pessoa com transtornos mentais sobre o tratamento medicamentoso. Rev Enferm UFSM. 2020 abr; 10: e24. Doi: https://doi.org/10.5902/2179769238607.

14. Hird R, Radhakrishnan R, Tsai J. A systematic review of approaches to improve medication adherence in homeless adults with psychiatric disorders. Front. Psychiatry. 2024 jan; 14: 1339801. Doi: https://doi.org/10.3389/fpsyt.2023.1339801.

15. Burnier M. The role of adherence in patients with chronic diseases. Review Article. 2023 jan; 119: 1-5. Doi: https://doi.org/10.1016/j.ejim.2023.07.008.

16. Kessler F, Cacciola J, Alterman A, Faller S, Souza-Formigoni ML, Cruz ML, et al. Psychometric properties of the sixth version of the addiction severity index (ASI-6) in Brazil. Revista Brasileira de Psiquiatria. 2012 mar; 34(1): 24-33. Doi: 10.1590/S1516-44462012000100006.

17. Borba LO, Capistrano FC, Ferreira ACZ, Kalinke LP, Mantovani MF, Maftum MA. Adaptation and validation of the measuring treatment adherence for mental health. Revista Brasileira de Enfermagem. 2018; 71(5): 2243-50. Doi: http://dx.doi.org/10.1590/0034-7167-2017-0796.

18. Fröhlich SE, Dal Pizzol TS, Mengue SS. Instrumento para avaliação do nível de conhecimento da prescrição na atenção primária. Rev. Saúde Pública. 2010 dez; 44(6): 1046-1054. Doi: https://doi.org/10.1590/S0034-89102010000600009.

19. Melchiors AC, Correr CJ, Fernández-Llimos F. Tradução e validação para o português do Medication Regimen Complexity Index. Arq. Bras. Cardiol. 2007 out; 89(4): 210-218. Doi: https://doi.org/10.1590/S0066-782X2007001600001.

20. Muthulingam D, Bia J, Madden LM, Farnum SO, Barry DT, Altice FL. Using nominal group technique to identify barriers, facilitators, and preferences among patients seeking treatment for opioid use disorder: a needs assessment for decision making support. J Subst Abuse Treat. 2019 may; 100: 18-28. Doi: 10.1016/j.jsat.2019.01.019.

21. Walton KM, Herrmann ES. Medication Adherence in Tobacco Cessation Clinical Trials. Addiction Neuroscience. 2023 jun; 6:100069. Doi:10.1016/j.addicn.2023.100069.

22. Neto PAVR. Benefícios e limitações do tratamento apenas com medicação no manejo de transtornos psiquiátricos. Braz. J. Hea. Rev. [Internet]. 2023 Nov. 11 [citado em 7 de mar 2025];6(6):27458-71. Available from: https://doi.org/10.34119/bjhrv6n6-073.

23. Laranjeira C, Carvalho D, Valentim O, Moutinho L, Morgado T, Tomás C, et al. Therapeutic Adherence of People with Mental Disorders: An Evolutionary Concept Analysis. Int J Environ Res Public Health. 2023 fev; 20(5): 3869. Doi: 10.3390/ijerph20053869.

24. Volkow ND, Blanco C. Substance use disorders: a

comprehensive update of classification, epidemiology, neurobiology, clinical aspects, treatment and prevention. World Psychiatry. 2023 jun; 22(2):203-229. Doi: 10.1002/wps.21073..

25. Silva SN, Lima MG, Ruas CM. Uso de medicamentos nos Centros de Atenção Psicossocial: análise das prescrições e perfil dos usuários em diferentes modalidades do serviço. Ciênc. Saúde Coletiva. 2020 jul; 25(7). Doi: https://doi.org/10.1590/1413-81232020257.23102018.

26. Schmidt SJ, Wurmbach VS, Lampert A, Bernard S, HIOPP-6 Consortium; Haefeli W. Individual factors increasing complexity of drug treatment – a narrative review. Eur J Clin Pharmacol. 2020 apr; 76(6): 745-754. Doi: 10.1007/s00228-019-02818-7.

27. Wakai E, Ikemura K, Kato C, Okuda M. Effect of number of medications and complexity of regimens on medication adherence and blood pressure management in hospitalized patients with hypertension. Plos One. 2021 jun; 16(6): e0252944. Doi: 10.1371/journal.pone.0252944.

28. Oliveira PC de, Cavalcante LPL, Medeiros M, Melo ENN de, Gonçalves IA de J, Torquato TM, et al. Violência e uso de álcool e outras drogas: percepções e vivências de adolescentes escolares. Ciência, Cuidado E Saúde. 2024 fev; 23:230. Doi: https://doi.org/10.4025/ciencuidsaude.v23i0.65954.

29. Anderson LJ, Nuckols TK, Coles C, Le MM, Schnipper JL, Shane R, et al. A systematic overview of systematic reviews evaluating medication adherence interventions. American Journal of Health-System Pharmacy. 2020 jan; 77(2): 138-147. Doi: https://doi.org/10.1093/ajhp/zxz284.

30. Santos DGPML, Silva FP, Guedes TG, Ventura CAA, Silva RA, Frazão IS. Guia da gestão autônoma da medicação como ferramenta educativa do enfermeiro na atenção psicossocial. Enferm Foco. 2023 dez; 14: e-202371. Doi: https://doi.org/10.21675/2357-707X.2023.v14.e-202371.

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