

REVIEW

DIMENSIONS THAT INTERFERE WITH ADHERENCE TO MEDICATION IN SUBSTANCE-RELATED DISORDERS: INTEGRATIVE REVIEW*

Fernanda Carolina Capistrano¹, Mariluci Alves Maftum², Camila Bonfim de Alcântara³, Aline Cristina Zerwes Ferreira⁴, Gustavo Jorge Maftum⁵

ABSTRACT

Objective: To analyze the scientific production about the dimensions that interfere in the adherence to pharmacological therapy of individuals with mental disorders related to substance abuse from 2006 to April 2017.

Method: Integrative literature review of publications indexed in the following three databases LILACS, CINAHL and PUBMED, performed in April 2017.

Results: The 43 studies that met the eligibility criteria were analyzed. Such analysis made it possible to identify factors that have positive or negative impact on adherence to pharmacological therapy, grouped according to the five dimensions that determine the adherence proposed by the World Health Organization, namely: socioeconomic, health team/system, disease, treatment, and individual/patient.

Conclusion: Although pharmacological therapy is crucial in the management of individuals with substance-related disorders, implementing the treatment is challenging because of the different interactive dimensions that directly impact the process of treatment adherence.

DESCRIPTORS: Adherence to medication; Patient cooperation; Pharmacological treatment; Substance-Related Disorders; Mental health.

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¹Nurse. Nursing PhD Student. Centro de Atenção Psicossocial Infantil of São José dos Pinhais. Curitiba, PR, Brazil. 

²Nurse. PhD in Nursing. Professor at the Postgraduate Program in Nursing from Universidade Federal do Paraná. Curitiba, PR, Brazil. 

³Nursing Student. Universidade Federal do Paraná. Curitiba, PR, Brazil. 

⁴Nurse. Nursing PhD Student. Centro de Atenção Psicossocial Álcool e Drogas de Curitiba. Curitiba, PR, Brazil. 

⁵Physician. Resident in Pediatrics. Hospital Universitário do Oeste do Paraná. Cascavel, PR, Brazil. 

DIMENSÕES QUE INTERFEREM NA ADESÃO À MEDICAÇÃO NOS TRANSTORNOS RELACIONADOS ÀS SUBSTÂNCIAS: REVISÃO INTEGRATIVA

RESUMO

Objetivo: Analisar a produção científica acerca das dimensões que interferem na adesão à terapêutica medicamentosa de pessoas com transtornos mentais relacionados ao uso de substância, no período de 2006 a abril de 2017.

Método: Revisão Integrativa da Literatura a partir de três bancos de dados, LILACS, CINAHL e PUBMED, realizada em abril de 2017.

Resultados: Foram analisados 43 estudos que atendiam aos critérios de elegibilidade. A análise dos estudos possibilitou identificar fatores que impactam positiva ou negativamente a adesão à terapêutica medicamentosa, agrupados de acordo com as cinco dimensões determinantes para a adesão proposta pela Organização Mundial da Saúde, sendo elas: socioeconômica, equipe/sistema de saúde, doença, tratamento, e indivíduo/paciente.

Conclusão: Embora a terapêutica medicamentosa seja imprescindível no gerenciamento da pessoa com transtorno relacionado a substâncias, muitas vezes representa um desafio devido às diferentes dimensões interativas que influenciam diretamente no processo de adesão.

DESCRITORES: Adesão a medicação; Cooperação do paciente; Tratamento farmacológico; Transtornos Relacionados ao Uso de Substâncias; Saúde mental.

DIMENSIONES QUE INFLUYEN EN LA ADHESIÓN A LA MEDICACIÓN EN LOS TRASTORNOS ASOCIADOS A SUSTANCIAS: REVISIÓN INTEGRATIVA

RESUMEN

Objetivo: Analizar la producción científica acerca de las dimensiones que influyen en la adhesión a la terapéutica medicamentosa de personas con trastornos mentales asociados al uso de sustancia, en el periodo de 2006 a abril de 2017.

Método: Revisión Integrativa de la Literatura a partir de tres bancos de datos, LILACS, CINAHL y PUBMED, hecha en abril de 2017.

Resultados: Se evaluaron 43 estudios que atendían a los criterios de elegibilidad. El análisis de los estudios permitió identificar factores que tienen impacto positivo o negativo en la adhesión a la terapéutica medicamentosa. Esos factores se organizaron de acuerdo con las cinco dimensiones determinantes para la adhesión que propuso la Organización Mundial de la Salud: socioeconómica, equipo/sistema de salud, enfermedad, tratamiento, e individuo/paciente.

Conclusión: A pesar de que la terapéutica medicamentosa es imprescindible en la administración de la persona con trastorno asociado a sustancias, muchas veces representa un desafío a causa de las distintas dimensiones interactivas que influyen directamente en el proceso de adhesión.

DESCRIPTORES: Adhesión a medicación; Cooperación del paciente; Tratamiento farmacológico; Trastornos asociados al Uso de Sustancias; Salud mental.

INTRODUCTION

Substance-related disorders are a complex phenomenon, closely related to the environment in which the individual is inserted. It is understood etymologically as multifactorial, being considered at present one of the most serious public health problems due to the increase of its prevalence⁽¹⁻²⁾.

It is estimated that 250 million people globally use Psychoactive Substances (SPA), which corresponds to approximately 5% of the population between the ages of 16 and 64, of which about 29.5 million have substance-related disorders, in which consumption is harmful, and they require treatment⁽³⁻⁴⁾.

The treatment contemplates several therapeutic modalities, including pharmacology. However, this therapy is marked by several challenges, including adherence⁽⁵⁾. It is known that a significant percentage of individuals with chronic diseases need medications for treatment. However, it is estimated that only 50% of them comply with the treatment. This figure is lower in developing countries like Brazil⁽⁶⁾.

A study conducted in the United States⁽¹⁾ based on analysis of the medical records of individuals with substance-related disorders in eleven outpatient clinics in different cities found that medication therapy is an important resource in the treatment of individuals with substance-related disorders. However, many of them find it difficult to complete the proposed medication plan⁽¹⁻²⁾.

There are many predictors that favor or not adherence to medication therapy, such as the fact that substance-related disorders are marked by high severity, successive relapses, craving, the extended period of time taken by the treatment, too many medications, lack of family support, among others^(1,7).

Given the different factors that interfere with adherence, the World Health Organization defined adherence based on a multidimensional phenomenon influenced by the interaction of the individual with five determinant dimensions (socioeconomic, health team/system, disease, treatment and individual/patient), demystifying the belief that the patient is solely responsible for long-term adherence to their treatment⁽⁶⁾.

Based on the aforementioned, adherence to treatment is considered a complex process, pervaded by the individual's subjectivity, the individual's self-image, how he/she perceives the disorder and the treatment. Adherence can be perceived in attitudes and behaviors that emerge from personal experience, motivation, and expectation.

Thus, since it is crucial to obtain a better understanding of the factors related to adherence to pharmacological therapy by this clientele, the present study aimed to analyze the scientific production about the dimensions that interfere with adherence to medication therapy by individuals with mental disorders related to substance abuse.

METHOD

Integrative literature review carried out in April 2017, which was structured in six stages: 1) selection of the hypothesis or question for review; 2) Sampling or search in the literature; 3) Representation and characterization of the studies and their findings; 4) Analysis of the findings; 5) Interpretation of results and, 6) Report of the Review⁽⁸⁾.

The strategy for elaborating the guiding question was used and the following question was obtained: What is the scientific evidence about the factors associated with adherence and non-adherence to pharmacological therapy?

The process of selection of studies was performed by three independent reviewers, and the inclusion criteria were primary study data on adherence and non-adherence to

medication therapy by individuals with substance-related disorders from 2006 to April 2017 published in full-text articles in English, Spanish and Portuguese. The exclusion criteria restricted review studies, reflections, meta-analysis, letters, editorials, case studies and studies on disorders related to tobacco use.

The search strategy was structured from the controlled descriptors indexed in the Medical Subject Headings (MeSH) and in the Descriptors in Health Sciences (Decs): Substance-Related Disorder; Alcohol-Related Disorders; Alcoholism; Amphetamine-Related Disorders; Cocaine-Related Disorders; Inhalant Abuse; Marijuana Abuse; Opioid-Related Disorders; Heroin Dependence; Morphine Dependence; Phencyclidine Abuse; Substance Abuse, Intravenous; Substance Abuse Detection and implemented in the Latin American and Caribbean Literature in Health Sciences (LILACS) databases, Cumulative Index to Nursing and Allied Health Literature (CINAHL) and PUBMED, developed by the National Center for Biotechnology Information (NCBI) of the US National Library of Medicine (NLM) considering their respective research capabilities.

The search of the databases resulted in 1,304 studies. Of these, 1,209 were excluded after floating reading of the titles and abstracts, and 319 remained. After full-length reading, 276 studies were excluded, and the final sample consisted of 43 studies.

The data collected was submitted to quantitative and descriptive analysis and grouped according to the five dimensions that determine adherence to treatment proposed by the World Health Organization: socioeconomic, health team/system, disease, treatment and individual/patient.

This article originated from the research project entitled 'Adherence to treatment by individuals with psychoactive substance use disorders' approved by the Research Ethics Committee of the Health Sciences Sector of the Federal University of Paraná, under protocol no 2,033,006 .

RESULTS

One study was obtained from the LILACS database, 15 from PUBMED and 27 from CINAHAL databases. All papers were available in English. The number of authors ranged from one to 13, and since there were many authors, only the first author was characterized, and most were physicians (29). Only one study was conducted by a nurse.

Regarding the institutions where the studies were developed, these were as follows: 35 studies were conducted in universities, seven in research centers and only one was conducted in a hospital. As for the journals, 36 were multidisciplinary and dedicated to the topic of psychoactive substances, and regarding the country of origin, 27 were conducted in the United States, six in China and one in Brazil.

The prevalent medical diagnosis was opioid dependence characterized in 25 studies, followed by alcohol dependence described in 12 studies. As for the methodological criteria, there was a low level of evidence in the studies, as follows: 25 studies had a level of evidence equal to 6, and 14, a level of evidence of 2.

The factors that interfere with adherence and non-adherence to medication therapy identified in the studies were classified according to the five different dimensions proposed by the WHO⁽⁶⁾ and shown in Chart 1.

Chart 1 - Interactive dimensions that interfere with adherence to treatment. Curitiba, PR, Brazil, 2017 (continues)

Treatment Dimension		
Adherence Factors		n
	1. Other therapeutic modalities ^(1,5,9-34)	28
	2. Appropriate medication dose ^(10-12,24,26,28,31,35-37,39)	12
	3. Effectiveness of medication ^(5,9,35)	3
	4. Previous treatments ^(14,21,24)	3
	5. Injectable medication ⁽³⁷⁾	1
	6. No treatment history ⁽³⁶⁾	1
	7. Long term treatment ⁽²⁴⁾	1
	8. Toxicological screening ⁽²⁵⁾	1
TOTAL	50	
Non-adherence factors	1. Side effects and adverse drug effects ^(12,15,18,20,22,26,32,40,41)	9
	2. Long term pharmacological treatment ^(11,15,33,36,38,42-45)	9
	3. Low efficacy of medication ^(12,18,27,35,37-38)	6
	4. Use of medications for other comorbidities ^(9,37,44)	3
	5. There is a long time interval between initial and stabilization doses ^(24,26)	2
	6. Change in medication dosage without medical advice ⁽⁴³⁾	1
	7. History of previous treatments ⁽¹³⁾	1
	8. Difficulty to attend treatment sessions due to work ⁽⁴⁶⁾	1
	TOTAL	32
Disease Dimension		
Adherence Factors	1. Abstinence from the preferred substance ^(10,15,18,24,28)	6
	2. Lower severity of chemical dependence ^(20,30,39)	3
	3. Mental comorbidities of low severity ^(17,25,40)	3
	4. Use of other psychoactive substances ^(38,47)	2
	5. Relapse ⁽¹²⁻³¹⁾	2
	6. Clinical comorbidity ⁽⁴⁸⁾	1
	TOTAL	17
Non-adherence factors	1. Do not remain abstinent ^(5,9-10,13-14,17,19-24,28,33-35,39,49)	19
	2. Associated mental comorbidities ^(1,5,9,13,17,26,28,33,35,37,44-45,48-50)	15
	3. Severity of chemical dependence ^(10,16,30,32-33,36,44,49-50)	9
	4. Use of multiple drugs ^(17-18,26,28,46)	6
	5. Type of substance (heroin and cocaine) ^(15,42,48)	3
	6. Withdrawal syndrome ^(26,39)	2
	7. Uncontrolled craving ⁽¹²⁾	1
	TOTAL	55

Chart 1 - Interactive dimensions that interfere with adherence to treatment. Curitiba, PR, Brazil, 2017 (continues)

Socioeconomic Dimension		
Adherence Factors	1. Age: Older ^(13-14,17,20-23,26,33,35,42)	13
	Younger ⁽¹⁹⁾	1
	2. Employment status: Employed ^(13,26,46)	3
	Retired ⁽¹³⁾	1
	3. Higher educational level ^(13,44)	2
	4. Female gender ^(19,26)	2
	5. Marital status: Single ⁽¹⁹⁾	1
	Married ⁽⁴⁴⁾	1
	6. Financial situation: Stable ⁽⁴⁴⁾	1
	High economic status ⁽¹³⁾	1
	7. Favorable Family environment ⁽⁴⁸⁾	1
	TOTAL	27
Non-adherence factors	1. Younger age ^(22-23,26,28,44,49)	6
	2. Criminal offenses ^(16,23,26,48)	4
	3. High cost of treatment ^(25,30,45)	3
	4. Black ethnicity ^(26,48)	2
	5. Male gender ^(16,26)	2
	6. Unemployment ⁽¹⁵⁻⁴⁴⁾	2
	7. Poor work performance ⁽⁴⁴⁾	1
	8. Homeless individual ⁽¹⁵⁾	1
	9. Low income ⁽¹⁵⁾	1
	10. Marital status: single ⁽¹⁵⁾	1
	11. Low educational level ⁽⁴⁴⁾	1
	12. Having children ⁽¹⁰⁾	1
	13. Serving term in prison ⁽⁵⁾	1
	14. Lack of financial incentive for adherence to therapy ⁽⁵⁰⁾	1
TOTAL	27	
Individual/Patient Dimension		
Adherence Factors	1. Desire to quit psychoactive substance abuse ^(9,16)	2
	2. Accept medication therapy ^(9,11)	2
	3. Satisfaction with medication treatment ^(16,37)	2
	4. Satisfaction with psychosocial treatment ^(20,25)	2
	5. Understand the importance of pharmacological therapy ^(9,38)	2
	6. Emotional trauma ⁽¹⁹⁾	1
	TOTAL	11

Chart 1 - Interactive dimensions that interfere with adherence to treatment. Curitiba, PR, Brazil, 2017 (continues)

Non-adherence factors	1. Dissatisfaction with the health professional ^(20,27-28,33,49)	5
	2. Poor understanding of the importance of medication ^(16,20,22,35)	4
	3. Desire to discontinue medication treatment ^(14,22,33)	3
	4. Disorganization ^(5,44)	2
	5. Lack of motivation to complete the medication treatment ⁽²²⁾	1
	6. Difficulty in self-administration of injectable medications ⁽³⁷⁾	1
	7. No desire to take medication regularly ⁽³³⁾	1
	8. Expectation of adhering to a short term medication treatment ⁽³⁶⁾	1
	9. Low commitment to medication treatment ⁽⁴⁵⁾	1
	10. Negative experiences with previous treatments ⁽¹⁷⁾	1
	11. Forgetfulness ⁽³³⁾	1
	12. Lack of knowledge about medication dosage/schedules ⁽⁴⁰⁾	1
	14. Impulsivity ⁽⁵⁾	1
	TOTAL	23
Health Team/System Dimension		
Adherence Factors	1. Public health assistance ⁽⁴⁸⁾	1
	2. Efficient, well organized treatment facilities ⁽⁴²⁾	1
	3. Better health insurance ⁽⁴⁷⁾	1
	TOTAL	3
Non-adherence factors	1. Limited access to treatment facilities ^(5,25,33)	3
	2. Lack of communication with health professionals ^(5,27,49)	3
	3. Limited hours of treatment ⁽⁵⁾	1
	4. Lack of professional support ⁽³⁷⁾	1
	TOTAL	8

DISCUSSION

There were many more studies on the subject published by US researchers than Brazilian researchers. This finding reveals a significant gap in studies on adherence and non-adherence to pharmacological therapy by individuals with substance-related disorders in Brazil, which has an impact on adherence to this therapeutic resource and may indicate the success of the treatment as a whole ⁽²⁶⁾.

Moreover, a considerable number of studies were developed by physicians, and it is known that the phenomenon of adherence and non-adherence to pharmacological therapy should be of interest to all the health professionals involved in the treatment and care of individuals with substance-related disorders. Nevertheless, pharmacological treatment is essential for the management of the disorder, as it facilitates the minimization and/or remission of signs and symptoms of withdrawal and craving, contributes to reduce morbidities, favors motivation for rehabilitation, prevention of lapses and relapses, as well as social reintegration ⁽⁷⁾.

The prevalence of studies developed by physicians may be related to the fact that the most frequent definition of medication adherence was ‘to correctly follow prescription instructions’. However, it contrasts with the definition of the World Health Organization, namely: “the extent to which a person’s behavior – taking medication, following a diet, and/or executing lifestyle changes, corresponds with agreed recommendations from a health care provider”⁽⁶⁾.

Pharmacological therapy is a valuable resource in the treatment of substance-related disorders, but adherence can be challenging, since many individuals affected by this mental disorder have difficulty completing the treatment required due to several factors^(1,51-52).

As for the factors related to adherence and non-adherence in the Treatment dimension that impact adherence, it is worth mentioning participation in other therapeutic modalities, correct medication dosage, side effects and the long time taken to complete the treatment. Given the complexity of the phenomena involved and the great diversity of factors that influence substance-related disorders, associating different therapeutic modalities to medication treatment favors its effectiveness and stimulates the development of positive attitudes of the individual, which favor the prevention of relapse and maintenance of abstinence⁽⁵⁾.

Thus, analysis of integrative review studies demonstrated the need for a multidisciplinary treatment, based on psychosocial approaches that contemplate the individual, the family and society, promote quality of life and enhance autonomy and social reintegration^(7,51).

Undoubtedly, long-term adherence to correct medication treatment is directly related to effectiveness and reduction of morbidity and mortality. However, the prescription of the medication must be tailored to meet each person’s individual needs during the required treatment period and at the lowest possible cost⁽⁵¹⁻⁵²⁾, which, in turn, may help reduce non-adherence behaviors⁽⁵¹⁻⁵²⁾.

Despite the importance of adherence to medication regimens for the treatment of substance-related disorders, there are high rates of discontinuation of medication use, particularly because of the long-term treatment often required and the numerous adverse side effects of the medication that are a permanent challenge of treatment adherence⁽¹⁻²⁾.

Individuals affected by substance-related disorders face the consequences of a long and continuous treatment process, marked by biological and psychological changes that may persist even after detoxification, or lead to behavioral effects manifested as constant relapses and intense craving, especially when exposed to substance-related stimuli⁽⁵³⁾.

Disease is another dimension related to adherence to pharmacological therapy, where abstinence, mental comorbidities, severity of substance-related disorders and use of multiple drugs emerged as the most prominent factors in the studies.

It is known that maintenance of abstinence contributed to adherence to treatment, since this behavior demonstrates that individuals are feeling better, are aware of their problem and willing to engage in specific actions aimed to maintain abstinence⁽⁷⁾. In such case, medication therapy is a resource that facilitates this process, as it attempts to restore the balance of the individuals’ mind and behavior, by controlling the acute symptoms and favoring long-term adherence to treatment^(51,53).

Mental comorbidities were highlighted in integrative review studies as a factor that interferes with adherence to medication therapy. It is known that association with other mental comorbidities intensifies the individual’s psychological suffering, which can pose a challenge to abstinence maintenance.

Another factor of the Disease dimension highlighted in this integrative review was the severity of substance-related disorders. According to the Diagnostic and Statistical Manual of Mental Disorders, in its fifth edition (DSM V), the severity of these disorders is classified as mild, moderate and severe. The difference between these classes results in the

grouping of different pre-established criteria based on a pathological pattern of behavior related to substance use. Thus, the greater the severity of the disorder, the higher the risk of treatment abandonment, which includes adherence to medication, by the individual.

The type of preferred psychoactive substance was also reported by the authors of the integrative review studies as a factor that may impact adherence to treatment, because individuals who consume heroin or cocaine/crack have lower levels of adherence to pharmacological treatment. These substances are characterized by their potential to cause addiction due to the intense craving caused by their use, resulting in repetitive and exacerbated consumption, which accelerates dependence of these substances^(7,53).

It should be emphasized that individuals who use more than one type of psychoactive substance have difficulty complying with medication regimens⁽⁷⁾, as the consumption of a high number of drugs results in greater damage to the individuals, since they may develop dependence on more than one substance. Moreover, the use of multiple drugs jeopardizes treatment, since the possible interaction between the substances used may cause clinical and behavioral adverse effects that complicate adherence to treatment^(7,51).

In the sociodemographic dimension, age, employment status, schooling, gender and criminal offenses are the most important factors. Some studies reported that younger male individuals are more likely not to adhere to pharmacological treatment⁽³¹⁾.

Data from a retrospective study carried out in a psychiatric hospital in the state of Minas Gerais, Brazil, reinforce this finding. Based on the collection of information from databases, the authors identified the prevalence of 4,325 (67.78%) male individuals who have been admitted to the service since the opening of the clinic, in 1980, until 2005⁽⁵⁴⁾.

On the other hand, some authors suggest that the prevalence of substance-related disorders in women may have been or may be underreported, and this can be explained by the fact that women are less likely to seek treatment because of feelings of shame, fear of judgment and/or prejudice, of social isolation, etc⁽⁵⁵⁾.

Thus, although the literature reports that few women are addicted to psychoactive substances, a more in-depth investigation of this population is necessary to identify their particularities and contribute to the elaboration of an effective care treatment.

In turn, low educational level is reported in studies as a factor for non-adherence, an aspect that can be explained by the fact that the consumption of psychoactive substances starts early, at the developmental stages of adolescence. Consequently, these individuals abandon their studies, as they experience changes in behavior and difficulties in interpersonal relationships, in addition to having cognition impaired due to the continuous use of psychoactive substances⁽⁵⁵⁾.

Higher education levels generally favor adherence to treatment, because of the greater understanding of aspects related to medication therapy, as well as to the need and importance of compliance with long-term adherence to medication⁽¹⁶⁾.

Having a history of criminal offenses was perceived as a factor for non-adherence to treatment. It is understood that the strong desire to consume psychoactive substances, associated with the high cost of maintaining dependence, results in risky behaviors. That is, the individuals are capable of committing crimes and violations, such as trafficking, robbery or theft, to obtain their preferred psychoactive substances⁽⁴¹⁾.

In the Individual/Patient dimension, it is stressed that lack of knowledge about the pharmacological therapy can have several negative consequences, leading to treatment failure, such as delayed medication administration that aggravates the individual's mental disorder, more serious side effects, errors in the medication regimen, among others. All these factors favor non-adherence, making it impossible to ensure an effective and safe treatment⁽⁵⁶⁾.

Adherence to medication treatment is a multicausal process that involves the individual in its totality and the socio-cultural context in which it is inserted. So, identifying the particularities and the profile of individuals who abuse psychoactive substances is essential to know the determinants for adherence or non-adherence to treatment⁽⁶⁾.

Fewer factors were identified in the health team/system dimension, as follows: limited access to the treatment facilities and lack of communication with the professionals. Regarding the first factor, it is worth mentioning that the strategies should be based on social rehabilitation and reduction of damage, focusing mainly on community actions, integrating public policies that aim, in an inter-sector approach, to favor the expansion of care through strategies that bring the individual and the family closer to the treatment facilities⁽⁵⁷⁾.

It should be emphasized that care for this clientele should also be provided within the scope of basic care, to preserve the decentralization of the mental health system achieved by the Psychiatric Reform Movement. Therefore, strategies geared towards networking with matrix support of special care are necessary⁽⁵⁷⁾.

Regarding communication with the health team, listening to and understanding the individual are the best ways to perform the treatment. Appropriate patient-health professional communication allows for more efficient and less costly results, as the individual is able to express his/her views and become a protagonist in his/her own treatment⁽⁵⁸⁾.

Being a mental health professional is a very hard job, because these professionals get more involved with the users/patients, becoming responsible for them and showing compassion. The bonds are established when the professionals have listening skills, demonstrate empathy, commitment and communicate with the patients⁽⁵⁴⁾.

CONCLUSION

Given the complexity of the different dimensions that involve adherence to medication treatment, this integrative review provided access to relevant data about the factors that may help improve care strategies for people with substance-related disorders.

Therefore, nursing professionals, who integrate a multidisciplinary team, must develop actions targeted to adherence to pharmacological therapy, to raise people's awareness of the high risk for relapse, help them cope with the changes, improving their quality of life, and also help them in maintenance of abstinence, rehabilitation and social reintegration.

There are few Brazilian studies on this theme, and they should be encouraged, because publications in scientific journals communicate research findings, contributing to scientific advances, transforming knowledge that is essential to the professional practice.

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Corresponding author:

Mariluci Alves Maftum

Universidade Federal do Paraná

R. Lothario Meisser, 632, Bloco Didático II - 80210-170 - Curitiba, PR, Brasil

E-mail: maftum@ufpr.br

Role of Authors:

Substantial contributions to the conception or design of the work; or the acquisition, analysis, or interpretation of data for the work - FCC

Drafting the work or revising it critically for important intellectual content - ACZF, CBA, GJM

Final approval of the version to be published - MAM

Agreement to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved - FCC, MAM
