

# Rating of dispensed prescriptions in the psychosocial Care Center of a City of Bahia

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**Abstract**— In Brazil, the legislation created to regulate the use of substances and drugs subjected to special control is from Ordinance Number 344 of May 12, 1998, which establishes a standard model for prescriptions in which such substances are prescribed. This ordinance also proposes to eliminate ambiguous, illegible or incomplete prescriptions, as well as the lack of standardization of the nomenclature of prescription drugs, the correct use of the notification model, the use of abbreviations and the presence of erasures, which composes elements that may cooperate to the occurrence of mistakes. To rate prescriptions that are dispensed in a Psychosocial Care Center inside of Bahia. Cross-sectional study, based on the collection of prescriptions and psychotropic drugs notifications, kept at the pharmacy of the Psychosocial Care Center of a city of Bahia, from May 2018 to May 2019. According to the prescriptions analyzed, it was observed mistakes such as illegibility, absence of quantity of medication to be dispensed, absence of the date of issue and prescription out of date, as well as common mistakes by the prescriptive professional such as do not present their specialty. From these data was realized the necessity for more rigorous supervision and attention to the existing data in prescriptions, in order to avoid future problems, which would be minimized if it had the presence or attendance of an effective pharmacist in the service.

**Keywords**—Prescriptions; psychotropic drugs; pharmacy.

## I. INTRODUCTION

According to Danniela (2016), mental disorders are clinical conditions featured by variations in thoughts and emotions or behaviors related to personal distress and / or degradation of psychic performance, triggering detrimental effects, which can affect not only the individual but the family and the community. Thus, the Psychiatric Reform in Brazil was created, which projects well-being and rights for people with mental disorders, so that the individual be welcomed with more tenderness and respect through actions in Psychosocial Care Centers (PCC) (MIELKE et al., 2009; BRAZIL, 2001).

It is worth noting that in recent years there has been a considerable increase in the use of psychotropic drugs worldwide. This factor can be associated with the predominant rhythm and lifestyle that lead the population to experience increasingly stressful and difficult situations such as demands for productivity, heavy traffic, excessive

activity, the increasing number of psychiatric disorders diagnoses in the population, the entry of new drugs in the pharmaceutical market and new therapeutic indications for already existing psychotropic drugs (PADILHA et al., 2014; BRIGIDO, 2008).

Psychotropic drugs are used as the therapeutic resource for patients with psychic disorders, but they are also consumed and prescribed for several situations, such as the anxiety for a promising life because of pressure from society. Studies show that the most consumed psychotropics by the major population are those ones from the anxiolytic class, which are used to treat depression, anxiety, insomnia, stress, among other social issues (NASARIO, 2016; SILVA, 2017). As a result of this, prescriptions increasing and the probable indiscriminate use of psychotropic drugs are relevant obstacles in mental health, because of the risk that these

drugs cause in a short and long time (SARMIENTO, 2017).

In Brazil, the legislation created to regulate the use of substances and medicinal products subjected to special control is from Ordinance Number 344 of May 12, 1998, which establishes a standard model for prescriptions in which such substances are prescribed with methods of specific fill-in forms according to the lists in which the substances participate: A1 and A2 (Narcotic), A3, B1 and B2 (Psychotropic), C1 (other substances subordinated to special control), C2 (Retinoids for systemic use) and C3 (immunosuppressants) (ANVISA, 1998).

This ordinance also proposes to eliminate ambiguous, illegible or incomplete prescriptions, as well as the lack of standardization of the nomenclature of prescribed drugs, the correct use of the notification model, the use of abbreviations and the presence of erasures, which constitute elements that may contribute to the occurrence of mistakes (CARDINAL and FERNANDES, 2014; CARDOSO et al. 2018). Thus, the goal of this work is to evaluate the prescriptions that are dispensed in a Psychosocial Care Center inside of Bahia, in order to verify errors in the prescriptions of psychotropics.

## II. METHODS

The present work is a cross-sectional study in which the cause and impact are analyzed at the same time (BORDALO, 2006).

Thus, the prescriptions and psychotropic drugs notifications kept at the pharmacy of the Psychosocial Care Center of a city in the state of Bahia were collected, from January 2018 to October 2018.

### METHOD FOR RATING OF PRESCRIPTIONS

Analysis of psychotropic recipes and notifications was performed by observing the following factors, as shown below:

- Characteristics of patient: Name, gender, age and full address;
- Characteristics of the prescription: Institution form containing name, address, specialty, signature or stamp and CRM.
- Characteristics of the prescriptive: Readability, dispatched quantity, date of issue and if the dispensation is within the time limit provided by law (30 days);
- Characteristics of prescription drugs: Name of the drug or substance, according to the Brazilian Common Denomination (BCD) (Ministry of Health, 2003), identification of the list that the psychotropic is involved, pharmaceutical form, dosage and dosage.

## ETHICS COMMITTEE

This research was approved by the Research Ethics Committee of the Salvador University by nº CAAE 18994019.7.0000.5033, because data analysis of prescriptions of human beings were performed. Thus, this study follows the Resolution Number 466 of December 12, 2012 from the National Health Council (NHC). Moreover, this study ensures anonymity and respect for the cultural, ethical, social, moral and religious values of those ones involved. Thus, the researchers were committed to the privacy and confidentiality of the data obtained.

## STATISTICAL ANALYSIS

Patient data and quantitative prescribing data will be presented like average, standard deviation and percentage. For tabulation and data analysis will be used the program GRAPHPAD Prisma (5.0), with significance level of 5%.

## III. RESULTS AND DISCUSSION

From the analysis of prescriptions (n= 431) it was possible to verify the profile of the patients of the CAPS of the studied city, in which 55.92% (n = 241) of the individuals are women and 44.08% (n = 190) are men. Furthermore, 100% of the prescriptions analyzed did not find information about patient's age and address, as shown in table 1.

Table 1. Characteristics of patients

Sex	Address	Age
<b>Feminine</b> <b>- 55,92%</b> <b>(n=241)</b>	Absent	Absent
<b>Male-</b> <b>44,08%</b> <b>(n=190)</b>	Absent	Absent

The study by Reis et al. (2017) shows the result of the prescription profile of psychotropic drugs in community pharmacy, which presented a women prevalence of 69.85%, which is an equivalent result with the present study. A study elaborated at several Psychosocial Care Centers in the southern region of the country acknowledged that 79% of psychotropic users were women (KANTORSKI et al., 2011). These data reinforce the results found in this present study, which shows the prevalence of women in using of psychotropic drugs. According to Maragno et al. (2006), mental disorders are more present in women, and the most common disorders are depression, stress and anxiety disorders (ANNEQUIN et. al., 2015; MARAGNO et. al., 2006). . Moreover, according to Farias et al. (2016) women have a greater

ability to perceive the signs and symptoms of pathologies and, because that, search medical assistance in advance and practically do not show resistance to adherence to prescribed treatments, unlike men.

Regarding the absence of the patient's address, Cunha (2017) presented a result of 21.88% similar to the present study, in which he observed that there were no patients' addresses in the prescriptions, and thereby did not perform one of the determinations from Ordinance Number. 344, of May 12, 1998 (CUNHA et al., 2017). Another research in a Popular Pharmacy of Brazil in Aracaju / SE, verified that there was no address of the patient or the same one was incomplete in 300 prescriptions analyzed (BARREIRA et al., 2011).

It is noteworthy that patient's address is essential to provide, if necessary, communication between the pharmacist and the patient. Thus, the presence of the address is a facilitator if there are any problems related to the use of prescription drugs (SANTOS PV; CRESPO JM, 2017). Moreover, Ordinance Number. 344, of May 12, 1998, indicates that prescriptions for special control medications must contain the full address of the patient in the identification of the user.

Likewise, Table 2 shows the drugs dispensed in CAPS along with the list of substances subordinated to special control B1 (psychotropic) and C1 (other substances subordinated to special control which are presented in Ordinance Number 344 of May 12, 1998.

Table 2. Medicines dispensed

Medicines	List	Amount	%
<b>Amitriptyline</b>	C1	76	12%
<b>Biperiden</b>	C1	12	2%
<b>Carbamazepine</b>	C1	77	12%
<b>Lithium</b>	C1	22	4%
<b>Carbonate</b>			
<b>Clonazepam</b>	B1	17	3%
<b>Chlorpromazine</b>	C1	5	1%
<b>Hydrochloride</b>			
<b>Chlorpromazine</b>	C1	9	1%
<b>Diazepam</b>	B1	161	26%
<b>Phenytoin</b>	C1	6	1%
<b>Phenobarbital</b>	B1	23	4%
<b>Fluoxetine</b>	C1	26	4%
<b>Haloperidol</b>	C1	74	12%
<b>Nortriptyline</b>	C1	7	1%
<b>Promethazine</b>	C1	30	5%
<b>Risperidone</b>	C1	55	9%
<b>Sodium</b>	C1	17	3%
<b>valproate</b>			
<b>TOTAL</b>		617	100%

It is possible to notice in Table 2 that 67% (n = 416) of prescription drugs are on list C1 and 33% (n = 201) are on list B1. In the study by Tatiana Silva and Aparecida Iguti (2013), accomplished in a Basic Health Unit of a large city of São Paulo state, with 800 prescriptions, the results about the lists of special control substances showed that 78.4% of prescriptions were substances from list C1 and 21.6% from list B1. These data are similar to those ones obtained in this study, maybe because it is a public unit, the frequencies of substances from group B1 and C1 can be taken into account because the National List of Essential Medicines (NLEM). Likewise, the research by Murta et al. (2019) analyzed the quality of medical prescriptions in Montes Claros - Minas Gerais, in which 510 prescriptions were analyzed. The results from lists 21.8% from list C1 and 2.15% from list B1. The information obtained are similar to the current study, proving an equivalent prescription profile.

It can be possible to verify that the most dispensed psychotropics were Diazepam (39.08%), Carbamazepine (18.69%), Amitriptyline (18.45%) and Risperidone (13.35%) and Haloperidol (10.43%).

Diazepam was the most prescription drug in the CAPS of the city of Bahia, recognized in prescriptions on 39.08%. According to Sousa et al (2016) the choice of Diazepam in several public health services in several occurrences happens due to this drug be a drug related to the National List of Essential Medicines (NLEM), which is known for its safety and efficiency, besides having the cost reduction and extensive clinical knowledge. in its various uses.

Therewith, this drug is used in epileptic illness emergencies, and besides that it has clinical suggestion in panic disorder. The prescription of Diazepam corresponds to 50% of the prescriptions of psychotropic drugs in Brazil, showing a permissible overprescription or even indiscriminate use of this drug (BOGER et al., 2017).

A study performed in a CAPS by Santos (2017) observed that Diazepam is the most prescribed drug with 24.6% followed by Carbamazepine and Haloperidol. On the other hand, a study by Cazarotti et al. (2019) in a drugstore in Santa Inés - MA, observed that Diazepam was the second most prescribed drug.

Regarding the present errors in the prescriptions analyzed, errors such as illegibility, absence of quantity of medication to be dispensed, absence of the date of issue and expiration of the prescription were observed. Thus, in this study, a high prevalence of late dispensation (49.8%) from the date of issue was detected, according to table 3, according to Ordinance Number 344 of May 12, 1998, the prescription had operation for a period of thirty days from

its issue and only inside the Federative Unit that granted the notation.

Table 3. Errors in the prescriptions

Items observed in Prescriptions	Amount (n)	%
Unreadable	108	25.6%
Absence of quantity to be dispensed	40	9.4%
Absence of the issue date	64	15.2%
Dispensing out of date	211	49.8%
<b>TOTAL</b>	<b>423</b>	<b>100</b>

Equivalent result to the present research was found in the research by Andrade et al. (2004), who pointed that illegibility was 18.2% for list B and 10.2% for list C. Already Silva et al. (2008) when performing a study at the Pharmacy Carlos Drummond de Andrade School of UFPE - Federal University of Pernambuco identified a result of 6.17% of illegibility.

According to Lopes et al. (2014), undecipherable and ambiguous prescriptions display a higher risk and the possibility of causing side effects. Moreover, according to the authors, unsatisfactory prescriptions of information has the capability of causing unequal dosages empowering for adverse reactions.

Thereby, it is plausible to understand that prescription is overriding for a positive therapeutic result, and it is essential that there is a cohesive understanding so that the prescribed drug be managed by the best way, reducing the recurrence of the pathology to be treated, the non-therapeutic success and side effects, besides that the understanding causes a satisfaction for patient and professional. Based on the understanding of these fundamental concepts, it becomes admissible the perception of the data that guide the medical prescription and its purpose (MURTA et al., 2019).

Since this model of prescription can reduce mistakes as it extinguishes the difficulty in analysis and understanding driven by the illegible letter of the prescriptive and provides that typing mistakes be corrected in the preparation of the prescription with no need for erasures or scribbles which hinder the understanding of the data (TAKAHASHI et al., 2019).

Regarding the absence of the prescription date of issue, a study by Arruda et al. (2012) at the CAPS pharmacy in Araguaína - TO showed that 74% of the prescriptions

analyzed had this absence. According to these authors, the absence of the date of issue in the prescription makes it difficult for the dispensing professional to take notice of the prescription period, having the power of causing damage to an excellent pharmaceutical orientation. Thus, omitting data from this field may lead to fraudulent actions or irrational use of the drug (ARRUDA et al., 2012).

The data presented in this research (15.2%) is higher than the study by Arruda et. al. (2012), because there was a lower error rate regarding to the absence of the date of issue in the prescription. In the research by Pinheiro et al (2016), it was observed that 61.95% of prescriptions had the date of issue, thus an extremely important data in the procedure of a prescription analysis, as it may indicate the continuity of the pharmacological treatment and in different incidents the reuse consequently of great importance to ensure the validity of the prescription.

It is noteworthy that when the prescriptive does not date the prescription, he / she contributes to the action of the patient do not instantly administer the drug on the date of the next appointment, having variations of the symptoms in the time lapse between the appointment and the starting of the drug use (SOARES et al., 2014).

Thus, the information can be pointed out as unnecessary by certain professionals, but it is essential to certify the validity of the prescription, because it consists of a basic reference in order to observe the historical development of the patients and along with the purpose that in each time lapse the medications be dispensed, administered and evaluated (ZANIN; LUZ, 2012).

According to the data, the common errors of the prescriptive professional and according to the total prescriptions observed, 97.8% did not have the specialty of the prescriptive. The result mentions the absence of the prescriptive professional specialty as over to the value acquired in the study by Cunha et al. (2016), in which 84.98% did not include the specialty of the prescribing professional.

A research by Pizzolatti et al. (2017) in Criciúma - SC showed the result of 44.4% of prescriptions without medical specialty, a very expressive result compared to the present study. Besides this, a study by Moura et al. (2018) on analysis of medical prescribing errors in an Emergency Care Unit, showed a result of 9.57% of prescriptions that were identified with no stamps or the CRM number of the prescriber.

In the present study, a result of 0.4% of prescriptions with no medical signature was observed and in a study by Oliveira et al. (2016) presented a result of 100% of the



absence of medical signature, a totally discrepant result when compared to the present study.

It is a total assignment from the doctor the performing of the prescription for the patient and the prescription is the key document that represents this assignment. Thus, the prescription will only be valid if it has the signature of the prescribing professional.

It is noteworthy that there is no legal requirement of the doctor's stamp in medical prescriptions, however it is necessary the signature with readable identification and the CRM, and it is optional to use the stamp, which aims to optimize medical tasks (MADRUGA; SOUZA, 2011). In the present study, 1.8% of prescriptions did not present the CRM of the prescriptive professional. Similar data was found in the study by Lima et al. (2016), which pointed out 4.17%, relative to the lack of identification of the prescriptive. Volpe et al. (2016) when performing a survey in a public hospital in the Federal District, showed that 98.3% of prescriptions without CRM.

It is advised that initially everything that is performed by the doctor must be followed not only by the signature but also by the registration of the doctor in the CRM, when prescribing special control medications becomes essential or the use of the stamp or the use of documents in which be printed the CRM of the prescribing professional (FEDERAL COUNCIL OF MEDICINE, 2014).

Given this context, the present study highlights the mistakes in prescriptions dispensed in a CAPS, which can be avoided following Ordinance Number 344 of May 12, 1998, increasing the importance of pharmaceutical evaluation in the prescription and drugs dispensing.

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