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#### **ECONOMIC STUDIES**

# The Impact of Psychotropic Drug Costs on the Brazilian Family Budget: An Analysis of the Family Budget Surveys of 2003 and 2009

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ABSTRACT

**Objective:** To estimate the cost of psychotropic drugs and its impact on the Brazilian family budget in 2003 and 2009 comparatively. **Methods:** This study had a cross-sectional design. Data were obtained from the Family Budget Surveys conducted in 2003 and 2009, including interviews in 48,470 and 55,970 homes of all Brazilian regions, respectively. The main measures are prevalence of psychotropic drug acquisition, monetary and nonmonetary expenses with psychotropic drugs, total spending on drugs, spending on health, total household spending, and estimated mean monthly household income. All incomes and expenses from the 2003 survey were adjusted by inflation. **Results:** There was a reduction in the prevalence of psychotropic drug acquisition by Brazilian households from 13.0% in 2003 to

11.2% in 2009. The mean monthly household spending on psychotropic drugs, however, rose from R \$54.38 in 2003 to R \$78.73 in 2009. The percentage of spending on psychotropic drugs from the expenses with health increased 27%. **Conclusions:** The increase in spending on psychotropic drugs can be due to a rise in their prices, the acquisition of more modern or more expensive drugs, or the increase in the number of drugs used. Proportionally, spending on psychotropic drugs grew more than did spending on health by Brazilian families.

Keywords: Brazil, income, psychotropic drugs.

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#### Introduction

For many decades, there have been controversies about the extent of prescription and use of psychotropic drugs, including their cost [1–4]. In the United States, in the last two decades, the increase in spending on psychotropic drug acquisition was higher than the increase in spending on other types of drugs [5,6]. In addition, in this same country, between 1986 and 2003, there was a growth in spending on prescribed psychotropic drugs from US \$2.2 million to US \$23.6 million [7]. During this period, the pharmaceutical industry grew and launched new antidepressants and antipsychotic drugs, increasing the variety of recommendations of existing drugs [8]. Between 1998 and 2007, spending on mental health remained relatively stable in the United States-US \$15.4 million in 1998 and US \$16 million in 2007—although spending on psychotherapy decreased from US \$10.9 million in 1998 to US \$7.2 million in 2007 [9]. These data indicate an increase in the proportion of spending on mental health drugs [9].

Since 1998, in the United States, the expenses paid by patients to treat mental disorders have risen more than 10% per year, surpassing the health spending growth index as a whole [7]. In Brazil, the current public policies on mental health and the change in the hospital- and hospitalization-oriented approach to

health care cause the family to become the main co-responsible participant in patient care. Thus, patients are provided medical care as needed, on an outpatient care basis, staying with their families [10]. Perhaps for this reason, expenses on mental health treatment are frequently paid by the family because these are not usually covered by health plans or the government [11].

Brazil is a country of great contrasts of geographic distribution and social indicators. All health services provided by the federal, state, and municipal governments are part of a public system known as the Unified Health System. The Brazilian Policy on Mental Health is essentially based on the Declaration of Caracas [12]. According to estimates from the World Health Organization [13], approximately 7.6% of the gross domestic product would be allocated for health in Brazil, of which 58.4% (or 4.44% of the gross national product) would be private spending, with the greatest portion being direct spending of families (nearly 70%) [13].

Economic aspects of psychotropic drugs have already been studied in countries such as Canada and the United States [9,14–17], although information of this nature is largely unknown in Brazil. An important source of data for studies on health spending in Brazil is the Family Budget Survey (FBS) of the Brazilian Institute of Geography and Statistics. The FBS investigates the structure of household spending and income in detail, enabling

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	n (%)	
	2003 FBS	2009 FBS
Region		
Northeastern	3,145,614 (6.5)	3,923,041 (6.8)
Northern	12,195,305 (25.2)	15,057,555 (26.1)
Southeastern	21,825,724 (45.1)	25,442,075 (44.1)
Southern	7,743,051 (16.0)	8,884,534 (15.4)
Center-West	3,484,373 (7.2)	4,384,576 (7.6)
Total	48,394,067 (100.0)	57,691,781 (100.0)
Area	, , ,	,
Urban	40,989,775 (84.7)	48,691,863 (84.4)
Rural	7,404,292 (15.3)	8,999,918 (15.6)
Total	48,394,067 (100.0)	57,691,781 (100.0)
Number of residents	(====)	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
1	4,887,801 (10.1)	6,865,322 (11.9)
From 2 to 4	30,778,627 (63.6)	39,576,562 (68.6)
From 5 to 8	11,856,546 (24.5)	10,672,979 (18.5)
9 or more	871,093 (1.8)	576,918 (1.0)
Total	48,394,067 (100.0)	57,691,781 (100.0)
Property status	10,551,007 (100.0)	37,031,701 (100.0)
Property status  Property is owned and paid	31,891,690 (65.9)	39,230,411 (68.0)
Other status	16,502,377 (34.1)	18,461,370 (32.0)
Total	48,394,067 (100.0)	57,691,781 (100.0)
Number of rooms	40,554,007 (100.0)	37,031,781 (100.0)
	12 024 420 (26 E)	13,038,343 (22.6)
Up to 4 From 5 to 7	12,824,428 (26.5)	
8 or more	27,052,283 (55.9)	33,345,849 (57.8)
Total	8,517,356 (17.6)	11,307,589 (19.6)
	48,394,067 (100.0)	57,691,781 (100.0)
Number of bedrooms	16 200 001 (22.7)	10.045.072.(24.4)
1	16,308,801 (33.7)	19,845,973 (34.4)
2	20,615,872 (42.6)	24,980,541 (43.3)
3 or more	11,469,394 (23.7)	12,865,267 (22.3)
Total	48,394,067 (100.0)	57,691,781 (100.0)
Number of bathrooms		
None or 1	38,666,860 (79.9)	43,499,603 (75.4)
2 or more	9,727,207 (20.1)	14,192,178 (24.6)
Total	48,394,067 (100.0)	57,691,781 (100.0)
Monthly spending on psychotropic drugs (US \$)		
0.00	42,102,838 (87.0)	51,230,302 (88.8)
From 0.01 to 12.99	3,290,797 (6.8)	2,711,514 (4.7)
From 13.00 to 42.99	2,177,733 (4.5)	2,538,438 (4.4)
From 43.00 to 210.00	774,305 (1.6)	1,153,836 (2.0)
Higher than 210.00	48,394 (0.1)	57,691 (0.1)
Total	48,394,067 (100.0)	57,691,781 (100.0)
Гotal household income (US \$)*		
Lower quintile	Up to 272.08	Up to 333.49
Lower middle quintile	From 272.09 to 454.26	From 333.50 to 536.
Middle quintile	From 454.27 to 747.98	From 536.12 to 846.4
** ***		

BCPI, Brazilian Consumer Price Index.

Upper middle quintile

Upper quintile

inferences and analysis to be made about the profile of household spending on health, among other aspects [18]. Until this moment, five studies of this size have been conducted in Brazil. The present study analyzed data from the 2003 and 2009 FBSs.

The aim of the present study was to estimate the cost of the acquisition of psychotropic drugs and its impact on the budget of Brazilian families, in 2003 and 2009 comparatively, with the purpose of observing and understanding the changes in spending on psychotropic drugs.

### Methods

From 747.99 to 1,406.48

From 1,406.49 to 166,359.19

The data used in this study were obtained from the 2002-2003 and 2008-2009 FBSs conducted by the Brazilian Institute of Geography and Statistics. The 2002-2003 FBS was conducted between July 2002 and June 2003 [19], while the 2008-2009 FBS was conducted between May 2008 and May 2009 [18].

From 846.45 to 1,500.84

From 1,500.85 to 49,251.76

<sup>\*</sup> The values referring to 2003 were adjusted by the accumulated inflation until 2009 by using the BCPI.

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