

# Consumption of psychodrugs. Influence of family dysfunction

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## Consumo de psicofármacos. Influencia de la disfunción familiar

### Summary

**Introduction.** The objective of this study is to know the prevalence of psychodrug consumption in Primary Health Care, related factors and influence of the family factor on this consumption.

**Methods.** Observational cross sectional study carried out in an urban Health Care Center. A total of 434 patients older than 14 years old, who are health care consumers, were included. They were selected by systematic sampling for 6 consecutive weeks. Psychodrugs consumption and related factors were measured by a questionnaire designed for this purpose. The questionnaire was filled out by personal interview and case history revision. Existence of family dysfunction was determined by self-applied Apgar-family questionnaire.

**Results.** Prevalence of psychodrugs consumption was 26% (95% CI: 22-30). A total of 53% were benzodiazepines and 27% were antidepressants (73% are SSRI). There was family dysfunction in 20% of consumers and 12% of non-consumers, which is a statistically significant difference ( $p < 0.01$ ). By logistic regression, being between 45-64 years old (OR: 3.18), or more than 65 years old (OR: 3.29), being female (OR: 2.2), being a housewife (OR: 3.07), having psychiatric background (OR: 15.2) and having important family dysfunction in the Apgar-family questionnaire (OR: 7.19) were the variables which appeared as associated with this consumption.

**Conclusions.** Consumption of psychodrugs in Primary Health Care consumers is 26%. Being 45 years old or more, female and housewife are possible factors which predict psychodrugs consumption. Psychiatric disease antecedents and having important family dysfunction are also associated independently. These should be kept in mind to improve medical prescription of these drugs in Primary Health Care.

**Key words:** Psychotropic drugs. Prevalence. Family. Family dysfunction. Prescriptions. Drug. Primary Health Care.

### Resumen

**Introducción.** El objetivo de este estudio es conocer la prevalencia del consumo de psicofármacos en Atención Primaria, los factores relacionados y la influencia del factor familiar en dicho consumo.

**Métodos.** Estudio observacional y transversal realizado en un centro de salud urbano. Incluimos 434 pacientes, mayores de 14 años demandantes de consulta, seleccionados durante 6 semanas consecutivas mediante muestreo sistemático. Medimos el consumo de psicofármacos y los factores relacionados mediante cuestionario diseñado al efecto y cumplimentado con entrevista personal y revisión de historias clínicas. La presencia de disfunción familiar se determina con el autocumplimentado del test de Apgar familiar.

**Resultados.** Prevalencia del consumo de psicofármacos del 26% (IC 95%: 22-30). El 53% fueron benzodiazepinas y el 27% antidepressivos (73% son ISRS). Encontramos disfunción familiar en el 20% de los consumidores y en el 12% de los que no consumen, diferencia estadísticamente significativa ( $p < 0,01$ ). Mediante regresión logística, tener entre 45-64 años (OR: 3,18) o más de 65 años (OR: 3,29), ser mujer (OR: 2,2), ser ama de casa (OR: 3,07), tener antecedentes psiquiátricos (OR: 15,2) y presentar un Apgar familiar con disfunción familiar grave (OR: 7,19) son las variables que aparecen asociadas al citado consumo.

**Conclusiones.** El consumo de psicofármacos en población demandante de asistencia en Atención Primaria es del 26%. Tener 45 o más años, ser mujer y ama de casa constituyen posibles factores predictores del consumo de psicofármacos. Los antecedentes de patología psiquiátrica y presentar disfunción familiar grave se asocian también de forma independiente y deberían ser tenidos en cuenta en la mejora de la calidad y pertinencia de la prescripción de estos fármacos en Atención Primaria.

**Palabras clave:** Psicofármacos. Familia. Disfunción familiar. Prescripción de fármacos. Atención Primaria.

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## INTRODUCTION

Several studies have been mentioning an increase of psychodrug consumption in Primary Health Care (PHC) in the last decade<sup>1-3</sup>. We should remember that psychodrugs are a very heterogeneous group of substances that electively develop their action on brain activities, indu-

cing variations in behavior, mood and/or in thought processes. Their objective is to restore psychic well-being of the patient and in this sense, its noteworthy efficacy has been demonstrated.

However, none of them are exempt to a greater or lesser degree from adverse effects, interactions and clinical risk situations that make their management difficult. In addition, there is a variability of individual response that is difficult to predict, attributed to intrinsic characteristics of the drug and to several factors of the individual: genetic determinants, personality, and psychiatric components, sociofamilial characteristics, age, etc. Thus, the greater susceptibility to present cardiorespiratory, cognitive disorders or paradoxical response phenomena of the elderly is well known and an increase in the number of hip fractures in the elderly who are long term consumers of benzodiazepines has been described<sup>4</sup>.

Increase in psychodrug prescription is parallel to elevated prevalence of mental disorders, which provide a qualitatively and quantitatively important group of reasons for a visit to PHC. Fifty percent of the patients who come to the clinic have an underlying psychosocial factor as a cause for their demand<sup>5</sup> and 20 % to 30 % correspond with a well-defined mental disorder<sup>5-8</sup>. Furthermore, only one out of every 20 cases diagnosed is referred to the specialized level<sup>9</sup> and thus, a high rate of these patients is treated by the general practitioner.

Other factors that are not specifically derived from the patient with psychiatric disease have been related with psychodrug prescription: time limitation for non-pharmacological approach, training deficiencies, coordination problems between levels or introduction of new drugs with fewer side effects<sup>7,10,11</sup>.

In the same way, it is known that loss of compliance regarding any of the family functions (affective, social, cares, etc.) may generate health problems in one or some of its members<sup>12</sup> up to the point that, as has been seen, patients coming from dysfunctional families consult more for health problems or due to poorly defined motives<sup>13</sup>, that is, they generate health problems that require attention, in many cases, as frequent visitors of the health care services. In this context, it seems reasonable to suggest that the conditions necessary for greater consumption of psychodrugs are created in this population group. If this is true, we could use the variable psychodrug consumption as an indicator for detection and study of family functional alterations.

Thus, our objective is to know the prevalence of psychodrug consumption in users requiring care in a health care center, identify the factors related with this consumption and determining the influence of family dysfunction factor.

## METHODOLOGY

We have performed a descriptive, cross-sectional study in a basic urban health care zone, in the Albacete Health Center V-B. It has six general medicine clinics

with an assigned population over 14 years of age of about 12,000 persons, mainly middle-low class. A total of 85 % of the population has a clinical history open.

Participants were selected for the study by systematic random sampling among the patients who came to the family medicine out-patient clinic during 6 consecutive weeks between the months of March and April 1998. We included patients over 14 years of age who, after being informed, accepted to participate in the study and who did not have mental deficiency.

Sample size is 434 subjects for a rate of 50 % of psychodrug consumption with a 95 % confidence level and 5 % accuracy.

All the patients chosen were administered a personal interview, review of their clinical history and were given prolonged treatment care, if necessary, to verify the presence of consumption.

We consider patients who consume or have consumed psychodrugs for at least 30 days, either continuously or intermittently in the last year as case (dependent variable).

In the data collection questionnaire, designed for such effect, we included sociodemographic variables, family type (extensive, nuclear, single parent, without family, family equivalents) and psychiatric backgrounds (diagnoses according to the ICD-10 Mental Disorder classification for Primary Health Care). When the patient is a psychodrug consumer, the questionnaire is filled out, identifying: psychodrugs consumed (recorded according to the commercial name and active ingredient and re-grouped for their analysis according to Nomenclator classification), consumption of fixed combinations, consumption time, prescribing physician (psychiatrist, Primary Health Care physician, others) and reason or health problem that it is prescribed for.

All the patients fill out the family Apgar test themselves, with the help of the trained personnel who are not participating in the study in the case of sensorial limitation or illiteracy. This test is a perception instrument of family function, validated in our setting<sup>14</sup> and frequently used to detect and grade family dysfunction. Scores ranging from 7 to 10 reflect normal family function; between 4 and 6, mild family dysfunction and between 0 and 3, serious dysfunction.

The statistical analysis includes: calculation of psychodrug consumption prevalence and their distribution, descriptive analysis of each variable, bivariate study using comparison studies of proportions for qualitative variables (Chi squared-with Yates correction if necessary according to the values of the table and Fisher's exact test when some of the frequencies are less than 2) and comparison of means for qualitative and quantitative variables (Student's *t* test and Mann-Whitney «U» test). Finally, we performed a multivariate analysis with a logistic regression model whose dependent variable is psychodrug consumption and independent variables those which are associated to consumption in the bivariate analysis. Reference category was the age group of 15 to 44 years, male gender, active work condition, not know-

ing how to read or write, not having psychiatric background and family Apgar indicating normal functioning. Statistical significance level was established at  $\alpha = 0.05$ . For all the calculations, a 95 % confidence interval was established. Analysis was performed with the Epi Info version 6 computer program and the Egret program was used for the logistic regression model.

## RESULTS

Only 6 of the 434 initial patients correspond to losses, so that 428 patients finished the study. Thus, we obtained a participation of 98.7 %. A total of 64.3 % of the population studied were women, mean age was  $51.6 \pm 20.1$

**TABLE 1. Characteristics of the population in relationship to psychodrug consumption**

Variables	They do consume n = 111 (25.9%)	They do not consume n = 317 (74.1%)	Totals n = 428 (100%)	Statistical significance
	n (%)	n (%)	n (%)	p
<b>Age groups</b>				<0.01
15-44 years	21 (19.0)	137 (43.2)	158 (36.9)	
45-64 years	37 (33.3)	77 (24.3)	144 (26.6)	
65 or more years	53 (47.7)	103 (32.5)	156 (36.5)	
<b>Gender</b>				<0.05
Man	26 (23.4)	127 (40.1)	153 (35.7)	
Women	85 (76.6)	190 (59.9)	275 (64.3)	
<b>Work situation</b>				<0.01
Active	20 (18.0)	101 (31.9)	121 (28.3)	
Unemployed	5 (4.5)	15 (4.7)	20 (4.7)	
Retired	29 (26.1)	81 (25.6)	110 (25.7)	
Housewife	54 (48.6)	88 (27.8)	142 (33.2)	
Student	3 (2.8)	32 (10.0)	35 (8.1)	
<b>Studies</b>				<0.05
Does not read or write	19 (17.1)	33 (10.4)	52 (12.1)	
Primary	63 (56.8)	165 (52.1)	228 (53.3)	
VT secondary/ equivalent.	24 (21.6)	70 (22.1)	94 (22.0)	
University	5 (4.5)	49 (15.5)	54 (12.6)	
<b>Family type</b>				>0.05
Parents and children	87 (78.4)	273 (86.1)	360 (84.1)	
Alon with children	10 (9.0)	23 (7.3)	33 (7.7)	
Alone without children	14 (12.6)	21 (6.6)	35 (8.2)	
<b>Psychiatric background</b>				<0.01
Yes	87 (78.4)	59 (18.6)	146 (4.1)	
No	24 (21.6)	258 (81.4)	282 (65.9)	

years SD, the most frequent work condition found was housewife (33.2 %), primary study level was predominant (53.3 %), parents and children lived together in 84.1 % of the cases and psychiatric background was present in 34.1 % of the patients evaluated. The descriptive data of the population assessed can be seen in greater detail in the totals column of **table 1**.

Prevalence of psychodrug consumption found was 26 % (95 % CI: 22-30). Out of the 161 psychodrugs consumed by these patients, 53 % (95 % CI: 48-60) were benzodiazepines, 27 % (95 % CI: 21-33) corresponded to antidepressants (especially selective serotonin reuptake inhibitors that represented 73 % of the antidepressant total) and only 3 % were fixed combinations. Consumption time was greater than 12 months in 50.3 % of the cases, the Primary Health Care physician was the initial prescriber in 54.7 % of the drugs consumed while that psychiatrist was the prescriber in 37.9 %. The most frequent prescription reasons were depressive disorders and anxiety. Non-psychiatric disease was the reason for prescription in 6 % of the cases. **Table 2** gives greater detail of the characteristics of the consumption.

When the bivariate analysis was performed based on psychodrug consumption, we found that age (being 45 years old or more), being a woman, housewife, having primary

**TABLE 2. Characteristics of psychodrug consumption**

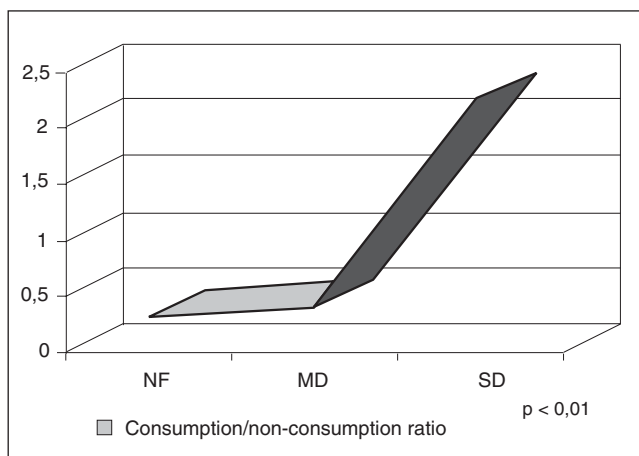
Consumption characteristics (n = 161)*	n	%	95 % CI
<b>Psychodrugs</b>			
Benzodiazepines (BDZ)	86	53	46-60
No-hypnotic BDZ	8	5	2-8
Antidepressants	44	27	21-33
Not selective	12	(27%)**	14.1-39.9
Selective	32	(73%)**	60.1-85.9
Neuroleptics	9	6	3-9
Fixed association	5	3	1-5
Others	9	6	3-9
<b>Consumption time</b>			
≤ 12 months	81	50.3	43.3-57.3
> 12 months	80	49.7	42.7-56.7
<b>Prescription origin</b>			
PHC physician	88	54.7	47.7-61.7
Psychiatrist	61	37.9	30.9-44.9
Others	12	7.5	3.5-11.5
<b>Reason for prescription</b>			
Non-psychiatric disease	10	6	3-9
Depression	59	37	30-44
Anxiety disorder	31	19	13-25
Mixed anxious-depressive disorder	20	12.5	7.5-17.5
Non-organic sleep disorder	33	20.5	14.5-26.5
Others	8	5	2-8

\*Total psychodrugs prescribed in 111 consumers found. \*\*Of the total antidepressants prescribed.

study level and psychiatric background presented statistically significant differences in the non-consumer group. The family type does not seem to play a role (table 1).

Regarding the results obtained with the family Apgar test, we detected family dysfunction in 14 % (95 % CI: 10.9-17.1) of all the total subjects studied, and there were statistically significant differences ( $p < 0.01$ ) in these findings in 20 % (95 % CI: 12.8-27.2) of the consumers and in 12 % (95 % CI: 8.5-15.5) of the non-consumers. When family dysfunction grade was determined and related with psychodrug consumption, the differences basically appeared in patients with serious dysfunction, who represented 8% of the consumers compared to 1% of the non-consumers ( $p < 0.01$ ). These differences became clearer when the proportion of patients who consume are determined in regards to those who do not consume in each family function or dysfunction category. A 0.31 proportion was obtained in the patient group with normal function and 0.39 in those who presented mild dysfunction compared to 2.25 who were in the group of serious dysfunction (fig. 1).

Considering consumption of psychodrugs as dependent variable and the variables that appear related in the bivariate analysis as independent variables, we applied the multiple logistic regression with the following results (table 3): being 65 years old or more (OR: 3.29; 95 % CI: 1.9-6.0) or belonging to the age group of 45-64 years (OR: 3.18; 95 % CI: 1.6-5.4), being a woman (OR: 2.2; 95 % CI: 1.3-3.6), being a housewife (OR: 3.07; 95 % CI: 1.6-5.4), having a previous psychiatric background (OR: 15.2; 95 % CI: 8.9-25.8) and presenting a family Apgar with serious family dysfunction (OR: 7.19; 95 % CI: 2.0-23.0) were the variables that appeared associated to psychodrug consumption.



**Figure 1.** Degree of family dysfunction and psychodrug consumption. The psychodrug consumer ratio is greater in the patient group with serious family dysfunction, the statistical difference being significant. NF: normal function; MD: mild dysfunction; SD: serious dysfunction.

**TABLE 3.** Risk factors related with the consumption of psychodrugs

Variable	Odds ratio	95% CI
<b>Age groups</b>		
15-44 years	1	
45-64 years	3.18	1.6-5.4
65 years or more	3.29	1.9-6.0
<b>Gender</b>		
Man	1	
Woman	2.2	1.3-3.6
<b>Work situation</b>		
Active	1	
Unemployed	1.67	0.6-5.3
Retired	1.79	0.8-3.2
Housewife	3.07	1.6-5.4
Student	0.47	0.1-1.8
<b>Studies</b>		
Does not read or write	1	
Primary	0.66	0.3-1.3
VT, secondary/equivalent.	0.60	0.3-1.2
Universitary	0.18	0.1-0.6
<b>Psychiatric background</b>		
Yes	15.2	8.9-25.8
No	1	
<b>Family apgar</b>		
Normal functioning	1	
Moderate/mild dysfunction	1.26	0.6-2.5
Serious dysfunction	7.19	2.0-23.0

Being 45 years or more, woman, housewife, having previous psychiatric background and presenting a family Apgar with serious family dysfunction are the variables that appear associated to psychodrug consumption.

## CONCLUSIONS

Psychodrug consumption in the population demanding Primary Health Care found in our study is 26 %, a result that does not substantially differ from that estimated by other authors both in cross-sectional studies performed with a similar population<sup>2</sup> or with an elderly population<sup>15</sup>, as well as in prospective investigations performed in other countries<sup>6</sup>, with values that range from 21 % to 30 %. It could be questioned if this not insignificant level of psychodrug prescription responds to the real needs of the demanding population or, on the contrary, if it has its origin in aspects related with training deficit, medical-patient time or communication.

In regards to the pharmacological groups, we verify, coinciding with other studies<sup>2,15</sup>, that benzodiazepines are the most consumed psychodrugs in our setting and that the SSRIs account for a high percentage (73 %) of the antidepressant prescriptions, in agreement with the tendency observed in recent years by other authors<sup>3,16</sup>.

Several studies that relate psychodrug consumption as a whole<sup>2,6,15</sup> or some of their groups<sup>17,18</sup> with socio-



demographic variables such as age, gender, civil state or work condition have been published. In this sense and using logistic regression, our findings indicate that being 45 years old or more, a woman and housewife make up possible independent predictor factors of psychodrug consumption, results that seem to verify those of previous studies. However, we must mention that this patient profile coincides with the group that most frequently visits the Primary Health Care services<sup>19</sup>.

Thus, having a background of psychiatric disease and presenting a result in the family Apgar test that indicates serious family dysfunction are associated in a statistically significant way and independently to psychodrug consumption. However, we have not found any studies having similar characteristics that include the presence of psychiatric background among their variables. In this point, it could be determined if the greater consumption observed in our study in patients who present some psychiatric background is due to a greater incidence of mental problems or to greater predisposition, by the physician, to begin drug treatment.

There are few indicators that make it possible to relate reasons for the visit to primary health care with family dysfunction<sup>13</sup> and, based on our results, it seems to be tempting to pose the possibility of using psychodrug consumption as an indicator of serious family dysfunction. However, we believe that we should be cautious when interpreting these findings. In the first place, due to the limitations that the study design type imposes (descriptive and cross-sectional character) and in the second place and although we have not found previous studies that analyze psychodrug prescription and family dysfunction, we do find studies having similar characteristics that relate mental health problems and family dysfunction with contradictory results, in favor or against such association<sup>20,21</sup>. Finally, we have to keep in mind that the family Apgar test, in spite of being validated in our setting and being widely used in the approach to family problems in the daily practice, is questioned in regards to its sensitivity<sup>20</sup> and practical utility<sup>22</sup>. Furthermore, more than measuring the objective degree of family dysfunction, it may be useful to detect the subjective perception of the patient on family functioning.

However, we think that our findings are sufficiently suggestive to continue investigating, especially on quality and appropriateness of the psychodrug prescription and its utility as a sentinel system that alerts us to the presence of dysfunctional situations in the patients that we see in our Primary Health Care clinic.

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