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Original Article

Evaluation of factors related to patients' medication adherence at a Psychosocial Care Center

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Objective: to evaluate factors related to medication adherence in patients with mental disorders at a Psychosocial Care Center. **Methodology**: descriptive cross-sectional cohort study, through analysis of medical records and semi-structured interviews. **Results**: of the 50 patients, the majority were female, single, black or brown, incomplete primary education, unemployed, aged 50 to 59 years. 58% of patients showed good adherence to medication; 50% forget to take their medication, 84% have clearer thoughts when medicated, and 90% said that their health depended on these medications, preventing the disease from worsening. Haloperidol was the most prescribed medication, at 58% of patients, and the main cause of adverse reactions and drug interactions, in 54% of prescriptions. Furthermore, 40% of patients had difficulty reading the medication packaging. **Conclusion:** the majority of participants regularly use medications and recognize their importance. They understand that interrupting treatment may worsen the clinical condition. A significant portion of patients did not have good adherence to pharmacotherapy, justified by adverse reactions and side effects, probably aggravated by drug interactions. Low education becomes an important factor in medication adherence.

Descriptors: Mental Disorder; Psychotropic Drugs; Pharmacotherapeutic Adherence; Clinical Pharmacy.

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Avaliação de fatores relacionados à adesão medicamentosa em pacientes de um Centro de Atenção Psicossocial

Objetivo: avaliar os fatores relacionados à adesão medicamentosa em pacientes com transtornos mentais em um Centro de Atenção Psicossocial. **Metodologia:** estudo descritivo de coorte transversal, por meio da análise dos prontuários e de entrevistas semiestruturadas. **Resultados:** dos 50 pacientes, a maioria era do sexo feminino, solteiro, negro ou pardo, com ensino fundamental incompleto, desempregado, idade entre 50 e 59 anos. Cinquenta e oito por cento dos pacientes apresentaram boa adesão à medicação, 50% esquecem de tomar a medicação, 84% têm pensamentos mais claros medicados e 90% disseram que sua saúde dependia desses medicamentos evitando o agravamento da doença. Em 58% dos pacientes, o haloperidol foi o mais prescrito; e a principal causa de reações adversas e interações medicamentosas em 54% das prescrições. Além disso, 40% dos pacientes apresentaram dificuldade para ler a embalagem do medicamento. **Conclusão**: a maioria dos participantes faz uso regular dos medicamentos e reconhece sua importância. Compreendem que a interrupção do tratamento pode ocasionar agravamento do quadro clínico. Uma parcela significativa dos pacientes não possuía boa adesão à farmacoterapia, justificado pelas reações adversas e pelos efeitos colaterais, provavelmente agravados pelas interações medicamentosas. A baixa escolaridade torna-se um fator importante na adesão medicamentosa.

Descritores: Transtorno Mental; Drogas Psicotrópicas; Adesão Farmacoterapêutica; Farmácia Clínica.

Evaluación de factores relacionados con la adherencia a los medicamentos en pacientes de un Centro de Atención Psicosocial

Objetivo: evaluar factores relacionados con la adherencia a los medicamentos en pacientes con trastorno mental en un Centro de Atención Psicosocial. **Metodología:** estudio descriptivo de cohorte transversal, mediante análisis de historias clínicas y entrevistas semiestructuradas. **Resultados:** de los 50 pacientes, la mayoría eran mujeres, solteros, negros o mestizos, educación primaria incompleta, desempleados, con edad entre 50 y 59 años. El 58% de los pacientes presentaron buena adherencia a la medicación; 50% olvidan tomar sus medicamentos, 84% tienen pensamientos más claros al medicarse y 90% dijeron que su salud dependía de estos medicamentos, al evitar que la enfermedad empeore. En 58% de los pacientes el Haloperidol fue el medicamento más prescrito, y la principal causa de reacciones adversas e interacciones medicamentosas en 54% de las prescripciones. Además, 40% de los pacientes tuvieron dificultades para leer el envase del medicamento. **Conclusión:** la mayoría de los participantes utilizan regularmente medicamentos y reconocen su importancia. Entienden que interrumpir el tratamiento puede empeorar el cuadro clínico. Una porción importante de los pacientes no tuvo buena adherencia a la farmacoterapia, hecho que se justifica por reacciones adversas y efectos secundarios, probablemente agravados por interacciones medicamentosas. El bajo nivel educativo se revela como factor importante en la adherencia a la medicación.

Descriptores: Trastorno Mental; Drogas Psicotropicas; Adherencia Farmacoterapéutica; Farmacia Clínica.

Introduction

Mental illnesses are characterized by clinical states that lead to disordered thinking, changes in emotions and degeneration of psychic activity, impacting on the lives of those affected and their families. It is estimated that around 450 million people are affected by psychiatric disorders worldwide, which means 14% of all illnesses[1]. In Brazil, around 12% of the population (23 million people) make frequent use of mental health services[2-3].

With the aim of caring for these people on an outpatient basis, the Psychosocial Care Centres (*Centro de Atenção Psicossocial*, CAPS) were created during the Psychiatric Reform, which are specialized services in which mental disorders are repositioned in a new context, no longer one of exclusion and segregation, but of inclusion of people with mental illness in society[4]. Different types of CAPS cater for different populations and also have a multi-professional team that works 24 hours a day, seven days a week[5].

Each municipality has its own psychosocial care network, depending on its population. This network generally consists of adult and child CAPS for psychiatric illnesses and for problematic use of alcohol and other drugs. Many municipalities still have reception units for adults, street clinics, harm reduction programs, therapeutic homes, psychiatric emergencies, psychiatric wards and psychiatric clinics for long-term hospitalization[6].

Psychotropic drugs are essential tools in the management of these individuals with mental disorders, combined with non-pharmacological interventions such as psychiatric and psychological counseling, individual or group meetings, home visits, therapeutic workshops, health education, community activities and family care[7]. However, patients must adhere to the prescribed medication in order to have better success in controlling or resolving their problems. On the other hand, some factors can contribute to non-adherence to medication, such as drug interactions, side effects, adverse reactions and even prescription errors[8]. Furthermore, some studies suggest low medication adherence in psychiatric patients, where the rate varies between 30% and 50%[9-11].

In order to reduce the problems related to the use of medications, the national pharmaceutical assistance policy was instituted to guarantee medication safety and efficacy, promoting its rational use[12]. The pharmacist is a professional qualified to identify these problems and guide patients in the rational use of medicines, by reviewing pharmacotherapy and health education, as well as being able to discuss with the psychiatrist the best course of action for each user's treatment and help with the process of medication adherence[13-15].

This low adherence influences the frequency of medical appointments, the interruption and inappropriate use of medication, the clinical worsening of patients, pharmacological refractoriness and the increase in drug-related hospitalizations[9]. Due to the scarcity of information on the assessment of medication adherence in patients with mental disorders, users of a CAPS service, this study aims to assess the medication adherence of patients diagnosed with severe and persistent mental disorders in a CAPS type III.

Methodology

A descriptive cross-sectional cohort study was carried out with 50 patients from a Type III Psychosocial Care Center (CAPS) in Aracaju, Sergipe. The sociodemographic profile of the patients was collected by searching for data in the *IDS SAÚDE*® electronic medical records. Information that did not appear in the medical records was collected through individual interviews. Variables such as gender, age, education, occupation, health-related behaviors and lifestyle factors, such as the patient's physical activity and use of illicit substances, were included.

Three instruments were used to assess medication adherence and identify the intentional and unintentional factors that negatively interfere with this process. The first instrument was the Medication Adherence Scale (MAS)[16]. It consists of 10 questions that assess medication adherence, with the patient answering only "yes" or "no" to each alternative: "Have you ever forgotten to take your medication?", "Have you ever forgotten when to take your medication?", "When you feel better or worse, do you sometimes stop taking your medication?" or "Do you only take your medication when you're sick?", among others. For each "yes" answer, the patient scores one, with scores below seven being considered low adherence[16].

Subsequently, an instrument from the Ministry of Health's Second Booklet, entitled Training for the Implementation of Pharmaceutical Services, from the series Pharmaceutical Care in Primary Care, was used[17]. The instrument "Assessment of adherence to treatment, considering the patient's beliefs, needs and concerns about their treatment" has 11 sentences that assess the patient's opinion about the prescribed medication, in which they "agree", "are not sure" or "disagree" on the subject. The sentences talk about whether the patient's health or life depends on the medication, now or in the future; and about the patient's concern about side effects, short- and long-term adverse reactions, and even the possibility of becoming dependent on the medication used. The result is evaluated by the N/P (Needs/Concerns) ratio, whereby when the N/P ratio is greater than one, the patient has a greater tendency to

adhere to treatment; N/P equal to one, the tendency to adhere is equal to the tendency not to adhere; while an N/P result of less than one indicates that the patient has a lower tendency to adhere to medication treatment[17].

The last instrument used was the "Record of the Pharmaceutical Clinic Service - Patients' difficulties with their medications", which contains questions about opening or closing the package, reading what is written on the package, remembering to take all the medication, getting the medication, and taking so many pills at the same time, among others. The patient chooses between the alternatives: "very difficult", "a little difficult" or "not difficult at all"[17].

In addition to these instruments, we also used the "Clinical Pharmacy Service Record - Current Pharmacotherapy" to list the most prescribed medications and the "Clinical Pharmacy Service Record - Adverse Reaction Tracking" to analyze adverse reactions[17]. Finally, we evaluated the medication interactions present in the prescriptions of the patients included in the study and used the Micromedex 2023 database[18] to list the possible problems related to these interactions. The medications supplied to patients at the CAPS pharmacy service were also monitored in a complementary way, so that we could assess whether or not the date of the patient's demand for more medication was in line with the prescription.

The Psychosocial Care Center, the setting for the research, is located in the central region of the municipality and caters for people over the age of 18 with severe and persistent mental disorders. It has a multidisciplinary team made up of a psychiatrist, psychologist, pharmacist, social worker, occupational therapist, nurse, nursing technicians and assistants, as well as residents and trainees, and is a 24-hour teaching, research and extension center.

The inclusion criteria for patients were: over 18 years old, being treated at CAPS and taking psychotropic medication. Patients with comprehension or communication difficulties that could impact on data collection, which took place between January 2022 and February 2023, were excluded. All the patients signed an informed consent form and the study was approved by the Research Ethics Committee of the Federal University of Sergipe, protocol number 35987020.5.0000.5546. The data was organized in Microsoft Office Excel® 2020 and the results are presented using descriptive statistics and in the form of graphs and tables.

Results

Our study included 50 patients undergoing treatment who met the inclusion criteria, 64% of whom were women aged between 50 and 59. The majority of patients were single (60%) and divorced (28%), with incomplete primary education (54%). The majority (86%) were unemployed at the time of the interview and the patients' family income (84%) was around the minimum wage (US$8/day). Only 26% of the participants reported practicing physical activity regularly (Table 1).

Table 1 - CAPS III Liberdade patients' sociodemographic profile (n = 50). Aracaju, SE, Brazil, 2023

Characteristics	Variables	n	%
Gender	Female	32	64
	Male	18	36
Age group (years old)	28 – 39	12	24
	40 – 49	10	20
	50 – 59	21	42
	60+	7	14
Height (meters)	1.45-1.79	19	38
	1.80-1.89	4	8
	Does not remember	27	54
Weight (kg)	44-59	4	8
	60-79	12	24

(continues on the next page...)

Characteristics	Variables	n	%
Weight (kilograms)	80-99	6	12
	100-112	2	4
	Does not remember	26	52
	1	6	12
	2	10	20
Children	3	8	16
	5	3	6
	None	21	42
	Does not remember	2	4
Pregnancy	Yes	24	75
	No	8	25
	Single	30	60
	Separated	14	28
Marital status	Widowed	2	4
	Married	4	8
	Illiterate	2	4
	Incomplete Elementary School	27	54
	Complete Elementary School	3	6
	Incomplete High School	4	8
Schooling	Complete High School	11	22
	Incomplete Higher Education	1	2
	Complete Higher Education	1	2
	Does not remember	1	2
Occupation	Has an occupation	7	14
	No occupation	43	86
Income	Less than 1 minimum wage*	8	16
	1 minimum wage*	42	84
Activity practice physical	Yes	13	26
	No	37	74

*R$ 1,302.00, 2023, Brazil

The medication adherence of the patients included in the study, assessed by the Medication Adherence Scale[16], showed that 58% of the patients adhered to their medication, with a score above 7, which means good adherence. On the other hand, we can see that 50% of respondents said that at some point they forgot to take their medication; another 30% tend to forget when to take their medication; and 20% of patients said that they only take their medication if they are sick; 16% stop taking their medication when they feel worse and 12% of them said that they stop taking their medication when they feel better. We can also see that 84% of respondents have clearer thoughts when they are medicated, 72% think it is normal to be controlled by medication and 68% believe that medication prevents them from getting sick. In addition, 70% stated that they become more tired and slowed down when using the medications and 50% felt like zombies when using their medications (Table 2).

Table 2 - Characterization of CAPS III Liberdade participants according to adherence to medication treatment using the Medication Adherence Scale[16] (n = 50). Aracaju, SE, Brazil, 2023

Questions	Yes n (%)	No n (%)
Have you ever forgotten to take your medication?	25 (50)	25 (50)
Do you sometimes forget to take your medication?	15 (30)	35 (70)
When you feel better, do you sometimes stop taking your medication?	6 (12)	44 (88)
Sometimes, when you feel worse, do you stop taking the medication?	8 (16)	42 (84)
Do you only take your medication when you are sick?	10 (20)	40 (80)
Do you find it natural to be controlled by medication?	36 (72)	14 (28)
Are your thoughts clearer when you're medicated?	42 (84)	8 (16)
By taking medication, do you think you prevent yourself from getting sick?	34 (68)	16 (32)
Do you feel strange, "like a zombie", when you use the medication?	25 (50)	25 (50)
Does the medication make you feel tired and sluggish?	35 (70)	15 (30)

When we used the instrument "Assessment of adherence to treatment, considering the patient's beliefs, needs and concerns about their treatment", from the Ministry of Health's Second Booklet[17], the score obtained by the majority of participants (86%) was higher than one, which also indicates a greater tendency towards medication adherence, and only 14% showed a lower tendency (Table 3). According to the patients' answers to this questionnaire, 90% said that their health depended on these medications, and 90% also reported that the medications prevented the disease from worsening. In addition, 80% believe that without the medication they would become ill, 68% consider that their future health depends on it and 66% disagreed that they are concerned about the long-term adverse effects caused by the medication. Of all those interviewed, 64% agreed that life would be impossible without the use of these medications, 62% disagreed that the medications get in the way of life and 60% said they didn't feel worried about taking them. Finally, 52% of patients were not sure what the indication was for the therapy used, 50% reported that the therapy causes unpleasant side effects and 28% are worried about becoming dependent on the medications (Table 3).

Table 3 - Characterization of CAPS III Liberdade participants according to their adherence to medication treatment, taking into account their beliefs, needs and concerns[17] (n = 50). Aracaju, SE, Brazil, 2023

Questions	I agree n (%)	I'm not sure n (%)	I disagree n (%)
N1 - My health currently depends on these medications.	45 (90)	1 (2)	4 (8)
P1 - Having to take these medications worries me.	11 (22)	9 (18)	30 (60)
N2 - My life would be impossible without these medications.	32 (64)	4 (8)	14 (28)
P2 - Sometimes the long-term effects of these medications worry me.	14 (28)	3 (6)	33 (66)
N3 - Without these medications I would be very ill.	40 (80)	2 (4)	8 (16)
P3 - These medications are a mystery to me.	7 (14)	26 (52)	17 (34)
N4 - My future health will depend on these medications.	34 (68)	6 (12)	10 (20)
P4 - These medications disrupt my life.	11 (22)	8 (16)	31 (62)
P5 - Sometimes I worry about becoming too dependent on these medications.	14 (28)	4 (8)	32 (64)
N5 - These medications protect me from getting worse.	45 (90)	0 (0)	5 (10)
P6 - These medications give me unpleasant side effects.	25 (50)	4 (8)	21 (42)

The instrument "Pharmaceutical Care Record - patients' difficulties with their medications" showed that 40% of patients found it difficult to read what was written on the medication packaging, and 28% of these reports were classified as "very difficult". In addition, 24% of patients reported having difficulty remembering to take their medication; 14% had difficulty taking so many tablets at the same time; 14% had difficulty acquiring their medication, especially olanzapine and risperidone, and 8% had great difficulty opening or closing their medication packaging.

When we evaluated adverse medication interactions using the "Clinical Pharmacy Service Record - Adverse Reaction Tracking", also from the Ministry of Health's Second Booklet[17], it was found that 36% of patients showed signs of adverse reactions. Haloperidol was the medication that caused the most adverse reactions, with 8% of patients affected, with weight gain, dyspnea, sedation and drowsiness being the most commonly reported symptoms. This was followed by risperidone (6%), with complaints of weight gain and stomach pain. Four percent of patients taking clonazepam experience amnesia and difficulty opening their mouths; 4% of patients taking valproic acid report dry mouth, constipation and emesis; and 4% of patients taking diazepam report gastritis and drowsiness. In addition, 20% of patients were unable to say which medication was possibly responsible for the adverse reactions (drowsiness, stomach pain and psychomotor agitation) and 44% said that no medication caused an adverse reaction (Table 4).

Table 4 - Tracking of the most common adverse reactions among CAPS III Liberdade users[17] (n = 50). Aracaju, SE, Brazil, 2023

Medication	Prescriptions (%)	Intensity of discomfort	n	Adverse reactions	n
Haloperidol	8	Very much Little	2 2	Weight gain and dyspnea Sedation, Sleepiness	2 1 1
Risperidone	6	Very much Little	2 1	Weight gain Stomach pain	2 1
Clonazepam	4	Very much	2	Amnesia Difficulty opening the mouth	1 1
Valproic acid	4	Very much	2	Dry mouth and constipation Emesis	1 1
Diazepam	4	Very much Little	1 1	Gastritis Sleepiness	1 1
Promethazine	4	Very much	1	Weight gain	1
		Little	1	Emesis	1
Olanzapine	2	Little	1	Weight gain	1
Levozine	2	Very much	1	Weight gain and sleepiness	1
All	2			I don't like taking	1
				Sleepiness	3
				Stomach pain	2
Does not know	20			Psychomotor agitation	2
				Sedation	2
				Emesis	1
None	44			None	22

The most prescribed medications at CAPS III Liberdade were clonazepam in 36% of prescriptions, followed by haloperidol (34%), chlorpromazine (24%), valproic acid (22%), and fluoxetine and haloperidol decanoate (20%). In addition to these, sertraline and biperiden appear in 18% of prescriptions; diazepam, amitriptyline, lithium, risperidone and levopromethazine (14%), olanzapine (12%), and promethazine and thioridazine (10%). Other less prescribed medications were imipramine, quetiapine, carbamazepine, pregabalin, desvenlafaxine, ziprasidone and duloxetine. The number of medications prescribed to each patient ranged from one to six, with 4% of patients using one psychotropic medication, 20% using two; 36% using three; 24% using four; 8% using five medications simultaneously, and 8% of patients using six psychotropic medications concomitantly.

We also observed that 100% of the interviewees had a prescription from a psychiatrist, 10% of whom did not know the therapeutic indications of their medication; 14% reported that the medication was prescribed for sleeping; 14% as a tranquilizer; 10% for "nerves"; 6% as a sedative and anxiolytic; 6% for anxiety; 6% for headaches and 6% to "feel good". As for the length of time they have been using medication, the vast majority (96%) have been using psychiatric medication for a long time, with 2% using it for at least eight years, 4% for ten years, 2% for 12 years, 6% for 20 years and 82% of patients not even remembering how long.

Consulting the Micromedex 2023 database[14], the main medication interactions found in the prescriptions of CAPS III Liberdade patients were haloperidol and chlorpromazine. This interaction was present in 14% of prescriptions. This was followed by haloperidol and promethazine, present in 14%; and haloperidol and sertraline, in 6%. These aforementioned associations can increase the risk of irregular heart rhythm (Figure 1). The combination of haloperidol and haloperidol decanoate is a therapeutic duplication, present in 8% of prescriptions. The combination of haloperidol and amitriptyline, observed in 6% of prescriptions, can affect heart rhythm; and the combination of haloperidol and lithium, present in 6% of prescriptions, can increase lithium levels and affect heart rhythm (Figure 1).

Medication interactions	n	Consequences
Haloperidol and chlorpromazine	7	Increases the risk of irregular heartbeat
Haloperidol and promethazine	7	Increases the risk of irregular heartbeat
Haloperidol and sertraline	3	Increases the risk of irregular heartbeat
Haloperidol and ziprasidone	1	Increases the risk of irregular heartbeat
Haloperidol and quetiapine	1	Increases the risk of potentially fatal irregular heart rhythm
Haloperidol and amitriptyline	3	Affects the heart rate
Haloperidol and lithium	3	Increases lithium levels and affects heart rate
Haloperidol and thioridazine	3	Increases blood levels of thioridazine to dangerous levels and causes irregular heart rhythm
Haloperidol and carbamazepine	1	Carbamazepine reduces the blood levels and effects of haloperidol
Haloperidol and haloperidol dec.	4	Therapeutic duplication
Thioridazine and sertraline	2	Increases blood levels of thioridazine to dangerous levels and causes irregular heart rhythm
Imipramine and sertraline	2	Increases the effects of imipramine
Clonazepam and olanzapine	5	Low blood pressure, shallow breathing, weak pulse, muscle weakness, sleepiness, dizziness and slurred speech
Lithium and fluoxetine	2	Increases the risk of serotonin syndrome: confusion, hallucination, increased heart rate, seizure
Amitriptyline and duloxetine	1	Increases the risk of serotonin syndrome: confusion, hallucination, increased heart rate, seizure

Figure 1 - Most frequent medication interactions at CAPS III Liberdade, according to Micromedex 2023[18]. Aracaju, SE, Brazil, 2023

When it comes to monitoring the collection of medication from the pharmacy, the results show that 52% of patients received their medication on time (compliant), and 48% of patients withdrew their medication early (non-compliant). Of these non-compliant patients, 18% gave the reason that they were using more medication than prescribed.

Discussion

Most of the patients who took part in the study were women aged between 50 and 59, without children. However, 75% of the interviewees had already had at least one pregnancy and were not living with a partner at the time of the interview. In a previous study, the authors analyzed patients admitted to a psychiatric hospital who were also not in a marital relationship[19]. The difficulty these patients have in maintaining social relationships and with a partner is due not only to the signs and symptoms of the illness itself, but also to the side effects of most antipsychotics, such as loss of libido, for example[19]. These side effects affect the majority of patients who take psychiatric medication, becoming a problem in the lives of these people and their spouses, often leading to marital fights, betrayals and separations, and can trigger violence.

Lack of schooling was a predominant factor in our study, in which the vast majority of participants reported having incomplete primary education, which makes it difficult for patients to understand their illness, treatment and self-care. Low schooling is usually associated with lower medication adherence, as it makes it difficult to understand the therapy and the patient's clinical conditions[19]. In a study of CAPS patients across the country, a rate of 66% of psychiatric patients with less than five years of education was reported[19]. Corroborating these findings, another study shows that 53% of the patients interviewed who were being treated in a hospital psychiatric unit had incomplete primary education[20].

We can see the influence of the low education level of the participants in our study, when 40% of them answered that they didn't understand what was written on the medication packaging. In this sense, health education can be a tool that facilitates the process of acceptance and knowledge of the disease, culminating in the development of greater patient autonomy in the use of psychotropic medication[9,21-22]. This population's social issues must be taken into account. One study observed an increase in the pharmacotherapeutic adherence of patients with schizophrenia and bipolar disorder after carrying out an educational program[23]. Another study carried out with patients at a CAPS showed a significant increase in medication adherence after pharmaceutical interventions that included health education workshops[13,24].

It was observed that almost all the patients (86%) were unemployed, which corroborates the results of another study, which found a prevalence of almost 59% of unemployed interviewees[25]. This can also be explained by factors intrinsically related to the illness, such as reduced productivity in some cases, and external factors such as stigmas about mental disorders[26]. This leads to a decrease in family income, which was predominantly less than one minimum wage (US$8/day) among the study participants. It is worth noting that family income influences people's quality of life and accessibility to health, leisure, housing, food and education services[27-28].

Measuring medication adherence is not an easy task. The instruments used for this evaluation have limitations, such as the tendency for the methods to indirectly overestimate patient adherence, since questionnaires can induce favorable responses to adherence[29-31]. To minimize this bias, two indirect methods were used in the study. These instruments are low-cost and easy to apply, making them interesting for services with many patients and scarce financial resources[32].

Of all the individuals analyzed, 58% had good adherence to medication treatment, reporting that they used their medication regularly and at the correct time, as prescribed. The majority of participants (90%) also recognized the importance of taking the medication, and considered that if they stopped taking it, the symptoms of the disease could worsen. This concern is highlighted in the reports of the majority of interviewees, such as "never stopping drug treatment" even in the presence of adverse effects, such as weight gain, drowsiness, amnesia and sedation, which were the most commonly reported events. The vast majority of respondents understand that the rational use of medication tends to prevent the disorder from worsening, 84% of whom said that the use of medication makes their thoughts clearer.

These data corroborate the study carried out in Thailand in 2021, which showed that the majority of patients with schizophrenia had good medication adherence[33]. As in the study carried out in a city in Rio Grande do Sul, in which the majority of those interviewed also showed good adherence to medication, with the majority understanding that only the rational use of medication would contribute to adequate control of the disease[34]. Despite this, in this study the vast majority of patients (61%) forgot to take the prescribed medication at some point.

The main adverse reactions of antipsychotics are weight gain, sedation, hyperglycemia, restlessness and muscle rigidity[35], making it difficult to carry out daily tasks and impacting on people's lives. In this study, weight gain was reported by 12% of respondents, as

well as adverse hormonal reactions leading to decreased libido. These effects tend to lead to dissatisfaction with physical appearance, negatively impacting patients' self-esteem and potentially affecting relationships with partners. This usually leads to a worsening of adherence to psychotropic medication and, consequently, an increased risk of psychotic crises and emergency room visits[36-37]. This is demonstrated in a study which found that patients with bipolar disorder who reported a significant number of adverse medication reactions were less likely to adhere to their medication[38].

Some interviewees (30%) said that even though they understood the importance of taking their medication correctly, they had difficulty remembering the right time to take it, which reinforces the previously published study, which reported that most interviewees had the same difficulty[39]. The amount of medication used by the patients included in the study was, a mean of four to seven tablets a day, with 16% of them taking eight tablets a day and another 16% taking nine tablets a day. According to the Ministry of Health's Clinical Protocol and Therapeutic Guidelines for Schizophrenia, treatments should be carried out with one medication at a time (monotherapy), according to the patient's safety profile and tolerability. In the event of therapeutic failure, a second attempt should be made with another antipsychotic[40]. Unfortunately, this is not a clinical practice observed in the CAPS studied, with excessive associations and off-label uses, as observed in the majority of studies on the subject[41-43].

Non-adherence to medication can be aggravated by an increase in the number of medications used daily[44]. Most of the patients included in the study have a caregiver, usually a family member who helps with the medication administration, which ensures greater adherence to treatment. The memory loss caused by psychotropic medication contributes to this forgetfulness in many cases.

There are also a considerable number of patients with difficulties in adhering to medication, and these difficulties may be linked to the patient's limited knowledge of their pathology and the medication used (dosage, adverse effects and medication interactions). Added to this are negative beliefs about the disease and psychotropic medications[9,44]. These problems related to the use of medication were presented by all the participants in our research at some point during the interviews. The instrument measuring adherence to medication treatment, based on the interviewees' beliefs, needs and concerns, revealed that a large proportion of the participants (86%) showed a greater tendency to adhere to treatment, suggesting that, in this study, users' understanding of the need for pharmacological treatment was more significant than their concern about the possible adverse effects caused by the medications used. Some studies have shown that individuals who are more likely to adhere to pharmacotherapy are those who are less concerned about the possible undesirable effects of the medication and who understand the need to use it[9,45-46].

The results obtained are in line with the values suggestive of good medication adherence, according to the Medication Adherence Scale used. However, undesirable effects and adverse reactions can also contribute to discontinuing use of the medication, as they can trigger disorders such as weight gain, drowsiness, sedation, dyspnea, amnesia, dry mouth, constipation, among others. These reactions contribute to non-adherence to pharmacotherapy[9].

Among the main difficulties in taking medication reported by the patients in the study were reading what is written on the packaging (28%), remembering to take the medication (10%) and taking so many pills at the same time (8%). These data corroborate the findings of other studies, in which the majority of interviewees reported having difficulty reading the medication packaging or remembering to take the medication[9,47-48]. Some authors suggest that the high number of medications taken daily negatively affects medication adherence[49], as found in this study. One possible strategy to overcome this problem of non-adherence to medication is to use visual and audible reminders[50], such as a cell phone alarm, for example.

Access to medication does not seem to be a problem for the patients included in the study, as in other previous reports[9]. The most commonly prescribed medications to the patients interviewed here were clonazepam, followed by haloperidol, chlorpromazine, valproic acid, fluoxetine and haloperidol decanoate, psychotropic drugs commonly prescribed in other CAPS[38,51-53].

Psychotropic medications are often prescribed in combination in clinical practice[41-42]. As observed in our results, the majority of interviewees use two, three or four medications concomitantly, bringing risks to patients[41,43]. The use of haloperidol with chlorpromazine, for example, is characterized as a risky combination. Similar results were recorded in another study carried out in a northeastern capital, indicating the need for pharmacists to classify and monitor these critical interactions and identify medication-related problems[54]. These events can have an impact on pharmacotherapeutic adherence, associated with treatment discontinuation[55-56].

According to some authors, a more significant concern about possible adverse reactions, combined with a common belief in the need to use medication, may be linked to non-adherence to psychotropic medication[57]. Prolonged use of anxiolytics can lead to dependency, associated with patients abandoning therapy[58].

In these situations, the pharmacist can act in pharmacotherapeutic follow-up and health education, to explain to patients the importance of medication adherence, the possible risks of not using the medication and answer questions about the medications prescribed and what can interfere with maintaining pharmacological treatment. Health education aimed at the rational and safe use of medications is very important[46]. In addition, the pharmacist can carry out health education activities to build possible strategies with the patient to facilitate the daily use of various medications[24].

Finally, many patients tend to get their medication from the CAPS pharmacy earlier than expected (48%). The most common justification for this practice was taking more medication than prescribed. This situation is justified because, with continuous use, psychotropic drugs can generate tolerance and consequently lose their effectiveness, requiring higher doses[59-60]. On the other hand, self-medication is characterized by incorrect adherence to prescriptions, which directly affects patient safety.

Unfortunately, the pharmacist, who is part of the CAPS team, only spends six hours a day at the service and the great demand for administrative activities, such as dispensing medications, stock control, requesting replacement medications, organizing space, evaluating prescriptions and separating patients' medications according to each case, makes it difficult for him to participate in activities outside the pharmacy. In other words, their work is restricted to the Pharmaceutical Assistance process, to the detriment of Pharmaceutical Care, which involves health education activities, clarification on the rational use of medications, evaluation of pharmacotherapy, observation of the appearance of side effects or adverse reactions, qualified conversations, participation in therapeutic groups and workshops developed in a multidisciplinary way, activities that could be carried out by the pharmaceutical professional, but do not occur due to the lack of professionals with the time to carry them out. Therefore, the work of pharmaceutical professionals in mental health is of fundamental importance so that strategies can be drawn up for the rational use of medications, aiming for more effective and safer therapies, as provided for in the National Pharmaceutical Assistance Policy[12].

Conclusion

The data obtained in our study shows that the majority of participants regularly use the prescribed medication and recognize the importance of using medication, understanding that interrupting medication treatment can lead to a worsening of the clinical condition and the disease. It was observed that, although patients reported concerns about the use of medication, the majority spoke of the need to maintain their medication and that they had no difficulties in accessing most of the prescribed medications.

On the other hand, a significant proportion of patients did not adhere well to pharmacotherapy, which can be explained by medication interactions that increase the appearance of side effects and adverse reactions. In addition, difficulty in remembering the right time to take the medication, a considerable number of pills used daily, negative beliefs about the medication and the psychiatric illness were also frequently reported by patients. The patient's low educational level, which makes it difficult for them to understand the disease and the medications used, together with the difficulty of reading what is written on the medication packaging and on the medical prescription, were important reports.

Pharmacists can play a fundamental role in promoting adherence to pharmacotherapy by identifying and preventing medication-related problems, assessing dangerous drug interactions and the appearance of adverse medication reactions through pharmacotherapeutic monitoring. The pharmacist's participation in clinical decisions, especially those related to medication, is fundamental in psychiatry, bringing significant results in improving adherence and understanding of treatment by CAPS patients.

Limitations of the study include the small number of participants included and, as a result, the reduced variety of mental illnesses assessed, which could have been improved if a greater number of patients had remained until the end of the study and could thus have been stratified by ICD. Another limitation of the study was that it was carried out in only one CAPS, which limits the comparison of prescriptions between different psychiatric professionals, since during the data collection period only two psychiatrists were present at the prescriptions. This indicates that research into medication prescriptions in mental health should be expanded, since there is a mass medicalization of the Brazilian population, due to a growing number of diagnoses of mental problems as early as childhood, perpetuating into adulthood, requiring an increasingly in-depth evaluation of the efficacy and safety of this high number of different psychotropic drugs prescribed to the same patient.

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