

## Perception of the value of generic drugs in São Paulo, Brazil

Percepção de valor de medicamentos genéricos em São Paulo, Brasil

Percepción del valor de las medicinas genéricas en São Paulo, Brasil

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### Abstract

*The objective of this study was to assess the perceptions of opinion-leaders, patients and their accompanying family members or carers about generic drugs. Three groups of participants were surveyed: (i) 50 customers while they were visiting commercial pharmacies located in São Paulo city, Brazil, (ii) 25 patients and 25 companions while they were waiting at the university outpatient clinic, and (iii) 50 healthcare opinion-leaders from government, hospitals, health plans, academia, and pharmaceutical companies. The questions explored socio-demographic characteristics and perceptions regarding value attributes of generic drugs compared to brand name drugs. Respondents had an average age of 52 years and 53% were women. Respondents believed generic drugs to be cheaper than brand name drugs (97%), and 31% thought generic drugs to be less effective than brand name drugs. Also, generic drugs were perceived by 54% of respondents to be as safe as brand name drugs and 74% would prefer brand name drugs if there was no price difference. In conclusion, multiple factors may contribute to the decision to buy generic drugs; among these, perceived effectiveness, safety and price appear to be the most important factors.*

*Generic Drugs; Reference Drugs; Drug Utilization*

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## Introduction

According to the report *World Health Statistics 2013*<sup>1</sup>, health expenditures in Brazil increased from 7.2% to 9% of gross domestic product (GDP) in 10 years, approaching the world average of 9.2%. Of the total health expenditure in Brazil, 53% is private, much higher than the 41.1% global average<sup>1</sup>. Drugs caused the majority of expenditure on healthcare by Brazilian families (*Brazilian Household Budget Survey 2008-2009* – POF). Generic drugs may potentially help to reduce private healthcare expenditure in Brazil<sup>2</sup>.

Generic drugs were approved in Brazil in 1999 under *Law n. 9.787/1999*<sup>3</sup>, and may be marketed if equivalent to the reference product and produced to the Brazilian National Agency for Sanitary Surveillance (ANVISA) quality standards<sup>4,5</sup>. Generic drugs prices must be 35% below their respective reference prices<sup>6</sup>. In São Paulo, Brazil, the mean price of generic drugs was 56.63% lower than that of the reference drugs in August 2013<sup>7</sup>.

The interchange between generic drugs and reference drugs can occur at the time of purchase and upon patients' request, except where the prescriber requested "not to substitute"<sup>4</sup>. In the public healthcare system, physicians must prescribe drugs by their Brazilian Common Denomination (Denominação Comum Brasileira – DCB) or, if absent, by the International Nonproprietary Name (INN)<sup>8</sup>. However, despite the legislation that supports the prescription of generic drugs, generic drugs still have a small market share, representing 27.3% of all drug units sold in Brazil in January 2014<sup>9</sup>.

A potential reason for the low penetration of generic drugs into the Brazilian market is a potential negative perception of the value of generic drugs. A study performed by Quintal & Mendes<sup>10</sup> with patients and pharmacists in Portugal indicated that a low rate of generic prescriptions, lack of confidence in generic drugs and poor knowledge by patients were the main reasons for low generic drugs utilization.

Generics were often perceived by a certain percentage of the population as being less effective, less safe and of inferior quality compared to the reference drugs<sup>11,12,13</sup>. Less than half of the 441 consumers from pharmacies in Auckland, New Zealand, considered generic drugs to be as safe, effective, and equivalent in quality, as their respective brand name drugs<sup>14</sup>. Shank et al.<sup>15</sup> found that 29.9% of 1,047 insured beneficiaries surveyed in the United States believed that brand name drugs were more effective than generic drugs. In Southern Brazil, 33.8% of 374 interviewed adults in 2011 considered generic drugs

to be products of lesser quality or did not know they existed<sup>16</sup>.

Even physicians in Finland reported concerns regarding generic drugs<sup>17</sup>. One year after the introduction of generic drugs substitution, it was observed that although 86% of the 49 physicians interviewed considered the substitution with generic drugs to be beneficial, more than half believed that generic drugs were not necessarily as effective as brand name drugs<sup>18</sup>. Another study<sup>19</sup> assessed psychological factors associated with the prescription of generic drugs by general practitioners in Spain, and observed that the biggest deterrent was the perceived opposition by patients against generic drugs and the time spent on educating patients about generic drugs<sup>19</sup>.

The knowledge about the value attributes perceived by the population regarding generic drugs versus brand name drugs is still limited in Brazil. The aim of this study was to better understand the attributes leading to the value perceptions of generic drugs or brand name drugs by opinion-leaders, patients and their companions.

## Methods

A cross-sectional survey was applied between March and August 2013. The sample consisted of three groups of respondents: (i) the first group was composed of 50 pharmacy customers, which were consecutively selected and interviewed while visiting seven commercial pharmacies located in different regions of the city of São Paulo. Three of the largest pharmacy chains of São Paulo were invited to participate in this study. The first one who agreed to participate was chosen for the interviews. The pharmacies were selected according to the availability of each and included one in each region: north, south, east, west and central zone of the city. The interviews were held for two days in each pharmacy and, if 10 respondents were not reached, another pharmacy of the same chain was selected in the same region of the city until the number of 50 respondents was attained; (ii) the second group was composed of 25 patients and 25 companions. The participants were consecutively selected and interviewed while waiting for their regular outpatient visits at the university outpatient clinic. The interviews were consecutively conducted in different days and hours until the sample of 50 subjects was reached; and (iii) the third group was composed of 50 opinion-leaders from government, hospitals, health-plans, academia, and pharmaceutical companies. To this end, a database with 124 opinion-leaders was created using personal contacts of the research team group. All respondents

were invited to take part in this study by an email message and interviews were scheduled with those who accepted the invitation. Reminder emails were sent after 24 days.

Inclusion criteria for the interviewees at the pharmacies and the outpatient clinic were age > 40 and literacy. Inclusion criteria for the opinion-leaders' group were age > 30, over 5 years of professional activity in the healthcare area and being in a leadership position in the government/public healthcare system (10), health-plans (10), public and private hospitals (10), academia (10) and the pharmaceutical industry (10). All participants signed a consent form before starting the interview.

A standardized text summarizing key definitions in the current Brazilian drug market and the main objectives of the study were presented to all interviewees. Three general questions were asked to evaluate their knowledge about generic drugs. 15 questions addressed the respondents' views and perceptions regarding value attributes of generic drugs in comparison to brand name drugs. The questionnaire explored socioeconomic, demographic and educational data and applied the SF-6D Brazil (*Short Form 6 Dimension*) questionnaire to determine the quality of life of respondents. Descriptive statistics were used to examine demographics and socioeconomic characteristics of the samples.

There was no mention of any pharmaceutical company, as well as specific generic drugs or brand name drugs, during the interviews.

All interviews were conducted by a registered pharmacist (E.P.N.). The study protocol was reviewed and approved by the Ethics Research Committee of São Paulo Federal University (UNIFESP/EPM).

## Results

A total of 148 people were interviewed. These included 50 pharmacy customers, 50 people in the clinics of São Paulo Hospital (UNIFESP/EPM – 25 patients and 25 companions), and 48 opinion-leaders from public healthcare (8), health insurance companies (10), public or private hospital service providers (10), academic, educational and research institutions (10), and pharmaceutical companies (10).

In the pharmacies, 203 people refused to participate (102 men and 101 women; response rate 19.8%). At the hospital, 27 people refused or discontinued participation during the interview due to being called to their appointment (response rate 64.9%). From all invited opinion-leaders, 17 people did not attend, 12 refused to participate,

and 47 people did not answer the invitation (total response rate 38.7%).

The demographics and socioeconomic characteristics of the 148 respondents are described in Table 1. Of the respondents, 53% were women, the average age was 52 years, 59% had health insurance, 38% used the public health system all or most of the time, and 60% had over 8 years of formal education. The average quality of life measured by the SF-6D questionnaire was 0.77. Considerable differences in respondents' socioeconomic characteristics were observed, mainly regarding their income and education.

Regarding overall understanding of generic drugs, users from pharmacies and hospitals were more informed about the price difference between generic drug and brand name drug than opinion-leaders, while opinion-leaders were more aware of the regulatory requirements for marketing generic drugs: only 44% of pharmacy customers and 28% of hospital customers knew that there are different requirements for regulatory approval of brand name drugs or generic drugs (Table 2).

Table 3 and Table 4 show value attributes as recognized by each of the groups. The majority of respondents believed that generic drug and brand name drug were equally effective (66%) and that they cause an equal number of side effects (67%). Comparing with the two other groups, more opinion-leaders believed generic drug and brand name drug to be equally effective (73%) and that generic drugs cause as many side effects as brand name drugs (90%) (Table 3).

Overall, 65% (n = 97) of respondents agreed with the statement that generic drug and brand name drug are similar in quality, while between 22% (in hospital) and 29% (opinion-leaders) of respondents said they believed generic drug were of an overall poorer quality compared with BD (Table 3).

Regarding the statement "generic drugs are as suitable or appropriate as brand name drugs for mild, trivial or less serious diseases" 57% of respondents (n = 84) agreed with this statement, while 23% (n = 34) considered generic drug to be more suitable for these conditions.

Of all respondents, 54% agreed that generic drug and brand name drug have the same safety profile. Nevertheless, 48% of the pharmacy, 44% of the hospital, and 71% of the opinion-leader group stated that brand name drug was safer than generic drug.

A slightly higher proportion of participants (46%) agreed to "getting confused in the pharmacy when offered more drugs with the same name or active ingredient". This was more pronounced in the hospital (74%) than in the phar-

Table 1

Demographic and economic characteristics of the studied sample.

	All groups	Patients/Companions pharmacy	Patients/Companions public hospital	Opinion-leaders
	n (%)	n (%)	n (%)	n (%)
Total	148 (100)	50 (100)	50 (100)	48 (100)
Age: mean (SD)	52 (10)	54 (8)	54 (9)	46 (10)
Gender				
Male	70 (47)	20 (40)	23 (46)	27 (56)
Female	78 (53)	30 (60)	27 (54)	21 (44)
Family income (minimum wages)				
Less than 2 (USD 627.78)	33 (22)	12 (24)	21 (42)	0 (0)
3 to 5	26 (18)	8 (16)	18 (36)	0 (0)
6 to 15	28 (19)	16 (32)	4 (8)	8 (17)
More than 16	53 (36)	9 (18)	4 (8)	40 (83)
Did not answer	8 (5)	5 (10)	3 (6)	0 (0)
Education (years) *				
Up to 4	25 (17)	4 (8)	21 (42)	0 (0)
From 5-7	34 (23)	14(28)	20 (40)	0 (0)
More than 8	89 (60)	32 (64)	9 (18)	48 (100)
Private health plan				
Yes	88 (59)	32 (64)	13 (26)	43 (90)
No	60 (41)	18 (36)	37 (74)	5 (10)
Use of public healthcare system				
Always or most of the time	57 (39)	12 (24)	42 (84)	3 (6)
Never or rarely	91 (61)	35 (70)	8 (16)	44 (92)
SF-6D mean (SD)	0.77 (0.13)	0.76 (0.12)	0.72 (0.15)	0.82 (0.09)

SD: standard deviation.

\* The years of education of the population studied were counted from the 6th grade onward, as discussed by Law n. 11,274<sup>27</sup>, which extends the elementary school to nine years in duration in Brazil.

macy (n = 42%) or among opinion-leaders with 21% (n = 10) agreement (Table 4).

When asked about their perception of the statement "If there was not a price difference (generics are cheaper), I would always prefer taking a brand name drug", the majority of participants (74%) agreed with it.

More than half of respondents (59%) disagreed with the statement that "doctors prefer to prescribe generic drug". There was a higher disagreement (79%, n = 38) observed with opinion-leaders and with pharmacy respondents (62%, n = 31) than in the hospital (36%, n = 18).

Of all respondents, 56% (n = 83) indicated that they would not accept advice from the pharmacist or salesperson concerning generic drugs, with the highest rejection reported by the opinion-leaders group (65%). Only in the hospital group more respondents indicated that they would listen to such advice (52%).

Finally, more than half of all respondents (54%) disagreed to always buying generic drugs if they could afford to buy brand name drugs. The disagreement was strongest among the opinion-leaders (60%); followed by the hospital group (52%) and the pharmacy group (50%) (Table 4).

## Discussion

The present study is the first comparison of the perceptions of opinion-leaders, patients and companions regarding generic drug or brand name drug in Brazil.

The preferences of consumers are important for healthcare choices and in order to improve healthcare efficiency. Moreover, the opinion of opinion-leaders can be an important indicator for the consistency of the generic policies. Their opinions translate in both regulatory and

Table 2

Overall understanding about generic drugs, according to the research groups.

	All	Groups		
	n (%)	Patients/ Companions pharmacy n (%)	Patients/Companions public hospital n (%)	Opinion-leaders n (%)
Knew of the existence of generic drugs	148 (100)	50 (100)	50 (100)	48 (100)
Generic drugs do not need all the safety and effectiveness studies for regulatory approval and market authorization as brand name drugs	78 (53)	22 (44)	14 (28)	42 (87)
Generic drugs are required by law to be priced at least 35% cheaper than the corresponding brand name drug	93 (63)	32 (64)	38 (76)	23 (48)

supervisory actions required for the production of safe products with high quality.

In terms of the general knowledge about generic drugs, consumers were more aware of the price difference between generic drug and brand name drug than opinion-leaders, whilst opinion-leaders, working in health care, were better informed about the regulatory requirements for drug marketing. It should be noted however, that the opinion-leader group was a broad stakeholder mix involving government, hospitals, health-plans, academia, and pharmaceutical companies; and differences may exist in attitudes depending on their professional perspectives.

The perception of generic drugs was generally more positive than negative when asked for specific value attributes such as effectiveness, safety or price. Nevertheless, the overall value appeared to be perceived higher for brand name drug as shown by the preference for brand name drugs in the case of equal price. In addition, there is a constant proportion of respondents who perceive generic drug as being less effective than brand name drugs (31%) as well as of a lower quality (26%).

The perception of reduced effectiveness of generic drugs was underlined by some respondents' verbal descriptions during the interviews, i.e. generic drugs were "weaker products". One pharmacy interviewee mentioned: "*I think generic drugs are very weak, I do not take generic drugs*"; and another said: "*sometimes I take a generic drug and feel no effect*". Sewell's qualitative study conducted in two counties in the rural Alabama Black Belt with 30 community members also noted perceptions of some respondents that generic drugs are less potent<sup>20</sup>.

Of opinion-leaders, 29% were concerned with quality deviations (26% of pharmacy respondents and 22% of hospital respondents shared the concern). This degree of concern is slightly lower than that observed by Shrank et al.<sup>17</sup> with almost half of the 506 physicians surveyed having concerns about the quality of generic drugs.

One opinion-leader stated that multinational companies produce higher quality drugs due to their global standards. Most brand name drugs sold in Brazil today are from multinational companies, while 90% of generic drug registrations in the ANVISA in November 2013 were products from Brazilian companies<sup>21</sup>.

Although the majority of respondents believed that brand name drug and generic drug are equally safe (54%), 40% of participants agreed in another question that brand name drug were safer than generic drug. Even 27% of the opinion-leaders thought that brand name drugs were safer than generic drugs, which raises the concern that opinion leaders do not trust in the current regulation and inspection processes involving generic drug in the country. One opinion-leader underlined his lack of confidence about generic drug safety saying that "*generic drug have no clinical research justifying the safety of their use*".

Likewise, in Germany, a considerable proportion of patients (37%) expressed general skepticism towards generic drugs because of their lower price<sup>12</sup>. Less than half of the 441 consumers from pharmacies in Auckland, considered generic drug to be as safe, effective and equivalent in quality as the respective brand name drug<sup>14</sup>. Interviews with 1,000 individuals (15-74 years old) in Switzerland found that 10% thought that

Table 3

Perception of value attributes of generic drugs (effectiveness, side effects, quality, use, time, safety, price) by the surveyed groups.

Attribute	All	Patients/ Companions pharmacy	Groups Patients/ Companions public hospital	Opinion-leaders
	n (%)	n (%)	n (%)	n (%)
Effectiveness				
1. Generic drugs are less effective than brand name drugs	46 (31)	17 (34)	19 (38)	10 (21)
2. Generic drugs are as effective as brand name drugs	98 (66)	32 (64)	31 (62)	35 (73)
3. Generic drugs are more effective than brand name drugs	0 (0)	0 (0)	0 (0)	0 (0)
4. I don't know/Did not answer	4 (3)	1 (2)	0 (0)	3 (6)
Side effects				
1. Generic drugs cause fewer side effects than brand name drugs	10 (7)	0 (0)	9 (18)	1 (2)
2. Generic drugs cause as many side effects as brand name drugs	99 (67)	33 (66)	23 (46)	43 (90)
3. Generic drugs cause more side effects than brand name drugs	6 (4)	3 (6)	3 (6)	0 (0)
4. I don't know/Did not answer	33 (22)	14 (28)	15 (30)	4 (8)
Quality				
1. Generic drugs have an overall worse quality than brand name drugs	38 (26)	13 (26)	11 (22)	14 (29)
2. Generic drugs have an overall similar quality as brand name drugs	97 (65)	32 (64)	33 (66)	32 (67)
3. Generic drugs have an overall better quality than brand name drugs	3 (2)	0 (0)	3 (6)	0 (0)
4. I don't know/Did not answer	10 (7)	5 (10)	3 (6)	2 (4)
Use				
1. Generic drugs are more suitable or appropriate than brand name drugs for mild, trivial or less serious diseases	34 (23)	11 (22)	15 (30)	8 (17)
2. Generic drugs are as suitable or appropriate as brand name drugs for mild, trivial or less serious diseases	84 (57)	30 (60)	20 (40)	34 (71)
3. Generic drugs are less suitable or appropriate than brand name drugs for mild, trivial or less serious diseases	27 (18)	8 (16)	14 (28)	5 (10)
4. I don't know/Did not answer	3 (2)	1 (2)	1 (2)	1 (2)
Time				
1. Generic drugs take less time to make effect when compared to brand name drugs	4 (3)	3 (6)	1 (2)	0 (0)
2. Generic drugs take the same time to make effect when compared to brand name drugs	96 (65)	30 (60)	30 (60)	36 (75)
3. Generic drugs take more time to make effect when compared to brand name drugs	32 (22)	11 (22)	14 (28)	7 (15)
4. I don't know/Did not answer	16 (11)	6 (12)	5 (10)	5 (10)
Safety				
1. Brand name drugs are less safe than generic drugs	3 (2)	1 (2)	2 (4)	0 (0)
2. Brand name drugs are as safe as generic drugs	80 (54)	22 (44)	24 (48)	34 (71)
3. Brand name drugs are safer than generic drugs	59 (40)	24 (48)	22 (44)	13 (27)
4. I don't know	6 (4)	3 (6)	2 (4)	1 (2)

(continues)

Table 3 (continued)

Attribute	All	Patients/ Companions pharmacy n (%)	Groups Patients/ Companions public hospital n (%)	Opinion-leaders n (%)
	n (%)			
Price				
1. Brand name drugs are more expensive than generic drugs	144 (97)	49 (98)	50 (100)	45 (94)
2. Brand name drugs are cheaper than generic drugs	0 (0)	0 (0)	0 (0)	0 (0)
3. Brand name drugs have the same price of generic drugs	0 (0)	0 (0)	0 (0)	0 (0)
4. I don't know/Did not answer	4 (3)	1 (2)	0 (0)	3 (6)

generic drugs were not effective or safe; 12% refused to use them<sup>22</sup>. Another study by Hakonsen et al.<sup>23</sup> with 174 outpatients in Oslo and Bergen in Norway revealed that 29% of patients were anxious when they started to use a substitute generic drug; 8% felt that the drug effect changed, and 15% reported having new or more side effects from the substitute. In pharmacies in Oslo, some of 22 patients who had already made use of antihypertensive generic and brand name drugs mentioned experiencing more side effects and weaker effects upon drug substitution<sup>24</sup>. In two studies conducted in Southern Brazil (2002 and 2011), it was observed that 70% of 3,182 respondents and 64.3% of 374 respondents considered the quality of generic drug products to be similar to brand name drug<sup>16,25</sup>.

What is of concern is that 46% of respondents in this study admitted to getting confused when offered more drugs with the same name or active ingredient. This proportion was highest in the public hospital, where 74% (n = 37) agreed with the statement. Despite the confusion, more than half of respondents did not appear to seek advice from the pharmacists or salespersons. One respondent justified *"because pharmacists never say anything right"*. Such distrust increases the hurdle for improving the decision competence of the patients during the purchase of drugs and other healthcare products. As suggested by Farina & Romano-Liber<sup>26</sup>, the role of the pharmacist should be reassessed so that pharmacies are perceived as local healthcare facilities for the population in Brazil, and not just a simple store or extended arm of the government.

The level of confidence in generic drug may depend on which manufacturer produced the generic drug. This argument appeared several times during the interviews with the three groups (*"It depends a lot on the manufacturer"*, *"I think generics are less safe depending on the manufac-*

*turer"* or *"I think the smaller ones do not have quality control"*).

Given the importance of physicians' behavior for both patients and companions, the study also evaluated the perception of respondents concerning the preference of these professionals during the prescription process. Less than half of respondents (36%) thought that physicians prefer to prescribe generic drug except for the hospital group, where 60% of the respondents agreed that physicians prefer to prescribe generic drug. This is aligned with the fact that public health physicians in Brazil have to prescribe drugs by their DCB or, in its absence, by the INN<sup>8</sup>.

Although the majority of respondents agreed that generic drug are similar in quality to brand name drug (65%) with equal numbers of side effects (67%) and are equally safe (54%), the majority (74%) agreed with the statement that *"If there was no price difference, I would rather always take brand name drug"*, showing a preference for brand name drug if the price attribute was neutral.

Additionally, the majority (85%) of respondents said they compare prices while shopping but only 44% of respondents said they would always buy generic drug. The patients and companions who were interviewed thought more so (48%), while only one third of opinion-leaders (35%) agreed and 60% disagreed. It should be noted that 83% of opinion-leaders were in the highest income category, while the other two groups of interviewees lived with much lower family incomes.

In conclusion, this study contributed to a better understanding of how Brazilian patients, their companions, and healthcare opinion-leaders value generic drugs compared to brand name drugs. Understanding the value attributes and perceptions about generic drugs or brand name drugs may be useful in guiding new pu-

Table 4

Perception of value attributes of generic drugs (confusion during purchase, preferences, similarity, perception of acceptance by physicians, pharmacist, salesperson, attitude during the purchase (price), equality, attitude during the purchase (preference)) by the groups surveyed.

Attribute			All	Patients/ Companions pharmacy	Groups Patients/ Companions public hospital	Opinion- leaders
			n (%)	n (%)	n (%)	n (%)
Confusion during purchase	I get confused in the pharmacy when I am offered more drugs with the same name or active ingredient	I agree	68 (46)	21 (42)	37 (74)	10 (21)
		I disagree	79 (53)	28 (56)	13 (26)	38 (79)
		I don't know/Did not answer	1 (1)	1 (2)	0 (0)	0 (0)
Preferences	If there was not a price difference (generics are cheaper), I would always prefer taking a brand name drug	I agree	109 (74)	36 (72)	38 (76)	35 (73)
		I disagree	36 (24)	12 (24)	12 (24)	12 (25)
		I don't know/Did not answer	3 (2)	2 (4)	0 (0)	1(2)
Similarity	Generic drugs are as good as brand name drugs	I agree	96 (65)	28 (56)	35 (70)	33 (69)
		I disagree	36 (24)	13 (26)	12 (24)	11 (23)
		I don't know/Did not answer	16 (11)	9 (18)	3 (6)	4 (8)
Perception of acceptance by physicians	Physicians prefer to prescribe generic drugs	I agree	53 (36)	17 (34)	30 (60)	6 (13)
		I disagree	87 (59)	31 (62)	18 (36)	38 (79)
		I don't know/Did not answer	8 (5)	2 (4)	2 (4)	4 (8)
Pharmacist, salesperson	When buying medications at the drugstore, I present the prescription and usually take advice and suggestions from the pharmacist or salesperson about the generic drugs he/she recommends	I agree	64 (43)	21 (42)	26 (52)	17 (35)
		I disagree	83 (56)	29 (58)	23 (46)	31 (65)
		I don't know/Did not answer	1 (1)	0 (0)	1 (2)	0 (0)
Attitude during the purchase (price)	When buying medications at the drugstore, I compare the prices of generic drugs and brand name drugs	I agree	126 (85)	41 (82)	44 (88)	40 (85)
		I disagree	20 (14)	8 (16)	5 (10)	7 (15)
		I don't know/Did not answer	2 (1)	1 (2)	1 (2)	1(2)
Equality	I believe the generic drug is exactly the same as the brand name drug	I Agree	83 (56)	26 (52)	33 (66)	24 (50)
		I disagree	55 (37)	16 (32)	16 (32)	23 (48)
		I don't know/Did not answer	10 (7)	8 (16)	1 (2)	1(2)
Attitude during the purchase (preference)	Even if I could afford (had money) to buy a brand name drug, I would always buy the generic drug	I agree	65 (44)	24 (48)	24 (48)	17 (35)
		I disagree	80 (54)	25 (50)	26 (52)	29 (60)
		I don't know/Did not answer	3 (2)	1 (2)	0 (0)	2(4)

blic policies and actions to ensure access to good therapeutics in Brazil. It is also important to highlight that this is only a survey of opinions, and does not necessarily reflect the actual purchase actions. Multiple factors may contribute to the decision to buy a generic drug. Price seems to be an important factor as well as effectiveness,

safety, and trust. Further studies are needed to better understand the personal experiences and decision-making process regarding generic drug use and its consequences for the healthcare system and the population.

## Contributors

All authors have made intellectual contributions to the study. E. P. Nardi and M. B. Ferraz participated in its design, analysis, and interpretation of data. They also drafted the manuscript. All authors gave final approval of the version to be published.

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**Resumo**

*Avaliar as percepções de formadores de opinião, pacientes e acompanhantes em relação aos medicamentos genéricos. Foram entrevistados três grupos de participantes: (i) 50 clientes durante visitas em drogarias localizadas na cidade de São Paulo, Brasil; (ii) 25 pacientes e 25 acompanhantes durante a espera em ambulatórios clínicos; e (iii) 50 formadores de opinião do governo, hospitais, planos de saúde, academia e empresas farmacêuticas. As questões exploraram características sociodemográficas e as percepções em relação aos atributos de valores dos medicamentos genéricos comparados aos medicamentos de referência. Os respondentes tinham em média 52 anos e 53% eram mulheres. Os participantes acreditavam que os medicamentos genéricos eram mais baratos que os medicamentos de referência (97%) e 31% tinham a percepção que os medicamentos genéricos são menos efetivos. Além disso, 54% acreditavam que os medicamentos genéricos eram tão seguros quanto os medicamentos de referência e, sem uma diferença de preço, 74% preferiam os medicamentos de referências. Em conclusão, múltiplos fatores podem contribuir para a decisão de compra de um medicamentos genéricos; dentre estes, a efetividade, a segurança e o preço aparecem como os fatores mais importantes.*

*Medicamentos Genéricos; Medicamentos de Referência; Uso de Medicamentos*

**Resume**

*Evaluar las percepciones de los formadores de opinión, pacientes y acompañantes, en relación con las medicinas genéricas. Fueron entrevistados tres grupos: (i) 50 clientes durante visitas a farmacias ubicadas en la ciudad de São Paulo, Brasil; (ii) 25 pacientes y 25 acompañantes durante la espera en ambulatorios clínicos; y (iii) 50 formadores de opinión del gobierno, hospitales, seguros de salud, académicos y empresas farmacéuticas. Las preguntas investigaron características sociodemográficas y las percepciones en relación con los atributos de valores de las medicinas genéricas, comparados con las medicinas de referencia. Los participantes tenían en promedio 52 años y 53% eran mujeres. Los involucrados pensaban que los medicinas genéricas eran más baratos (97%) y 31% tenía la percepción que las medicinas genéricas son menos efectivos. Además, 54% creía que las medicinas genéricas eran tan seguros como las medicinas de referencia y, sin diferencia de precio, 74% preferirían las medicinas de referencia. En conclusión, múltiples factores contribuyen en la decisión de compra de un medicinas genéricas; dentro de los cuales, la efectividad, la seguridad y el precio aparecen como los más importantes.*

*Medicamentos Genéricos; Medicamentos de Referencia; Utilización de Medicamentos*

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