Prevalence in the use of psychotropics and associated factors in primary health care

Prevalência do uso de psicotrópicos e fatores associados na atenção primária à saúde

Tatiana Longo Borges[1]
Adriana Inocenti Miasso[1]
Kelly Graziani Giacchero Vedana[1]
Paulo Celso Prado Telles Filho[2]
Kathleen Mary Hegadoren[3]

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Descritores
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Abstract

Objective: Investigating the prevalence in the use of psychotropics and associated factors in primary health care withsocio-demographic and pharmacotherapeutic factors, medical history, and Common Mental Disorders.
Methods: A cross-section study which includes 430 primary health care patients. The research instruments were Self-reporting Questionnaires and medical records. A chi-squared test was used in the univariate analysis, and a logistic regression was used in the multivariate analysis.
Results: The prevalence in the use of psychotropics was 25.8%. There was an association among the use of psychiatric drugs and common mental disorders, use of non-psychiatric drugs, number of medications prescribed,number of pills a day, clinical pathologies, age, and schooling. In the multivariate analysis, the predictors for the use of psychiatric drugs were: common mental disorders, clinical pathologies, and schooling.
Conclusion: The prevalence in the use of psychiatric drugs and the associated factors varied according to the univariate or the multivariate analyses.

Resumo

Objetivo: Investigar a prevalência de uso de psicotrópicos e fatores associados na atenção primária à saúde com fatores sociodemográficos, farmacoterapêuticos, histórico de saúde e Transtornos Mentais Comuns.
Método: Estudo transversal que incluiu 430 pacientes de atenção primária à saúde. O instrumento de pesquisa foi o *Self-reporting Questionnaire* e prontuários. Para análise, utilizou-se teste Qui-quadrado na análise univariada e regressão logística na multivariada.
Resultados: A prevalência de uso de psicotrópicos foi de 25,8%. Houve associação entre uso de psicofármacos e transtornos mentais comuns, uso de medicamentos não psicofármacos, número de medicamentos prescritos, número de comprimidos/dia, patologias clínicas, idade e escolaridade. Na análise multivariada os preditores para uso de psicofármacos foram: transtornos mentais comuns, patologias clínicas e escolaridade.
Conclusão: A prevalência de uso de psicofármacos e os fatores associados variaram conforme a análise uni ou multivariada.

Corresponding author
Tatiana Longo Borges
Bandeirantes Avenue, 3900, Ribeirão Preto, SP, Brazil. Zip Code: 14040-902
tatilborges@usp.br

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[1]Escola de Enfermagem de Ribeirão Preto, Universidade de São Paulo, Ribeirão Preto, SP, Brazil.
[2]Universidade Federal dos Vales do Jequitinhonha e Mucuri, Diamantina, MG, Brazil.
[3]University of Alberta, Edmonton, AB, Canada.

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Introduction

Psychiatric drugs are among the medication types which are the most prescribed in the United States.[1] Such phenomenon seems to happen worldwide, as studies conducted in other countries showed high usage rates for them.[2]

Although the benefit related to the use of psychiatric drugs as a therapeutic modalities cannot be denied, their popularization gave rise to questions regarding the real need for them.[3] Not always are psychiatric drugs used to treat specific mental disorders; sometimes the very doctor prescribing them cannot specify the reason some of their patients use them.[1,4]

As the current Brazilian mental health policies consider the primary health care units as the gateway for patients with psychological symptoms, and as such units are responsible for treating mental disorders which are considered less serious, the so-called Common mental Disorders, there is no information in the literature in order to investigate whether the people who use psychiatric drugs are positive for Common Mental Disorders, and to investigate the factors related to the consumption of psychiatric drugs.[5,6]

The importance of studies which discuss that subject is justified by the possibility for patients to be guided, not only as to the best therapeutic modality for their cases, but also in regards to the correct use of medications, as the misuse of psychiatric drugs involves the risk of conditions that may be serious.[7]

This study aimed at investigating the prevalence in the use of psychiatric drugs in primary health care units, and the possible associations among their use, and socio-demographic and pharmacotherapeutic factors, medical history, and the presence of Common Mental Disorders.

Methods

This is a quantitative, epidemiological, cross-sectional study, and it is correlational and descriptive in character. It was conducted in a municipality in the countryside of São Paulo - Brazil.

The city which was used as the research field is divided in five health care sectors. The basic health care units with the highest reach in regards to the number of people treated were chosen for each sector. The data were collected over nine months. Individuals were recruited whilst waiting for doctor's appointments in the related units.

Individuals had to meet the following criteria to be included in the study: being 18 years of age or older, being capable of expressing oneself in Portuguese, and having appointments scheduled in the related units. Individuals were excluded from the study for: coming to the units in order to use the pharmacy, bandaging rooms, and vaccination rooms (without a scheduled appointment); being younger than 18 years; and having trouble communicating (example: being unable to speak).

Statistical associations were investigated among the dependent variable (use of psychiatric drugs) and independent variables (socio-demographic and pharmacotherapeutic factors, medical history, and presence of Common Mental Disorders).

The data were collected through structured interviews in the very health care units, in private places. The script utilized comprised questions related to socio-demographic and pharmacotherapeutic profiles of patients.

The description of medications was conducted with the first level of Anatomical Therapeutical Chemical classification - ATC.[8]

In order to identify the prevalence of Common Mental Disorders, the Brazilian version of SRQ-20 (Self-Reporting Questionnaire), which comprises 20 questions, was used. It was validated in the early 1980s, and it has been widely used ever since.[9]

Medical records of patients were analyzed, in order to properly identify the prescribed psychiatric drugs, so as to minimize the possibility of mistakes. In order to test whether the instrument prepared could reach the proposed objectives through its content and method, a pre-test was conducted in the research site. Subjects interviewed in the pre-test stage were not part of the sample.

The sample comprised 430 patients. Stratified sampling was used. Each Basic Health Care Unit

consisted of one stratum. The tolerable sampling error was 5%, and the significance level, 5%. A nonresponse rate was added, and it corresponded to 15%.

Associations between the dependent variable and the independent variables were investigated through Chi squared test. Association hypotheses were accepted when "p" found was lower or equal to 0.05. When independent variables consisted of only two categories, Yates' correction for continuity was used. In the cases in which there were categories with less than five individuals, Fisher's test was used.

Logistic regression models were developed in order to check the impact of independent variables on the dependent variable. All explanatory variables which presented $p<0.05$ in the univariate analysis were included in the models, and so were the variables which, despite not presenting significant associations, were strongly related to the dependent variables, according to the literature. It is important to point out that only the variables which did not present multicollinearity problems were included in the logistic regression models. The models were analyzed for suitability through the Hosmer-Lemeshow test.

The study development met the national and international ethics regulations in regards to studies involving human beings.

Results

The sample comprised women mostly (84.8%). The average age was 45 years, ranging from 18 to 83 years. Most subjects interviewed were married (59.3%), had elementary schooling (51.6%), worked formally or informally (57.7%), had a monthly family income of up to three times the minimum monthly wage (54.9%), and a religion (95.3%) - most were catholic. 65.8% were verified to make use of medications, and 58.8% presented clinical pathologies - there was a higher prevalence for high blood pressure (31.4%) and endocrine pathologies (30.7%). Also, 5.6% were diagnosed with depression.

Use of psychiatric drugs and related factors

The prevalence in the use of psychotropics was 25.8%. The most prescribed type was the one of antidepressants (N06A) (73%), followed by benzodiazepine anxiolytic drugs (N05B) (46.8%), antiepileptic drugs (N03A) (4.5%), antipsychotics (N05A) 3.6%, and dopaminergic drugs (N04B) (0.9%).

Among the antidepressants, the most prevalent medication was fluoxetine, which accounted for 53.1% of prescriptions. Amitriptiline and escitalopram were present for 28.4% and 22.2% of subjects, respectively. Among the benzodiazepine anxiolytics, the two most prescribed and equally prevalent ones were diazepam and clonazepam. Each of them was present in 48.1% of prescriptions. 30.6% of subjects were observed to use psychiatric drugs. When the data were collected, they had at least two psychiatric drugs prescribed.

In table 1, the use of psychiatric drugs was verified to be the most prevalent in the category of users who are older than 60 years (41.6%), and the lowest one, in the range of people from 18 to 40 years of age (10.2%). The association between age and use of psychiatric drugs was statistically confirmed ($p<0.001$). A significant association between the use of psychiatric drugs and schooling was verified ($p<0.001$). Most psychiatric drug users (65.8%) had finished or were attending elementary school.

The prevalence of common mental disorders was 41.4%. In table 2, 41% of people who are positive for Common Mental Disorders were observed to make use of psychiatric drugs. Among the people who were negative for Common Mental Disorders, that rate was 15.1%. Such association was significant ($p<0.001$). All patients diagnosed with depression (5.6%) were making use of psychiatric drugs at the time interviews were conducted. Significant associations were found among the use of psychiatric drugs, pharmacotherapeutic variables, and clinical diseases ($p<0.001$).

The logistic regression model (Table 3) with all predictors was statistically significant ($x2(8, N = 430) = 97.81$, $p<0.001$). The model as a whole was able to account for between 20.3% (Cox and Snell

Table 1. Socio-demographic and economic variables and use of psychiatric drugs

Variables	Use of psychiatric drugs Yes n(%)	No n(%)	Total n(%)	p-value
Gender				
Feminine	99(27.1)	266(72.9)	365(100)	0.19
Masculine	12(18.5)	53(81.5)	65(100)	
Age				
18 to 40 years	18(10.1)	161(89.9)	179(100)	
41 to 59 years	56(34.6)	106(65.4)	162(100)	< 0.001
> 60 years	37(41.6)	52(58.4)	89(100)	
Schooling				
Complete/incomplete elementary schooling	73(32.9)	149(67.1)	222(100)	
Complete/incomplete high school education	26(14.6)	152(85.4)	178(100)	< 0.001
Complete/incomplete university education	12(40.0)	18(60.0)	30(100)	
Marital status				
Single	15(17.6)	70(82.4)	85(100)	
Married	61(23.9)	194(76.1)	255(100)	0.08
Widow(er)	17(42.5)	23(57.5)	40(100)	
Divorced	18(36.0)	32(64.0)	50(100)	
Religion				
Catholic	49(29.0)	120(71.0)	169(100)	0.19
Other	33(22.0)	117(78.0)	150(100)	
Occupation				
Unemployed	9(16.7)	45(83.3)	54(100)	
Informal job	24(23.5)	78(76.5)	102(100)	
Formal job	25(17.1)	121(82.9)	146(100)	0.17
Leave of absence	7(63.6)	4(36.4)	11(100)	
Retired	24(44.4)	30(55.6)	54(100)	
Housewife	22(34.9)	41(65.1)	63(100)	
Monthly income				
>three times the minimum monthly wage*	45(24.1)	142(75.9)	187(100)	0.58
<three times the minimum monthly wage	66(27.2)	177(72.8)	243(100)	
Number of people in the family				
Up to four	91(26.0)	259(74.0)	350(100)	0.19
More than four	20(25.0)	60(75.0)	80(100)	

Table 2. Variables related to pharmacotherapeutic profiles, presence of clinical diseases, and Common Mental Disorders

Variables	Use of psychiatric drugs Yes n(%)	No n(%)	Total n(%)	p-value
Use of non-psychiatric drugs				
Yes	96(35.6)	174(64.4)	270(100)	< 0.001
No	15(9.4)	145(90.6)	169(100)	
Number of types of medications				
Up to two	37(24.2)	116(75.8)	153(100)	< 0.001
Three or more	74(56.9)	56(43.1)	130(100)	
Number of pills a day				
Up to two	30(26.8)	82(73.2)	112(100)	< 0.001
Three or more	79(53.0)	70(47.0)	149(100)	
Presence of associated clinical diseases				
Yes	96(37.9)	157(62.1)	253(100)	< 0.001
No	15(8.5)	162(91.5)	177(100)	
CMD				
Yes	73(41.0)	105(59.0)	178(100)	< 0.001
No	38(15.1)	214(84.9)	252(100)	

CMD - Common Mental Disorders; p-value - Chi squared test, Yates' correction for continuity or Fisher's test

R-squared) and 29.9% (Nagelkerke R-squared) of the variance between being either using or not using psychiatric drugs, and it correctly classified 79.1% of the cases.

Having clinical diseases was the strongest predictor in the use of psychiatric drugs, presenting an odds ratio (OR) of 5.4; the variable Common Mental Disorders was the second strongest one, with an OR of 3.9. Variable schooling presented an OR of 1.7.

Table 3. Logistic regression model for predicting the use of psychiatric drugs

Model	Coefficient	Standard error	p-value	OR	CI95% Lower	CI95% Upper
Constant	-3.5	0.6	< 0.001			
CMD						
Yes	1.3	0.2	< 0.001	3.9	2.36	6.55
No				1		
Clinical diseases						
Yes	1.7	0.3	< 0.001	5.4	2.84	10.2
No				1		
Gender						
Feminine	0.5	0.4	0.17	1.7	0.8	3.56
Masculine				1		
Age						
Elderly	0.3	0.3	0.33	1.4	0.7	2.57
Not elderly				1		
Schooling						
Low	0.5	0.2	0.04	1.7	1.02	2.92
Medium to high				1		
Income						
<three times the minimum monthly wage	0.4	0.2	0.15	1.5	0.86	2.56
>three times the minimum monthly wage				1		
Occupation						
Unemployed	-0.3	0.3	0.17	0.6	0.38	1.19
Employed				1		
Marital status						
No partner	-0.3	0.2	0.21	0.7	0.43	1.2
With a partner				1		

CMD - Common Mental Disorders; 1 - Categories with value "1" for OR represent reference categories

Discussion

The first limitation of this study relates to its cross-sectional design, which does not allow for predicting causality in the questions mentioned. The research instrument used to detect common mental disorders is not the golden standard, which would be psychiatric interviews. Even so, SRQ-20 has standards which are considered reliable for use in prevalence studies.

Despite the limitations, the results present relevant aspects for the nursing practice, by establishing the dimension regarding the use of psychiatric drugs in primary health care. It is possible to use the associations found as a base for planning actions which are specific for this environment. One of these aspects regards to the association between the use of psychiatric drugs and clinical diseases. In that sense, nurses can guide patients in regards to the possible enhancing of adverse effects which may result from the simultaneous use of psychiatric drugs and other classes of medications, and how to prevent or minimize them. Also, considering the association between the use of psychiatric drugs and socio-demographic factors, nurses can structure support or education groups, in order to help treat psychological symptoms in that context.

When comparing the data found here with the literature, there are some points to consider. Consistent with the literature, the sample was verified to be predominantly feminine.[7]

The usage rate of psychiatric drugs observed (25.8%) was higher than the one found in the literature, which ranges from 9 to 13%.[1,2]

In regards to the types of psychiatric drugs prescribed, the most prevalent ones were the ones in the class of antidepressants, followed by benzodiazepine drugs. Consistent with the results found in this study, other studies show that such medication classes are the ones which are the most prescribed in different countries.[1,2]

The high rate of fluoxetine prescriptions may be justified by some factors. Firstly, fluoxetine is classified as a selective inhibitor for serotonin reception, a class of antidepressants which are safer and more tolerated. Notwithstanding, one should mention that all antidepressants and benzodiazepine anxiolytics prescribed consist of medications distributed by the Brazilian *Sistema Único de Saúde - SUS* (Single Health System), which could motivate its prescription despite there being other options.[10]

In regards to socio-demographic factors, the use of psychiatric drugs was shown to be related to age and schooling. The tendency for the prevalence in the use of psychiatric drugs is observed to rise according to subjects' age range.[11] Such finding corroborates the results found in this study. Thus, the analysis of data showed that the lower prevalence in the use of psychiatric drugs was found for the age range between 18 to 40 years (10.1%), followed by persons between 41 and 59 years of age (31.6%). The use of psychiatric drugs was more common for subjects above 60 years of age (41.6%).

In the multivariate analysis, low schooling (patients who reported to have complete or incomplete elementary school education) was shown to be a predictor for the use of psychiatric drugs, alongside with suffering from Common Mental Disorders and clinical pathologies. The latter was the factor which contributed the most with the model, with an OR of 5.4.

In regards to schooling, no studies were found in the literature specifically proving the association between it and the use of psychiatric drugs. However, as the use of psychiatric drugs was shown to be constantly associated with Common Mental Disorders in this study, it is possible to use the literature regarding Common Mental Disorders to clarify that relationship. That way, it is important to point out that schooling is usually linked to worse chances of achieving professional and social success, and it may contribute to a worse quality of life, to the possibility of developing Common Mental Disorders, and to an increased likelihood of using psychiatric drugs.[9]

Obviously, as a great deal of patients who make use of psychiatric drugs have clinical pathologies, it is not surprising that they take more medications and use more pills a day, as found in this study. Notwithstanding, there is evidence that making use of more than one drug is common among psychiatric drug users.[6,11] Such aspect is particularly important, once those patients have higher risks of suffering from adverse effects and drug interactions.[2,11]

The association between psychiatric drugs and Common Mental Disorders, revealed in this study, is confirmed by previous studies.[5] Despite such association, one cannot help but notice, in this study, the fact that among the people who were negative for Common Mental Disorders, 15.1% made use of psychiatric drugs.

Before that context, it is important to consider two assumptions: either there are patients who use psychiatric drugs and present no symptoms, or their symptoms have remitted. Thus, there is evidence that the psychiatric drugs are not being effective, which indicates discrepancies in regards to their use and to the correct identification of Common Mental Disorders.

Being of particular interest for the discussion of results, this study unveiled the reasons why physicians who worked in primary health care units prescribed psychiatric drugs. The people interviewed consider that psychiatry, "is not a science like the others; it leaves room for many interpretations". Besides that, they considered that factors such as, "the patients seek for treatment for their symptoms" and "the lack of resources in the unit" outweigh the very needs from patients when prescribing psychiatric drugs.[3]

Also, family doctors in the United States classified their knowledge on the prescription of psychiatric drugs as nonexistent or insufficient, even though they routinely prescribed those medications.[12]

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Collaborations

Borges TL and Miasso AI contributed to design the project, to develop the research, to collect, analyze and interpret the data, to draft its text, to make a critic and relevant review of the intellectual content, and also to get the approval for the final version to be published. Vedana KGG; Telles Filho PCP, and Hegadoren KM contributed to develop the research, to draft its text, to make a critic and relevant review of the intellectual content, and also to get the approval for the final version to be published.

Conclusion

The prevalence found for the use of psychotropics was high. In the univariate analysis, there was an association among the use of psychiatric drugs and common mental disorders, use of non-psychiatric drugs, number of medications prescribed, number of pills a day, clinical pathologies, age, and schooling. In the multivariate analysis, the predictors for the use of psychiatric drugs were: common mental disorders, clinical pathologies, and schooling.

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