

Bipolar affective disorder: health social determinants, adherence to treatment and space distribution

Transtorno afetivo bipolar: determinantes sociais de saúde, adesão ao tratamento e distribuição espacial

Trastorno afectivo bipolar: determinantes sociales de la salud, adherencia al tratamiento y distribución del espacio

Ana Flávia Diniz Elias^I; Camila de Oliveira Fagüeiro^{II}; Edilene Aparecida Araújo da Silveira^{III};
Jeiziane Aparecida Ferreira Pinto^{IV}; José Arimatéa de Aleluia Júnior^V; Richardson Miranda Machado^{VI}

ABSTRACT

Objective: to identify the health social determinants of patients with bipolar affective disorder (BAD), their spatial distribution and treatment adherence. **Methods:** a descriptive and cross-sectional study with non-probabilistic sampling, carried out at the Psychosocial Care Center of Divinópolis/Minas Gerais, from February/2017 to February/2018 with 35 patients diagnosed with BAD, submitted to a questionnaire, clinical scale and phone calls. Analysis performed through univariate and multivariate techniques. Study approved by the Research Ethics Committee. **Results:** most of the population studied had a positive prediction for treatment adherence, which was associated with gender, age, healthy lifestyle, support from social and community networks, basic sanitation, access to social health services and government benefit. **Conclusion:** adherence to treatment is a product of the interaction between the dimensions related to the patient, the health service, the socioeconomic factors and the proposed therapy.

Descriptors: Bipolar disorder; spatial distribution of population; social determinants of health; adherence to treatment.

RESUMO

Objetivo: identificar os determinantes sociais de saúde dos pacientes com transtorno afetivo bipolar (TAB), sua distribuição espacial e a adesão ao tratamento. **Métodos:** estudo descritivo e transversal, com amostragem não probabilística, realizado no Centro de Atenção Psicossocial de Divinópolis/Minas Gerais, no período de fevereiro/2017 a fevereiro/2018 com 35 pacientes diagnosticados com TAB, submetidos a um questionário, escala clínica e telefonemas. Análise estatística realizada através de técnicas univariadas e multivariadas. Estudo aprovado por Comitê de Ética em Pesquisa. **Resultados:** a maioria da população estudada apresentou predição positiva à adesão ao tratamento, que se associou ao sexo, idade, estilo de vida saudável, apoio de redes sociais e comunitárias, saneamento básico, acesso a serviços sociais de saúde e benefício do governo. **Conclusão:** a adesão ao tratamento é um produto da interação entre as dimensões relacionadas ao paciente, ao serviço de saúde, aos fatores socioeconômicos e à terapêutica proposta.

Descritores: Transtorno bipolar; distribuição espacial da população; determinantes sociais de saúde; adesão ao tratamento.

RESUMEN

Objetivo: identificar los determinantes sociales de la salud de pacientes con trastorno afectivo bipolar (TAB), su distribución espacial y la adherencia al tratamiento. **Métodos:** estudio descriptivo y transversal con muestreo no probabilístico, realizado en el Centro de Atención Psicossocial de Divinópolis/Minas Gerais, de febrero/2017 a febrero/2018 con 35 pacientes diagnosticados de TAB, sometidos a un cuestionario, escala clínica y llamadas telefónicas. Análisis realizado a través de técnicas univariadas y multivariadas. Estudio aprobado por Comité de Ética en Investigación. **Resultados:** La mayoría de la población estudiada tenía una predicción positiva para la adherencia al tratamiento, que se asoció con el género, la edad, el estilo de vida saludable, el apoyo de las redes sociales y comunitarias, el saneamiento básico, el acceso a los servicios de salud social y los beneficios del gobierno. **Conclusión:** la adherencia al tratamiento es producto de la interacción entre las dimensiones relacionadas con el paciente, el servicio de salud, los factores socioeconómicos y la terapia propuesta.

Descriptores: Trastorno bipolar; distribución espacial de la población; determinantes sociales de la salud; adherencia al tratamiento.

INTRODUCTION

Bipolar affective disorder (BPAD) is a severe and chronic mental illness characterized by acute variations in mood, with alternating episodes of depression and euphoria (mania). The depressive crisis is manifested by deep sadness, apathy, social isolation, changes in sleep and appetite, significant decreased libido, lack of meaning in life and suicidal thoughts, among others. The state of euphoria is commonly manifested by increased motor activity, loss of sleep, irritability, increased sexual desire, anxiety and impulsive behaviors, among others¹.

^INursing student. Universidade Federal de São João Del-Rei, Divinópolis, Brazil. E-mail: anaflavia.diniz01@hotmail.com.

^{II}Nursing student. Universidade Federal de São João Del-Rei, Divinópolis, Brazil. E-mail: camilafagüeiro@gmail.com.

^{III}Nurse. PhD. Universidade Federal de São João Del-Rei, Divinópolis, Brazil. E-mail: edileneap@ufsj.edu.br.

^{IV}Nurse. Master. Universidade Federal de São João Del-Rei, Divinópolis, Brazil. E-mail: jeizianiprof@gmail.com.

^VAdministrator. Universidade Federal de São João Del-Rei - Campus CCO, Divinópolis, Brazil. E-mail: ari.junior@outlook.com.

^{VI}Nurse. PhD. (Advisor). Universidade Federal de São João Del-Rei, Divinópolis, Brazil. E-mail: richardson@ufsj.edu.br.

For the control of BPAD, continuous pharmacological treatment is necessary to improve the prognosis, resulting in a decrease in the manic symptoms, the frequency of the episodes and the mood swings. Lithium carbonate, used as a drug of first choice for mood stabilization, is considered *the gold standard* for treatment² as it reduces manic and depressive crises; however, it has several adverse effects³⁻⁵.

BPAD negatively affects the quality of life of the patients and several other areas, with emphasis on economic life, leisure and interpersonal relationships⁶. The severity of the disease associated with non-adherence to treatment is often a result of factors related to the socio-environmental space and the relationships established, which are capable of triggering the disease process. In this context, the Social Determinants of Health (SDHs) are highlighted, which comprise all the variables that involve the health and illness of an individual or population and consider that both aspects are interconnected, being the result of several factors (i.e., social, economic, cultural, ethnic/racial, psychological and behavioral factors)^{3,6}.

In this sense, this study aimed to identify the SDHs of the patients with BPAD, their spatial distribution and adherence to treatment.

LITERATURE REVIEW

Bipolar affective disorder is responsible for high rates of morbidity and mortality. This disorder is related to genetic, biological, environmental and psychosocial factors, and it can be reduced based on therapies, on the individual's adherence to treatment and on the assistance of health professionals⁴.

The effectiveness of the treatment is directly related to adherence, that is, the patient's compliance with the clinical recommendations. However, studies on adherence have shown that patients do not follow the prescriptions, thus leading to the escalation of the disease^{3,7}.

The variables that may affect the health of an individual with BPAD can be assessed by the Social Determinants of Health (SDHs), which aim to recognize the variables that involve health and illness, and consider that health and illness are interconnected and are the result of several factors³.

In the last decades, there has been a great advance in the study of the SDHs. However, the main challenge is to establish a hierarchy between the determinants and the way they affect the health situation of people and society, since their relationship is not a simple and direct cause-and-effect relationship⁷. In this context, studies on these factors make it possible to identify where and how interventions should be carried out, with the purpose of reducing health inequities and establishing where such interventions can have the greatest impact and reduce diseases and their complications⁸.

METHODOLOGY

This is a cross-sectional and descriptive study, approved by the Research Ethics Committee of the Federal University of São João Del-Rei (No. 1,868,647) and carried out at the Psychosocial Care Center (CAPS III) of the city of Divinópolis/Minas Gerais.

The method used was non-probabilistic sampling, involving all the patients diagnosed with BPAD (according to the International Classification of Diseases – ICD 10) who were treated in the CAPS III between February 1st, 2017 and February 1st, 2018.

The following inclusion criteria were adopted: age greater than or equal to 18 years old; ability to understand and agree to participate in the research; self-reported literacy declared; being a patient in the CAPS III for more than 6 months and not being hospitalized in the service. These were the exclusion criteria: having a physical disability that would prevent reading the questionnaires; incomplete questionnaires or mistakes in filling them, showing any condition that would interfere in the collection and measurement of data; refusing to participate in the survey at any time.

Data was collected through a questionnaire, a clinical scale and phone calls to survey the participants' SDHs. The questionnaire was prepared based on an already validated⁹ and open access model that defines and distributes the SDHs in the following layers: individual determinants; behavior and lifestyle; community and support networks; living and working conditions; general socio-economic, cultural and environmental conditions. The other instrument used was the Clinical Scale to Predict Adherence to Treatment in Bipolar Affective Disorder (ECPAT-TBH), consisting of 21 items with alternatives on a five-point scale (0 to 4), where the higher the mean score, the greater the adherence to treatment.

The database for the research was created from the data collected that were entered into the *Microsoft Excel* program by matching the information of each patient. Then, the data were exported to the *Statistical Package for the Social Sciences* (20.0) program for descriptive statistical analysis, from which the percentages of the categories of responses to the variables were searched and explored by means of the univariate and multivariate techniques. For the

spatial distribution of the patients from their home addresses, the geo-processing technique was used combined with the *Google Earth Pro* software.

RESULTS AND DISCUSSION

When approaching the model that defines and distributes the Social Determinants of Health (SDHs), referred to as “individual determinants” (age and gender), it was found that of the 35 patients studied, 71.4% have a positive prediction for treatment, while 28.6% do not. The majority of the patients with a positive prediction are female (76%), and 60% are over 45 years old. On the other hand, the patients with a negative prediction have the same prevalence between genders (50%); however, 60% are under 45 years old.

It was observed that the increase in adherence was proportional to the increase in age, a finding also evidenced in another research in the field¹⁰. Experience has shown that the age factor is proportionally significant in terms of adherence to treatment for psychiatric disorders. The authors emphasize the importance of analyzing age, neuropsychological performance and executive functioning in adherence behavior, especially in the elderly¹¹. In this context, it is highlighted that it is essential to consider that independence and autonomy for the elderly involve social and economic aspects and, especially, the physical and mental skills necessary to carry out activities of daily living¹².

Several studies indicate that bipolar affective disorder (BPAD) can manifest itself in similar proportions among men and women. However, women are more affected by mental disorders (MDs) because they are more susceptible to hormonal and psychological factors, and they are also more capable of identifying symptoms, accepting them and seeking medical help, which may explain the greater adherence to treatment¹³.

According to the stage of the model of social determination of health that addresses behavior and lifestyle, it was found that in the positive prediction group, 52% of them are single, 76% have children, 68% declared to be sedentary, 44% smokers and 12% alcoholics. While of those with a negative prediction 90% are single, 50% have children; 40% reported having a sedentary lifestyle, 70% are smokers and 50% are alcoholics. These determinants related to marital status, number of children, physical inactivity, smoking and alcohol consumption are considered proximal determinants, and the individuals themselves are capable of changing them¹⁴.

Another study shows that being single and not having children are factors that contribute to non-adherence to treatment, either due to the fact that they have a smaller support network that impels them to follow the treatment and/or due to the difficulty of monitoring signs and symptoms of possible crises themselves¹⁵.

Sedentarism contributes to the escalation of chronic and degenerative diseases, including psychiatric ones, and can result in the onset of clinical comorbidities like diabetes, hypertension and obesity. Practicing physical activities provides physical benefits and favors the psychosocial rehabilitation of people with MDs, offering individual and collective gains in terms of health promotion¹⁶.

Smoking and alcohol consumption have been linked to several diseases or disorders. A number of research studies point to an increase in chronic diseases due to higher rates of tobacco use and to the harmful use of alcohol, sedentarism and inadequate diets¹⁷. The relationship between smoking and mental illnesses has been reported by some authors^{18,19}, showing an association between tobacco consumption, psychiatric disorders and psychopathological conditions, such as schizophrenia and major depression. Added to this is the fact that smoking patients generally have a low level of education, low economic level, and high and very high levels of nicotine dependence²⁰.

Regarding the stage of the model of the social determination of health related to the social and community networks, it was observed that the majority of the participants have a consistent support network. Among the treatment adherence group, 88% of the participants consider having a favorable support network, and in the non-adherence group, 80% consider the same. This layer is related to the social capital, which considers the social relationships and attitudes of solidarity between them. The level of social cohesion directly interferes with the health status of society as a whole¹⁴. The absence of family and social support can be considered as barriers to adherence to treatment, so it is extremely important to evaluate the patients' interaction with their support networks²¹. In addition, family members can help these people acquire independence through promotion and stimulation of autonomy²².

In relation to the stage of the model of the social determination of health that addresses working and life conditions, it was verified that, among the adhesion group, 64% have up to eight years of schooling; 92% are unemployed; 64% have a family income of up to two salaries and 88% live with family members. In the non-adherence group, 60% have up to eight years of study; 80% are unemployed; 50% have a family income of up to two salaries and 90% live with family members. These characteristics are the intermediate determinants, which allow to clearly observe

the social stratification due to socio-economic factors, the influence on the health situation and the disparities generated. The characteristics include schooling, employment bond, income, health service and housing conditions¹⁴.

Several studies reveal lower levels of schooling in patients with MDs. This is a presumptive reality, since the disorders cause changes such as difficulty concentrating, memory lapses, difficulty memorizing, mood swings, drowsiness, tremors, slowness, and inability to pursue a goal, requiring periods of absence for the treatment, contributing to the interruption of the studies and interfering in the insertion of these individuals in the job market and in the maintenance of the employment bond^{23,24}.

It was observed that there is a higher percentage of individuals with low income among the participants. A research study reveals the same correlation between income and adherence to treatment²⁵. The formal labor market is guided by a historical conception that *people with mental disorders* are incapable and unproductive for the employment relationships articulated by capitalism²³, reasserting the stigma. Thus, people with BPAD can depend financially on their family and/or federal assistance.

In this context, of the 35 patients followed up by the Mental Health Reference Service of the Psychosocial Care Center (SERSAM/CAPS III), only 80% of both groups are linked to the Family Health Strategy that provide services for the places where they live.

The literature highlights the importance of matrix support of these patients by Primary Health Care and the need to strengthen the articulation with SERSAM/CAPS III, since care does not belong only to professionals from specialized services and must offer the best assistance to users, from a holistic approach²⁶.

In this study, 84% of the patients in the adherence group have sanitation services; while in the non-adherence group, 70% reported the same. It should be noted that quality of life is linked to better sanitation conditions as it is able to influence patients' living conditions due to the connection with housing, food, hygiene and health issues. According to the literature, infectious and parasitic diseases are responsible for 4.5% of the total deaths in the country²⁷.

In relation to the stage of the model of the social determination of health related to general socio-economic, cultural and environmental conditions, this study analyzed two issues, namely: financial aid granted by the government in the form of retirement/benefit and the distance in kilometers from the participants' homes to the SERSAM/CAPS III. This determinant is specifically linked to the socio-political context and addresses macro determinants that are considered distal, but act on all other determinants and stratify groups according to their hierarchies.

It is possible to note that both groups have the same percentage (60%) of retired patients or beneficiaries. This coincidence can be explained because patients with BPAD suffer changes that can compromise their performance in daily activities, long periods of absence being required to stabilize the condition when crises occur, which results in disability retirement and can elucidate the high rate of retirement/benefits among the groups^{23,24}.

Regarding the environmental conditions, the territory, as a geographic, social and political space in permanent transformation, is a setting where a bond starts to establish between the health services and the population. Territorialization is established through the definition of the territory and the population, associated with the systematic collection of data on the health situation and needs of the population, enabling the mapping and segmentation of the population by means of the territory. This proximity between users and health services enables a better understanding of the health problems and needs.

In this way, maps can be considered extremely useful instruments to learn about the space where people live and work, and allow for the concrete representation of geographic spaces. Therefore, the use of geo-processing in the health services aims to define, analyze and control priority areas of action, thus being able to minimize the health risks¹⁴. In this work, the distance in kilometers between the home and the mental health reference service (SERSAM/CAPS III) was evaluated using the referred tool (Figure 1).

Then, the customers were stratified as being near or far from the service according to the distance from their house to the SERSAM. Those who live up to 10 km away were classified as near, and those who live more than 10 km away, as far. Regarding the distances from their houses, the patients in the adherence group live relatively farther (32%) when compared to the non-adherence group (10%). It is noted that the distance does not determine adherence or non-adherence to treatment.

Another study points to demographic growth and urbanization as causes of the increase in the population living in the outskirts, a fact that can reinforce social stratification and exposure to negative socio-environmental factors, causing the loss of SDHs considered important for the promotion and adherence to the treatment of BPAD¹⁴.

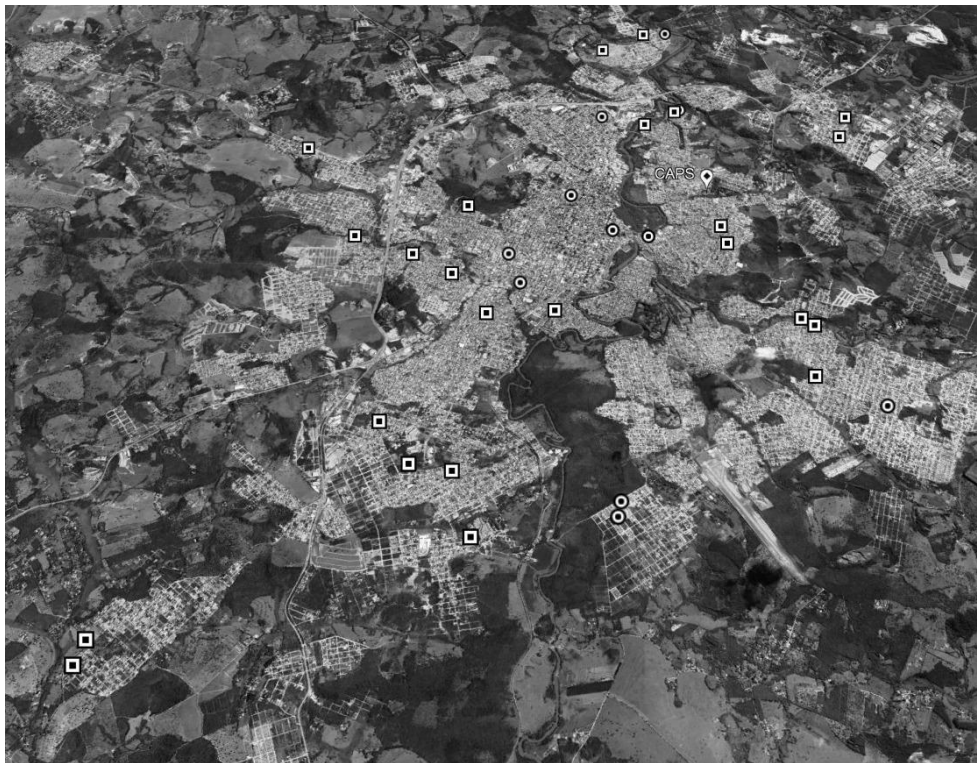


FIGURE 1: Spatial distribution of the 35 participants according to their residence addresses. City of Divinópolis, Minas Gerais, 2018.

The study showed a positive prediction for treatment adherence by the majority of the studied population, as shown in Figure 2.

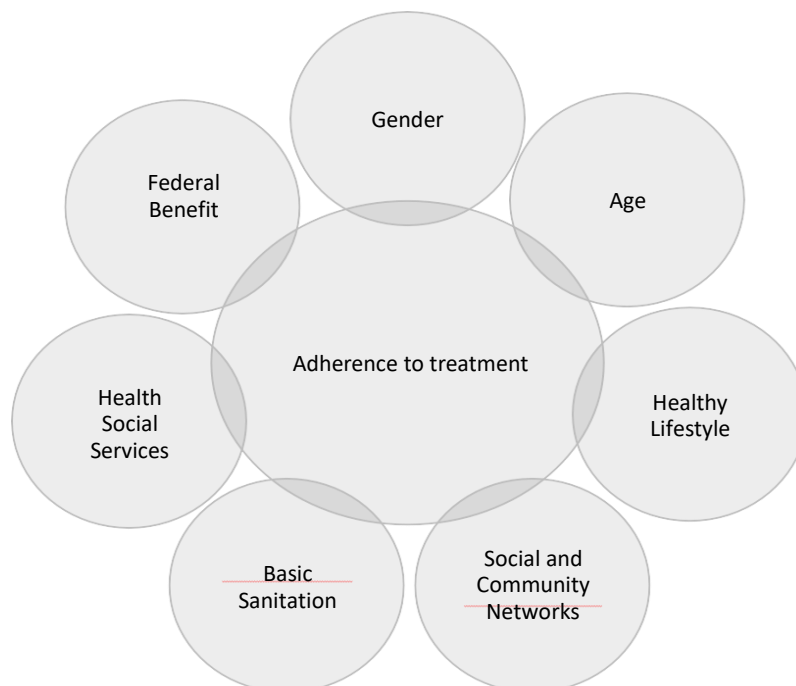


FIGURE 2: SDH of patients with BPAD that are associated with adherence to treatment.

CONCLUSION

It was found that adherence to treatment is a multidimensional phenomenon that does not depend only on the patients, as it is the product of the interaction among the dimensions related to them, the health team/health service, socioeconomic factors and the proposed treatment.

It was possible to notice that the SDHs and the spatial distribution of the patients can have an impact on treatment adherence, requiring greater vigilance and strategies that reinforce the SDHs that have a positive influence on treatment adherence.

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