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# Use of Psychotropic Drugs in an Adult Population Covered by the Family Health Strategy

*Uo de Psicofármacos em População Adulta Coberta pela Estratégia de Saúde da Família*

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## RESUMO

Objetivo: investigar o uso de psicofármacos junto a uma população adulta adscrita à Estratégia Saúde da Família de Ribeirão das Neves (MG). Métodos: estudo transversal de base populacional de pessoas com 20 anos ou mais residentes no município. Foi determinada a prevalência de uso de psicofármacos (antidepressivos e/ou benzodiazepínicos - variável dependente) e fatores associados por meio de análises univariadas e multivariadas (qui-quadrado de Pearson e regressão logística). Resultados: A prevalência de uso de psicofármacos foi de 8,6%. Foram independentemente associados ao uso de psicotrópicos: sexo feminino (OR=3,0; IC95%=1,7-5,3), autoavaliação de saúde ruim/péssima (OR=2,6; IC95%=1,4-4,7), dependência para atividades instrumentais de vida diária (AIVD) (OR=1,9; IC95%=1,0-3,6), dependência para atividades básicas de vida diária (ABVD) e AIVD (OR= 3,4; IC95%=1,7-7,1), número de doenças crônicas (OR=1,3; IC95%=1,1-1,6); e, termo de interação entre idade e escolaridade. Conclusão: A alta prevalência do uso de psicotrópicos evidenciou a demanda, geralmente caracterizada por subdiagnóstico e subtratamento. Os fatores associados permitem delinear políticas locais para acesso aos psicofármacos.

**Palavras-chave**: Saúde mental. Atenção primária à saúde. Ansiolíticos. Antidepressivos. Psicotrópicos.

## ABSTRACT

Objective: to investigate the use of psychotropic drugs in an adult population assigned to the Family Health Strategy of Ribeirão das Neves (MG). Methods: population-based cross-sectional study of people aged 20 years or older. The prevalence of antidepressant and/or benzodiazepine use was determined - dependent variable and associated factors through univariate and multivariate analyzes (Pearson's chi-square and logistic regression). Results: The prevalence of psychotropic drug use was 8.6%. The following were independently associated with the use of psychotropic drugs: female gender (OR=3.0; 95%CI=1.7-5.3), poor/very poor health self-assessment (OR=2.6; 95%CI=1,4-4.7), dependence for instrumental activities of daily living (IADL - OR=1.9; 95%CI=1.0-3.6), dependence for basic activities of daily living (BADL) and IADL (OR= 3.4; 95%CI=1.7-7.1), number of chronic diseases (OR=1.3; 95%CI=1.1-1.6); interaction between age and schooling. Conclusion: The high prevalence of psychotropic drug use highlighted the demand, generally characterized by underdiagnosis and undertreatment. Associated factors allow outlining local policies for access to psychotropics.

**Keywords**: Mental health. Primary health care. Anxiolytics. Antidepressants. Psychotropic drugs.

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## 1. INTRODUÇÃO

It is essential to understand populational through an historical, economic, political, social and environmental point of view, taking into consideration the basic human needs, values and beliefs[1]. Mental, physical, and social health are interdependent, with mental health being indispensable for the general well-being of individuals, societies, and countries, but often neglected[2].

Mental disorders result from many factors and can affect anyone[2]. Global reports show that Brazil is the country with the highest proportion of people with anxiety disorders in the world and the fifth in cases of depression, with an estimated prevalence of 9.3% and 5.8 % respectively. Brazil is also the country with the highest number of cases of depression in Latin America[3]. According to the Brazilian Ministry of Health, the prevalence of depression throughout life, alone or associated with a physical disorder, is 15.5%[4].

Non-pharmacological treatment is essential for the proper management of mental disorders, but the use of medication is often necessary[5]. From the 1950s onwards, the use of psychotropic drugs led to a broad reformulation in the treatment of mental disorders. However, the decision to use or not a psychotropic drug depends on many factors, and there are situations in which psychotherapies alone or a combination of both methods may be the ideal choice[6].

Despite the possibilities of mental health care, the world's health systems have not yet adequately responded to the burden of mental disorders. The percentage of people with mental disorders who do not receive treatment is between 76% and 85% in low- and middle-income countries and between 35% and 50% in high-income countries[7].

In this context, knowing the profile of the use of drugs used in the treatment of mental disorders such as depression, anxiety, and sleep disorders in primary health care (PHC) in Brazil is fundamental for the elaboration of public policies for mental health care. It is in this scenario that the present study is inserted, with the objective of investigating the use of psychotropic drugs among an adult population assigned to the family health strategy (FHS) in the municipality of Ribeirão das Neves, in the state of Minas Gerais.

## 2. MATERIAL E MÉTODOS

This is a cross-sectional, population-based study, that was approved by the ethics committee of the René Rachou Research Center at the Oswaldo Cruz Foundation (11350413.0.0000.5091).

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## 2.1 Study Location

Ribeirão das Neves is one of the most populous municipalities in the Metropolitan Region of Belo Horizonte (MRBH) with and estimated population of 296,317 inhabitants at the time of the study and a Municipal Human Development Index of 0.684 (medium human development). The city also presented a degree of human development below the average of Minas Gerais and the MRBH[8]. The municipal territory is divided into 180 neighborhoods, with marked spatial fragmentation/segregation, as well as inadequate quality of life and human development indicators, due to low urban standards and the low-income[8,9].

At the time of the study, the municipal health care network was distributed in five health regions. The PHC in the municipality was organized in two ways. The 53 FHS, distributed in 50 Basic Health Units (Unidades Básicas de Saúde), covered approximately 50% of the population. The remaining 50% of the population had as a gateway five Basic Health Reference Units, which operated without Community Health Agents[10].

## 2.2 Population and Sample

The research participants were selected based on a systematic probabilistic sample, ensuring representativeness of the adult population aged 20 years or older covered by the FHS. To this end, all households registered by the FHS were listed, stratified and selected randomly according to each health region. The participants were randomly selected among the residents of the household.

## 2.3 Data Collection and Study Variables

Data were collected through home interviews carried out by trained personnel, using tablets with a camera, GPS, and 3G.

The dependent variable was the use of at least one psychotropic drug, restricted to antidepressants (ATD), benzodiazepines (BZD) or BZD-related sedatives (also called "z-drugs"). To measure the event, the participant was asked if, in the last 15 days, they had used "any medication prescribed by the doctor, to treat depression, anxiety, sleep problems or any nervous problem". Participants who responded positively were asked the name of the

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medication used, which was broken down into their active principles, and, in sequence, coded according to the Anatomical Therapeutic Chemical (ATC) system.

The independent variables constituted three distinct sets: i) sociodemographic variables. ii) variables related to health behavior and health conditions; and iii) variables related to the use of health services (Table 1). It is important to point out that binge drinking consists of excessive alcohol consumption on a single occasion and in a short period of time: above five drinks for men and four drinks for women[11].

**Table 1.** Description of the independent variables. Ribeirão das Neves (MG), 2016.

| Independent variables | Categories |
|---|---|
| Sex | female *vs* male |
| Age | in complete years, continuous format; in age groups – 20 to 39, 40 to 59, 60 or more |
| Skin color | white, brown, black, others, or don't know/did not answer |
| Marital status | lives with a partner *vs* lives without a partner |
| Monthly family income | in minimum salary – less than 1 salary, 1 to 2.9 salaries, 3 to 4.9 salaries, or 5 or more |
| Education | total years of formal school attendance, continuous format and educational ranges – did not attend school, incomplete ES, complete ES to incomplete high school, complete high school or more, or do not know/did not answer) |
| Current smoking | does not smoke, smokes less than daily, or smokes daily |
| Excessive alcohol use – binge drinking | yes *vs* no |
| Hospitalizations in the last 12 months | yes *vs* no |
| Self-rated health | very good, good, fair, poor, or very poor |
| Number of chronic diseases | none, 1 disease, 2 diseases, 3 or more diseases, or don't know/didn't answer |
| Perform daily life activities | achievement of basic (BADL) and instrumental (IADL) activities of daily living (ADL), analyzed together (independent for BADL and IADL, dependent only for IADL, or dependent for BADL and IADL |

**Source:** Research data.
**Legend:** *BADL = basic activities of daily living; IADL = instrumental activities of daily living; ES = elementary school.

To assess the performance of ADL, two instruments were used: the Katz Index (for BADL) and the Lawton-Brody scale (for IADL). The Katz Index score varies from 1 to 6 points, with a score of 5 to 6 points indicating independence; 3 to 4 points moderate dependence; and up to 2 points dependent. The maximum score for the Lawton-Brody scale is 27 points, with less than 7 points indicating total dependence; between 7 and 21 points partial dependence; and above 21 points independence[12].

For descriptive purposes, the prevalence was also estimated for the three mental disorders that constitute an indication for the investigated psychotropic drugs: depression,

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sleep disorders, and anxiety. Other self-reported chronic diseases also made up the number of chronic diseases variable, namely: myocardial infarction, angina, heart failure, stroke, diabetes mellitus, cancer, systemic hypertension, asthma, arthritis, back problems/lower back pain/pain in the back, depression, chronic obstructive pulmonary disease, chronic renal failure. These estimates were based on self-reported medical diagnoses.

## 2.4 Data Analysis

Qualitative and quantitative variables were described. The prevalence of BZD and ATD use was estimated according to therapeutic class and active ingredient.

The comparison between users and non-users of psychotropic drugs in relation to the explanatory variables was performed using Pearson's chi-square test (with calculation of p-value by Monte Carlo simulation) or Student's t test.

The variables that were associated with the dependent variable in the univariate analysis at a significance level of 20%, as well as their interaction terms, were included in the multivariate logistic regression model. A final level of 5% statistical significance was adopted. The strength of association was determined by the odds ratios and their 95% confidence intervals. All statistical analyzes were performed using the R statistical software.

## 3. RESULTADOS

The study sample (n=1,100) was characterized by a mean age of 42.6 years and a predominance of females (52.6%), with brown skin color (55.9%), who live with a partner (59.5%) and with incomplete primary education (52.0%). Almost half of the individuals described monthly family income between 1 and 2.9 minimum salaries (46.3%) (Table 2).

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**Table 2.** Sample characteristics. Ribeirão das Neves (MG), 2016 (n=1,100).

| Variables | Categories | | |
|---|---|---|---|
| **Sex – n (%)** | Female | 578 | (52.6) |
| | Male | 522 | (47.4) |
| **Continuous age – mean (standard deviation)** | | 42.6 | (15.4) |
| **Age range (years) – n (%)** | 20 to 39 | 551 | (50.1) |
| | 40 to 59 | 373 | (33.9) |
| | 60 or more | 176 | (16.0) |
| **Skin color – n (%)** | Brown | 615 | (58.1) |
| | Black | 218 | (20.6) |
| | White | 187 | (17.6) |
| | Others | 36 | (3.6) |
| | Don't know/did not respond | 42 | (-) |
| **Marital Status – n (%)** | With partner | 654 | (59.4) |
| | Without partner | 446 | (40.6) |
| **Continuing education – mean (standard deviation)** | | 8,0 | (4,0) |
| **Schooling – n (%)** | Did not attend school | 78 | (7.1) |
| | Incomplete ES | 572 | (52.0) |
| | Complete ES, incomplete High School | 401 | (36.5) |
| | Complete High School or more | 45 | (4.1) |
| | Don't know/did not respond | 4 | (-) |
| **Monthly Family income (minimum salaries) – n (%)** | < 1 | 314 | (28.6) |
| | 1 to 2.9 | 509 | (46.3) |
| | 3 to 4,9 | 228 | (20.7) |
| | 5 or more | 49 | (4.5) |
| **Smoking – n (%)** | Do not smoke | 894 | (81.3) |
| | Smoke less than daily | 21 | (1.9) |
| | Smoke daily | 185 | (16.8) |
| **Binge drinking – n (%)** | Yes | 184 | (16.7) |
| | No | 916 | (83.3) |
| **Perform daily life activities – n (%)** | Independent for BADL and IADL | 535 | (48.6) |
| | Dependent only for IADL | 393 | (35.7) |
| | Dependent for BADL and IADL | 172 | (15.6) |
| **Self-assessment of health – n (%)** | Very good | 135 | (12.3) |
| | Good | 504 | (45.8) |
| | Reasonable | 356 | (32.4) |
| | Bad | 71 | (6.5) |
| | Very bad | 34 | (3.1) |
| **Hospitalized in the last 12 months - n (%)** | No | 974 | (88.6) |
| | Yes | 126 | (11.4) |

**Source:** Research data.
**Legend:** *BADL = basic activities of daily living; IADL = instrumental activities of daily living; ES = elementary school.

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**Table 2.** Sample characteristics. Ribeirão das Neves (MG), 2016 (n=1,100). (Cont.)

| Variables | Categories | | |
|---|---|---|---|
| **Number of chronic diseases– n (%)** | 0 | 501 | (47.3) |
| | 1 | 295 | (27.9) |
| | 2 | 141 | (13.3) |
| | 3 or more | 122 | (11.5) |
| | Don't know/did not respond | 41 | (-) |
| **Number of mental disorders – n (%)** | 0 | 791 | (72.1) |
| | 1 | 143 | (13.0) |
| | 2 | 70 | (6.4) |
| | 3 | 93 | (8.5) |
| | Don't know/did not respond | 3 | (-) |
| **Diagnosis of anxiety– n (%)** | Yes | 233 | (21.2) |
| | No | 867 | (78.8) |
| **Diagnosis of depression – n (%)** | Yes | 188 | (17.1) |
| | No | 911 | (82.9) |
| | Don't know/did not respond | 1 | (-) |
| **Diagnosis of sleep disorder – n (%)** | Yes | 141 | (12.8) |
| | No | 957 | (87.2) |
| | Don't know/did not respond | 2 | (-) |
| **Use of psychotropic drugs – n (%)** | Only benzodiazepine | 25 | (2.3) |
| | Only antidepressant | 52 | (4.7) |
| | Benzodiazepine and antidepressant | 17 | (1.6) |

**Source:** Research data.
**Legend:** *BADL = basic activities of daily living; IADL = instrumental activities of daily living; ES = elementary school.

With regard to health behavior, 81.3% of respondents reported not smoking and 83.3% not binge drinking. Almost half of the interviewees were independent for BADL and IADL (48.6%). Self-rated health was classified as very good or good by 58.3%. About 47% of respondents were not diagnosed with any chronic disease. About 28% of respondents were diagnosed with at least one mental disorder: anxiety reported by 21.2%, depression by 17.1% and sleep disorders by 12.8%.

The use of at least one psychotropic drug was reported by 8.6% of respondents. The most frequently used psychotropic drugs were fluoxetine (3.4%), clonazepam (1.6%), diazepam (1.2%), and amitriptyline (1.2%) (Table 3).

**Table 3.** Prevalence of psychotropic drug use. Ribeirão das Neves (MG). 2016 (n=1,100).

| Active Ingredient | n | Prevalence (%) | |
| --- | --- | --- | --- |
| | | Estimate | 95%CI |
| Benzodiazepines or benzodiazepine-related sedatives* | 42 | 3.82 | 2.83 - 5.14 |
| Clonazepam | 18 | 1.64 | 1.02 - 2.60 |
| Diazepam | 13 | 1.18 | 0.68 - 2.04 |
| Bromazepam | 4 | 0.36 | 0.11 - 0.98 |
| Chlordiazepoxide + Amitriptyline | 3 | 0.27 | 0.05 - 0.85 |
| Alprazolam | 2 | 0.18 | 0.01 - 0.72 |
| Zolpidem | 2 | 0.18 | 0.01 - 0.72 |
| Lorazepam | 2 | 0.18 | 0.01 - 0.72 |
| Diazepam + Phenytoin | 1 | 0.09 | 0.00 - 0.58 |
| Antidepressives** | 69 | 6.27 | 4.98 - 7.88 |
| Fluoxetine | 37 | 3.36 | 2.44 - 4.62 |
| Amitriptyline | 13 | 1.18 | 0.68 - 2.04 |
| Sertraline | 9 | 0.82 | 0.41 - 1.58 |
| Nortriptyline | 5 | 0.45 | 0.17 - 1.10 |
| Citalopram (30) | 3 | 0.27 | 0.05 - 0.85 |
| Chlordiazepoxide + amitriptyline (48) | 3 | 0.27 | 0.05 - 0.85 |
| Clomipramine (51) | 2 | 0.18 | 0.01 - 0.72 |
| Imipramine (55) | 2 | 0.18 | 0.01 - 0.72 |
| Fluvoxamine (93) | 1 | 0.09 | 0.00 - 0.58 |
| Benzodiazepines and/or Antidepressants | 94 | 8.55 | 7.03 – 10.4 |

**Source:** Research data.
**Legend:** *We considered 45 records of medication use due to the fact that two individuals used more than one BZD, one individual described the use of Clonazepam, Chlordiazepoxide + amitriptyline and Zolpidem and another individual the use of Bromazepam and Clonazepam.
**75 medication use records were considered due to the fact that six individuals used more than one ATD. Individuals who used more than one ATD used: 1) Fluoxetine and Nortriptyline; 2) Sertraline and Chlordiazepoxide + amitriptyline; 3) Fluoxetine and Fluvoxamine; 4) Sertraline and Fluoxetine; 5) Amitriptyline and Fluoxetine; 6) Clomipramine and Fluoxetine.

In the univariate analysis, users of psychotropic drugs were more frequently females and older people, who had lower education, did not binge drink, dependent for ADL, with worse self-rated health, with history of hospitalization, and with at least one chronic disease (Table 4).

**Table 4.** Comparative analysis between adult users and non-users of psychotropic drugs. Ribeirão das Neves (MG), 2016, (n=1,100).

| Variables | User of at least one psychotropic drug | | P-value |
|---|---|---|---|
| | No (n=1.006) | Yes (n=94) | |
| **Sex – n(%)** | | | |
| Male | 500(49.7) | 22(23.4) | <0.001* |
| Female | 506(50.3) | 72(76.6) | |
| **Age in years – mean (standard deviation)** | 41.9(15.3) | 49.6(14.0) | <0.001** |
| **Age range – n(%)** | | | |
| 20 to 39 years | 523(52.0) | 28(29.8) | |
| 40 to 59 years | 330(32.8) | 43(45.7) | <0.001* |
| 60 years or more | 153(15.2) | 23(24.5) | |
| **Skin color – n(%)** | | | |
| Brown | 564(58.2) | 51(57.3) | |
| Black | 203(21.0) | 15(16.9) | |
| White | 166(17.1) | 21(23.6) | 0.451* |
| Others | 36(3.7) | 2(2.2) | |
| Don't know/did not respond | 37(-) | 5(-) | |
| **Marital status – n(%)** | | | |
| Live with partner | 606(60.2) | 48(51.1) | 0.105* |
| Live without partner | 400(39.8) | 46(48.9) | |
| **Schooling in years – mean (standard deviation)** | 8.2(4.0) | 6.7(3.7) | <0.001** |
| **Schooling – n(%)** | | | |
| Did not attend school | 72(7.2) | 6(6.6) | |
| ES incomplete | 503(50.1) | 69(74.2) | |
| ES complete ES to incomplete high school | 383(38.2) | 18(19.4) | <0.001* |
| Complete high school or more | 45(4.5) | 0(0) | |
| Don't know/did not respond | 3(-) | 1(-) | |
| **Monthly Family income – n(%)** | | | |
| Less than 1 | 282(28.0) | 32(34.0) | |
| From 1 to 2.9 | 467(46.4) | 42(44.7) | 0.413* |
| 3 or more | 257(25.6) | 20(21.3) | |
| **Binge drinking – n(%)** | | | |
| No | 829(82.4) | 87(92.6) | 0.017* |
| Yes | 177(17.6) | 7(7.4) | |
| **Smoking – n(%)** | | | |
| Do not smoke | 817(81.2) | 77(81.9) | |
| Smoke less than daily | 20(2.0) | 1(1.1) | 0.822* |
| Smoke daily | 169(16.8) | 16(17.0) | |
| **Performing activities of daily living – n(%)** | | | |
| Independent for BADL and IADL | 519(51.6) | 16(17.0) | |
| Dependent Only for IADL | 355(35.3) | 38(40.4) | <0.001* |
| Dependent for BADL and IADL | 132(13.1) | 40(42.6) | |
| **Self-assessment of health – n(%)** | | | |
| Very good/good/reasonable | 928(92.2) | 67(71.3) | <0.001* |
| Bad/very bad | 78(7.8) | 27(28.7) | |
| **Hospitalized in the last 12 months – n(%)** | | | |
| No | 897(89.2) | 77(81.9) | 0.042* |
| Yes | 109(10.8) | 17(18.1) | |
| **Number of chronic diseases – n(%)** | | | |
| None | 487(50.0) | 14(16.5) | |
| 1 | 267(27.4) | 28(32.9) | |
| 2 | 125(12.8) | 16(18.8) | <0.001* |
| 3 to 9 | 95(9.8) | 27(31.8) | |
| Don't know/did not respond | 32(-) | 9(-) | |

**Source:** Research data. **Legend:** BADL = basic activities of daily living; IADL = instrumental activities of daily living; ES = elementary education. *Pearson's chi-square test with p-value calculated by Monte Carlo simulation. **Student's t test.

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After multiple adjustment, the variables sex, age, education, self-rated health, dependency in ADL, number of chronic diseases, and the term of interaction between age and education remained independently associated with the use of psychotropics. The model showed that the chances of using psychotropic drugs were higher among women (OR=3.0; 95%CI=1.7-5.3), people with poor/very poor self-rated health (OR=2.6; 95%CI=1.4-4.7), with dependence for IADL (OR=1.9; 95%CI=1.0-3.6), and for BADL and IADL (OR=3.4; 95%CI=1.7-7.1). For each chronic disease presented, a 30% increase in the chance of using psychotropics was observed (Table 5).

**Table 5.** Results of the final multivariate logistic regression model for psychotropic drug use. Ribeirão das Neves (MG). 2016 (n=1,100).

| Independent Variable | Coefficient | Standard Error | P- Value | OR | 95%CI |
|---|---|---|---|---|---|
| Sex | | | | | |
| Male | - | - | | - | - |
| Female | 1.109 | 0.288 | <0.001 | 3.0 | 1.7 - 5.3 |
| Self-assessment of health | | | | | |
| Very good/good/reasonable/ | - | - | | - | - |
| Bad/very bad | 0.950 | 0.308 | 0.003 | 2.6 | 1.4 - 4.7 |
| Daily life activities | | | | | |
| Independent for IADL and BADL | - | - | | - | - |
| Dependent only for IADL | 0.640 | 0.330 | | 1.9 | 1.0 - 3.6 |
| Dependent for IADL and BADL | 1.236 | 0.372 | 0.004 | 3.4 | 1.7 - 7.1 |
| Number of chronic diseases[1] | 0.295 | 0.090 | 0.001 | 1.3 | 1.1 - 1.6 |
| Age (years)[1] | -0.037 | 0.018 | 0.041 | * | * |
| Schooling (years of study)[1] | -0.253 | 0.111 | 0.021 | * | * |
| Age x years of study | 0.005 | 0.002 | 0.013 | * | * |

**Source:** Research data.
**Legend:** [1]Treated as quantitative. *Not applicable, as odds ratios are not calculated for variables that are included in the interaction terms, as these ratios depend on the values of other variables in the interaction terms.

Due to the presence of the interaction term, the variables age and education cannot be interpreted separately and the Figure 1 represents the interaction: among people with lower education (e.g.: zero years of study), the higher the age, the lower the probability of using psychotropics. In contrast, among people with more education (e.g.: 14 years of study), the older the age, the greater the probability of using psychotropics.
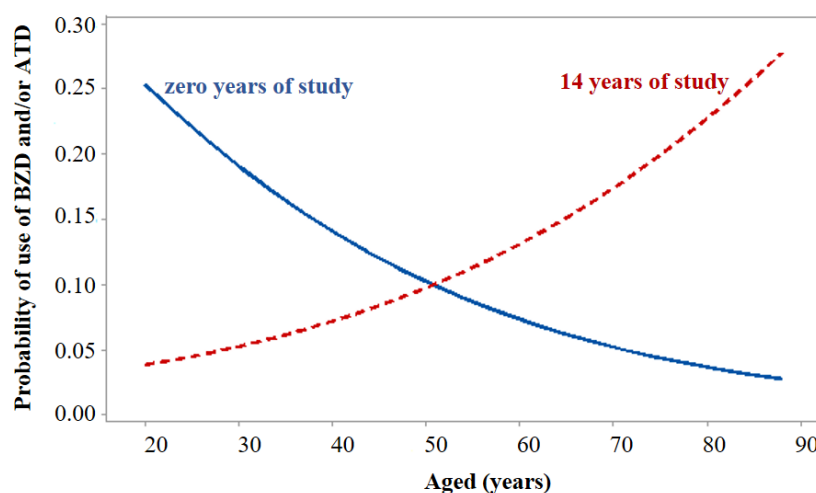
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**Figure 1.** Illustration of the interaction effect between age and schooling (years of study) in the multivariate model for the use of psychotropic drugs. Ribeirão das Neves (MG). 2016 (n=1,100).

## 4. DISCUSSÃO

The present study proposes the evaluation of psychotropic drugs use among adults enrolled in the FHS, residing in a city characterized by low income, urban challenges, and high rates of violence. Studies based on primary pharmacoepidemiological data are usually focused on capitals and older people, excluding cities with such characteristics.

Considering the adult population, a relevant prevalence of psychotropic use (8.6%) was identified, with emphasis on the use of ATD (6.3%), which was higher than the prevalence identified in the city of São Paulo (3.1%), Rio de Janeiro (2.8%) and Botucatu (SP - 5.0%)[13-15]. In a study carried out in the city of Campinas (SP), the global prevalence of use of psychotropics (BZD, ATD, and/or antipsychotics) was lower than that of the present study (6.8%)[16]. The prevalence of use of BZD or "z-drugs" in the present study (3,8%) was higher than the values identified in in São Paulo (3.6% in 2020 and 2.7% in 2015) in Rio de Janeiro (1.6%) and in Botucatu (SP - 3.1%)[13-15].

Poverty in its broadest sense, encompassing social, urbanization, education, and violence issues influence individuals' self-perception of health, which may partly explain the high prevalence numbers of self-reported depression disorders (17.1%) and anxiety (21.2%) identified in the present study, higher than the estimated prevalence values for all of Brazil (5.5% - depression; 9.2% - anxiety)[17]. It is important to highlight the limitations of such results, which refer to self-reported diagnostic measures. However, the identified numbers indicate a complex mental health scenario, to be further investigated.

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On the other hand, the more frequent consumption of ATD than of BZD identified signals rationality in the management of the most frequent mental disorders, since ATD are first-choice drugs for the pharmacological treatment of various mood and anxiety disorders[18-20]. However, it is estimated that less than half of the depressive disorders cases worldwide receive proper pharmacological treatment. Obstacles to the use of effective psychotropic drugs include lack of resources and trained professionals, and the social stigma associated with mental disorders[18].

The use of BZD and "z-drugs" should be restricted to patients with major depressive disorders associated with anxiety and/or insomnia, and only if any previously prescribed ATD did not provide adequate management[21]. The use of BZD involves the risk of adverse reactions such as motor impairment, cognitive deficits, daytime sleepiness, risk of car accidents, and falls[22]. Furthermore, its continuous use is frequent, exceeding the four weeks recommended for the management of severe anxiety disorder. In Brazil, most prescriptions for BZD are issued in primary care services, and the short time for consultations, in addition to the fragmentation of care, work overload and little investment in specific training are pointed out as the main reasons for the consumption of BZD[23]. However, our data do not allow us to assess the quality or time of use of BZD.

In the present study, the most frequently used ATD were fluoxetine (3.4%) and amitriptyline (1.2%), as well as in the Research on Access, Use and Promotion of Rational Use of Medicines in Brazil (Pesquisa sobre Acesso, Utilização e Promoção do Uso Racional de Medicamentos - PNAUM)[24]. Regarding BZD, more frequent use of clonazepam (1.7%) and diazepam (1.2%) was observed, as well as in São Paulo[13,24].

As this is a sample cut of people who use the FHS, this factor can considerably influence the profile of medications used, since all the most frequently used psychotropic drugs are part of the National List of Essential Medicines (Relação Nacional de Medicamentos Essenciais - RENAME) and available in the Public Health Service (Sistema Único de Saúde – SUS). However, the source of obtaining medication was not evaluated in the present study.

Through multivariate analysis, the use of psychotropic drugs was associated with factors such as female gender, self-assessed health, dependency for ADL, number of chronic diseases, education and age (in interaction). The female gender was one of the factors most strongly associated with the dependent variable, which was also identified in other studies[14,16,25-27]. Regardless of the socioeconomic issue, women are at greater risk of mental disorders, due to the multiple roles they play in society. In addition, they face

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significant gender discrimination, poverty, hunger, malnutrition, overwork, and domestic and sexual violence, frequent in the studied city. Women also have greater perception by women in relation to the symptomatology of the diseases, early search for help, and less resistance to the use of prescription drugs than men. Therefore, it is expected that women are more likely to use psychotropic drugs[2,26-28]. Even though it was not the object of this study, it is important that treatment strategies are developed to reduce the medicalization of painful life experiences and to invest more in non-pharmacological treatments.

The positive association between worse self-rated health and use of psychotropics, also identified in other studies[16,24], may be related to the high prevalence of self-reported diagnosis of mental disorders in the studied population, which is generally related to worse health[29,30]. Since this is a self-reported diagnose, one can consider the possibility that the individual may have a worse health self-assessment than a real diagnosis of mental disorders, which would also lead to a possible increase in prescriptions of psychotropic drugs unnecessarily. However, the design of the present study does not allow the evaluation of this possible interaction.

In the population studied, the variables "age" and "years of schooling" showed significant individual and interaction coefficients. No studies were found that evaluated jointly the relationship between age, schooling and use of psychotropic drugs. As a hypothesis in view of these results, it is assumed that lower education and older age associated with lower consumption of psychotropic drugs may be related to worse health literacy, lack of information about medications, and lower capacity for self-care. In contrast, higher education can lead to greater knowledge about diseases and treatments, and consequently, increase self-care capacity, leading to the search for pharmacological treatment. Greater education also promotes lessens stigma involving mental disorders and its treatment, increasing the acceptance of psychotropic drugs[31,32].

The PHC can invest in health promotion actions that offer users a better understanding of their disease, approaching the subject in a simple language, regardless of their level of education. Adherence to treatment can be impaired if the patient does not understand the importance of using medication, as well as the possible adverse reactions. The association between worse perception of health and use of psychotropic drugs can also be minimized when the patient better understands their health condition[31,33].

Individuals dependent for IADL and BADL also used more psychotropic drugs than their counterparts. In a cohort study involving older women, the use of psychotropic drugs was identified as a predictor of functional disability[34]. A possible explanation for the

association between the use of BZD and functional disability would be their sedative and hypnotic effects. Likewise, the anticholinergic effect of some ATD is associated with cognitive and motor decline[34]. However, due to the cross-sectional design of the present study, it is not possible to state whether the limitations to carrying out ADL lead to the use of psychotropic drugs or vice versa. However, it is necessary to take into account both potential problems: the need to manage psychiatric disorders among dependent people to improve their quality of life, but taking into account that the treatment can further enhance functional dependency.

The present study does not reflect a long-term view, and the absence of the source of obtaining the medications, which is a limitation inherent to the selected design. Such a variable could more adequately support the discussion about the use of psychotropic drugs being or not associated with the availability of the drug in the public health system.

In contrast, the present study showed methodological strength, from the definition of the sampling plan, recruitment of the study population, to the data collection procedures. As it is a population-based study, it allows us to make inferences for a population that is mostly dependent on the SUS and its specific needs. Another strong point of this study is the source of obtaining data through interviews and checking packages, instead of using dispensing data from pharmacies and medical records, as the method used tends to reflect reality more concretely.

Despite the results not being transferable to other populations, as this is to our knowledge the first study to evaluate the use of psychotropic drugs in a SUS-dependent population with low socioeconomic conditions, its results raise peculiarities that may lead managers to reflect health and development of public policies that meet the needs of other Brazilian municipalities with a similar profile. In addition, it is expected that the identified results can contribute to the construction of relevant public policies that guarantee access to psychotropic drugs, especially in locations marked by great social and economic inequalities.

## 5. CONCLUSION

The high prevalence of psychotropic use highlights the demand for the use of these drugs. Considering the frequent under treatment of psychiatric disorders, it is necessary to offer treatment and also training to health professionals to promote the adequate diagnosis and prescription of psychotropic drugs when needed.

The multiple associated factors make it possible to outline local policies for adequate access to psychotropic drugs, in addition to encouraging pharmacoepidemiological evaluation in more adverse contexts.

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