# Prevalence and characteristics of women with induced abortion – Favela México 70, São Vicente – São Paulo

Prevalência e características de mulheres com aborto provocado – Favela México 70, São Vicente - São Paulo

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# **Abstract**

In Brazil, abortion is among the leading causes of maternal mortality. Research has shown that abortion is practiced clandestinely by women of all social classes, but has unequal consequences depending on social inclusion, producing risks to poor women. Although the issue has been widely explored in the past 20 years, there is a lack of data about low-income women. Thus, the present study aims to estimate the prevalence of women with induced abortion. Women from a population-based household survey in low-income sectors of São Vicente, São Paulo were recruited. Women of childbearing age from 15 to 49 years were eligible. The evaluation of the prevalence ratios for women with induced abortion was performed by using generalized linear models, with Poisson log-link function and robust variance to approximate the binomial. The most frequent variables that influenced reporting of abortion were: "always accept this practice" (95% CI 2.98 - 11.02), followed by "not having a child born alive" (95% CI 1.35 - 19.78), having "two to five live births" (95% CI 1.42 - 14.40), "having 'six or more live births" (95% CI 1.35 - 19.78), "age at interview" (95% CI 1.01 - 1.07) and "income" < R\$ 484.97' (95% CI 1.04 - 2.96). A widespread campaign about the practice of abortion, which can raise awareness among women in favor of the cause, especially among those in low-income strata is necessary to prevent unnecessary deaths.

**Keywords:** Induced abortion. Unsafe abortion. Epidemiology. Poisson Regression. Reproductive health. Poverty.

#### Resumo

No Brasil, o aborto está entre as principais causas de mortalidade materna. Pesquisas mostram que o aborto é praticado clandestinamente por mulheres de todas as classes sociais: no entanto, tem consequências desiguais, dependendo da inserção social, produzindo riscos à vida de mulheres pobres. Embora o tema venha sendo amplamente explorado nos últimos 20 anos, observou-se escassez de dados sobre mulheres de baixa renda. Desta forma, o presente estudo tem por objetivo estimar a prevalência de mulheres com aborto provocado. Arrolaram-se mulheres por inquérito domiciliar de base populacional em setores de baixa renda de São Vicente, São Paulo. Eram elegíveis as mulheres em idade fértil de 15 a 49 anos. A avaliação das razões de prevalência de mulheres com aborto provocado foi realizada por meio de modelos lineares generalizados, usando-se a regressão de Poisson com função de ligação logarítmica e variância robusta para aproximar a binomial. As variáveis que demonstraram ter maior influência no relato de aborto foram: "aceitar sempre esta prática" (IC95% 2,98 - 11,02), seguida de "não ter filho nascido vivo" (IC95% 1,35 -19.78), ter de "dois a cinco nascidos vivos" (IC95% 1,42 - 14,40) e ter de "seis ou mais nascidos vivos" (IC 95% 1,35 - 19,78), "idade no momento da entrevista" (IC 95% 1.01 -1,07) e "renda" < R\$ 484,97 (IC 95% 1,04 -2,96). É necessário campanha de grande abrangência sobre a prática do aborto, que consiga sensibilizar para esta causa todas as mulheres, sobretudo as de baixa renda, evitando assim mortes desnecessárias.

**Palavras-chave:** Aborto provocado. Aborto inseguro. Epidemiologia. Regressão de Poisson. Saúde reprodutiva. Pobreza.

#### Introduction

Every year, all over the world, 20 million women risk their lives by undergoing unsafe abortion procedures, 25% of whom suffer serious health complications, including approximately 66,500 women who die from induced abortion without adequate medical care. The legislation on abortion varies according to the country. Currently, only 26% of the world population lives in countries where abortion is prohibited by law, i.e. the great majority of countries have laws that allow abortion.

The World Health Organization published a document this year that emphasizes among its conclusions that unsafe abortion and the deaths caused by unsafe abortion complications continue to affect the lives of many women, especially in developing countries. Unsafe abortion is the cause of serious health complications and disability for millions of women each year and an important cause of maternal death. Despite the efforts made to meet the 5th Millennium Development Goal - to reduce by three--quarters the maternal mortality ratio between 1990 and 2015 – the percentage of maternal deaths from unsafe abortion remains at 13%. The number of unsafe abortions has increased with the rise in the number of women of childbearing age. This trend will continue unless there is an improvement in women's access to safe abortion and adequate contraceptive methods.

In the particular case of Brazil, induced abortion is considered to be a crime against life in the penal code, including severe punishments against women undergoing the procedure and the individuals who perform it. Only in cases of imminent risk of death and rape is the practice of abortion legally permitted.<sup>2</sup>

Consequently, unsafe abortion is the fourth cause of maternal mortality in Brazil<sup>3</sup>, totaling 11% of all deaths.<sup>4</sup> The risk of death by unsafe abortion is three times higher among black women than white women<sup>5</sup>, probably due to low access to family planning policies aimed at unwanted pregnancy

prevention<sup>5,7</sup>, but especially due to fewer resources to go to illegal abortion clinics, putting their lives in the hands of uncertified midwives or or even self inducing abortion.

At the same time, according to the 2006 *Pesquisa Nacional de Demografia e Saúde* (PNDS – National Demographic and Health Survey), nearly 18.2% of pregnancies were unwanted by Brazilian women. Higher prevalences of unwanted births were found among women who were poorer, black, older and not married/cohabitating, and who had a lower level of education and many children.<sup>6</sup>

In short, there are more unwanted pregnancies among poorer women. Although some women choose to stop their pregnancy at any cost, there are others who end up assuming the responsibility for the birth of their child at an inappropriate time in their lives.

Despite the fact that the issue of abortion has been widely discussed in the last 20 years, there are still few population data, particularly on low-income population. In this sense, the present study aimed to estimate and characterize the prevalence of women aged between 15 and 49 years with induced abortion living in a slum situated in the city of São Vicente, state of São Paulo.

## **Methods**

A cross-sectional study was conducted, based on secondary data derived from a sub-population of women participating in the project entitled "Aborto provocado, fecundidade e contracepção: imbricações com a integralidade em saúde, relações de gênero e exclusão social - Cidade de São Paulo e na Favela México 70" (Induced Abortion, Fertility and Contraception: Associations with Health Comprehensiveness, Gender Relations and Social Exclusion - City of São Paulo and Favela Mexico 70 Community), in late 2008, approved by the research ethics committee of the Universidade Federal de São Paulo (UNIFESP) under number 0196/08.

The Mexico 70 slum is situated in the

southwestern-most part of the island of São Vicente and it is characterized by an illegal settlement of the Navy lands in an area of approximately 30 hectares of flood-prone lowlands, located between the Barreiros and Mar Pequeno bridges in this city. This slum was divided into three areas at the moment of data collection: buildings constructed and administered by the Companhia de Desenvolvimento Habitacional e Urbano do Estado de São Paulo (CDHU – State of São Paulo Housing and Urban Development Company); settlements; and stilt houses present in areas without infrastructure, especially basic sanitation, water services and sewage system. This slum is one of the largest and poorest settlements situated in the Baixada Santista (the metropolitan area that includes the city of Santos), an area with environmental degradation and extreme poverty.

Random household sampling<sup>8</sup> was performed in the original project, including 1,067 women aged between 15 and 60 years, of whom 860 were in the age group of interest. However, the present study emphasized the analysis of the 735 women who have had one or more pregnancies.

Household selection was performed in partnership with the CDHU, which estimated that a total of 6,000 individuals lived in its area of coverage in the Mexico 70 slum. in 2007. Considering that each household, including businesses and churches, was comprised of three people on average, a total of 2,200 households were estimated in the area. The sample included all residential households with even numbers, while those with odd numbers comprised the back-up sample. Of all selected places, researchers decided to interview individuals from every other household, thus totaling nearly 1,100 households visited. In the case of more than one woman in the age group of interest being present, the one whose birth date was closer was selected to respond to the questionnaire. Up to three visits were made before considering a sample loss.

A pre-coded questionnaire was developed and used to collect data. All interviewers

were female university students, as it was easier for them to discuss this issue. They received training on the content, management and application of questionnaires, which included the following: explanation about study objectives; description of the sampling scheme and instructions to identify eligible respondents; detailed description of the questionnaire; instructions on interview techniques; and interview execution.

The instrument was tested by conducting a pilot study, which enabled researchers to observe how easy it was to understand the questions formulated, to assess the interviewers' ability to perform the task attributed to them, and to identify the instructions required, which should be included in the questionnaire application manual.

The database of the sub-sample of the present study was structured using Excel software. Statistical analyses were performed with the SPSS software for Windows, version 17.0. The data were described as numbers and percentages for qualitative variables and as mean and standard-deviation for quantitative variables.

The assessment of prevalence ratios of women with induced abortion was performed with generalized linear models, using Poisson distribution with log link function and robust variance to approximate the binomial9 according to each of the following characteristics: age, paid work, income, level of education, marital status, contraceptive use, number of live births (LB), and acceptance of abortion, among others. The "Acceptance of abortion" categories were as follows: women who do not accept it under any circumstances; those who accept it in specific cases, such as lack of support from the child's father, presence of many children, unfavorable economic conditions, any conditions that prevent mothers from caring for their children adequately, risk of life for the mother and/or child, rape; and those who accept it in all cases, aiming to identify what characteristics were more associated with induced abortion.

Multiple regression analysis of the prevalence ratio was performed according to the factors investigated, using a backward stepwise variable selection strategy and the grouping of levels of factors that are statistically closer to one another. A level of significance () of 5% was adopted in all analyses, i.e. results with a p-value equal to or lower than 5% ( $\leq$ 0.05) were considered to be significant. The strength of association between each of the explanatory variables and the response variable was assessed by calculating the prevalence ratio, followed by the respective 95% confidence interval (95%CI).

#### Results

Among the 860 women aged between 15 and 49 years who participated in this study, the mean age was 32.4 years with a SD of 8.65. Of these, 735 (85%) had already become pregnant and their mean age was 32.9 years with a SD of 8.30. Table 1 shows the prevalence of women who became pregnant according to socioeconomic characteristics.

The lowest prevalences of women with a history of pregnancy were observed in the 15 to 20 year age group (53.5%), with an income higher than one minimum wage (83.3%) and high level of education (74.5%), and who were single (55.5%), did not use effective contraceptive methods (74.2%) and were against the practice of abortion (81.6%).

Table 2 shows the distribution of women who became pregnant according to the presence and absence of induced abortion (IA). The age at interview was shown in this table in a continuous way and, subsequently, as age groups.

Among women who became pregnant, 6.9% had an induced abortion. The highest frequencies of IA were observed in women aged between 40 and 45 years (12.9%), with an income equal to or lower than one MW (9%) and a low level of education (up to the 5th grade of primary school) (11.4%) and who always accepted the practice of abortion (34.8%). With regard to the "number of live births" variable, there was a high risk among women without children and among those

**Table 1** - Prevalence of women who had been pregnant according to socio-economic characteristics - Favela México 70, 2008.

Tabela 1 - Prevalência de mulheres que engravidaram segundo características socioeconômicas – Favela México 70, 2008.

Characteristic	Total number of women	Total number of women	%	PR*	95%CI		$X^2_{w}$	р
	or women	who became						
 Total	860	pregnant 735	85.0					
AGE at interview (in years)*	800	/33	05.0				24.07	0.0005
15   20	71	38	53.5	1			24.07	0.0003
20   25	117	102	87.2	1.63	1.30	2.05	17.65	<0.0001
25   30	187	165	88.2	1.65	1.32	2.06	19.31	<0.0001
30   35	152	139	91.4	1.71	1.37	2.13	22.34	<0.0001
35   40	138	118	85.5	1.60	1.27	2.01	16.31	<0.0001
40   45	112	101	90.2	1.68	1.35	2.11	20.61	<0.0001
45  50	83	72	86.7	1.62	1.28	2.05	16.57	<0.0001
PAID WORK				1.03	0.98	1.09	1.44	0.2298
Yes	428	372	86.9	1.03	0.98	1.09	1.44	0.2298
No	432	367	84.9	1				
INCOME**				1.07	1.01	1.12	5.19	0.0227
≤ 1MW R\$ 484.97	337	299	88.7	1.07	1.01	1.12	5.19	0.0227
> R\$ 484.97	515	429	83.3	1				
LEVEL OF EDUCATION							57.57	<0.0001
Illiterate/Knows how to read	155	149	96.1	1.29	1.21	1.38	55.95	<0.0001
and write/ 1st through 5th								
grades of primary school								
(incomplete/complete)								
6 <sup>th</sup> through 9 <sup>th</sup> grades of	324	302	93.2	1.25	1.17	1.34	44.55	< 0.0001
primary school (complete/								
incomplete) / Secondary								
school (incomplete /complete)	)							
Higher education (complete or	381	284	74.5	1				
incomplete)								
MARITAL STATUS							60.38	<0.0001
Single	182	101	55.5	1				
Not single	678	634	93.5	1.69	1.48	1.92	60.38	< 0.0001
Married	599	555	92.6	1.66				
Separated or widowed	79	79	100.0	1.80				
CONTRACEPTIVE USE							22.24	< 0.0001
Effective method	396	359	90.6	1				
Pill or IUD	292	255	87.3					
Elective sterilization	104	104	100.0					
Not effective	239	209	87.4	0.96	0.91	1.02	1.51	0.2193
Does not use it	225	167	74.2	0.82	0.75	0.89	22.18	<0.0001
ACCEPTS INDUCED ABORTION							5.37	0.0205
Does not accept it	315	257	81.6	1				
Accept it	545	478	87.7	1.08	1.01	1.14	5.37	0.0205
Accept it in some cases	522	455	87.2	1.07				
Always accepts it	23	23	100.0	1.22				

 $RP\ (IC\ 95\%) = Razão\ de\ prevalência\ mulheres\ que\ engravidaram\ (Intervalo\ de\ confiança\ em\ nível\ de\ 95\%)\ /\ prevalence\ ratio\ of\ women\ who\ had\ been\ pregnant\ (95\%\ confidence\ interval);\ \chi^2_{w=}\ Qui-quadrado\ de\ Wald\ /\ Wald\ 's\ chi\ square;\ P=\ valor\ de\ p\ /\ p\ value$ 

<sup>\*</sup>Idade usada como contínua. Age used as continuous.

<sup>\*\*</sup> Foram excluídas 7 mulheres na análise de renda, por terem se recusado/não saber. Seven women were excluded from the income analysis, due to refusing / not knowing.

**Table 2 -** Distribution of women who did not induce and who induced abortion in relation to total number of women who had been pregnant – Favela México 70, 2008 – crude analysis.

**Tabela 2 -** Distribuição das mulheres sem aborto e com aborto provocado para o total de mulheres que engravidaram – Favela México 70, 2008 - análise bruta.

	Total number	Total number					
Characteristics	of women	of women	PR	95% CI IA		$X^2_{w}$	р
Characteristics	who became	with induced	IA			ν w	
	pregnant	abortion					
Total	735	51					
	100.0%	6.9%					
AGE at interview*			1.05	1.02	1.09	11.87	0.0006
Age at interview (in years)						9.97	0.0076
15  25			1				
15   20	38	0					
	100.0	0.00					
20   25	102	3					
	100.0	2.9					
25   30	165	10	2.83	0.79	10.08	2.57	0.1087
	100.0	6.1					
30   35	139	9	3.02	0.84	10.93	2.84	0.0918
	100.0	6.5					
35   40	118	10	3.95	1.11	14.04	4.53	0.0334
	100.0	8.5					
40   45	101	13	6.01	1.76	20.53	8.17	0.0042
	100.0	12.9					
45   50	72	6	3.89	1.00	15.10	3.85	0.0497
·	100.0	8.3					
PAID WORK						0.85	0.3563
Yes	372	29	1.29	0.75	2.20	0.85	0.3563
	100.0	7.8					
No	363	22					
	100.0	6.1	1				
NCOME**						3.63	0.0567
≤ 1 MW R\$ 484.97	299	27	1.68	0.99	2.88	3.63	0.0567
	100.0	9.0					
> R\$ 484.97	429	23					
	100.0	5.4	1				
ESCOLARIDADE						8.37	0.0152
Illiterate/Knows how to read and write/	149	17				8.37	0.0038
1st through 5th grades of primary school		11.4	2.95	1.42	6.13		
(incomplete/complete)							
5 <sup>th</sup> through 9 <sup>th</sup> grades of primary	302	23				3.58	0.0583
school (incomplete/complete)	100.0	7.6	1.97	0.98	3.06	0.00	0.0000
Secondary school (incomplete/	284	11	,	0.70	2.00		
complete) / Higher education	100.0	3.9	1				
(incomplete/complete)	100.0	3.7	'				
MARITAL STATUS						2.42	0.2981
Single	101	9				۷.4۷	0.2701
Single	100.0		1 45	0.72	2.04	1.00	0.2065
Cohabitating		8.9	1.45	0.72	2.94	1.09	0.2965
Cohabitating	555	34	1				
Consented annual des	100.0	6.1	1			1.00	0.4704
Separated or widowed	79	8	1.5-	0 =0	2	1.80	0.1791
	100.0	10.1	1.65	0.79	3.44		

**Table 2 -** Distribution of women who did not induce and who induced abortion in relation to total number of women who had been pregnant – Favela México 70, 2008 – crude analysis. (continuation)

**Tabela 2 -** Distribuição das mulheres sem aborto e com aborto provocado para o total de mulheres que engravidaram – Favela México 70, 2008 - análise bruta. continuação)

	<b>-</b>						
	Total number of women	Total number of women	DD	95% CI IA		$\chi^2_{w}$	р
			PR				
	who became	with induced	IA				
CONTRACEDIUE LICE	pregnant	abortion				4.07	0.4744
CONTRACEPTIVE USE						4.97	0.1741
Pill or IUD	255	11	1				
	100.0	4.3					
Elective sterilization	104	11	2.45	1.10	5.48	4.78	0.0288
	100.0	10.6					
Not effective	209	16	1.77	0.84	3.74	2.27	0.1316
	100.0	7.7					
Does not use it	167	13	1.80	0.83	3.93	2.21	0.1374
	100.0	7.8					
ACCEPTANCE OF INDUCED ABORTION						31.39	< 0.0001
Does not accept it	257	10	1				
	100.0	3.9					
Accepts it in some cases	455	33	1.86	0.93	3.72	3.12	0.0773
	100.0	7.3					
Always accepts it	23	8	8.94	3.91	20.42	27.01	< 0.0001
	100.0	34.8					
LIVE BIRTHS						13.11	0.0044
None	33	5	11.16	2.80	44.54	11.68	0.0006
	100.0	15.2					
One	221	3	1				
	100.0	1.4					
Between two and five	432	37	6.31	1.97	20.23	9.60	0.0019
	100.0	8.6					
Six or more	49	6	9.02	2.44	34.87	10.18	0.0014
5 55.2	100.0	12.2	2.32		5	. 3.10	2.0011

RPAP (IC 95%) = Razão de prevalência do aborto provocado (Intervalo de confiança em nível de de 95%) / prevalence ratio of induced abortion (95% confidence interval);  $\chi^2_{w=}$  Qui-quadrado de Wald/ Wald's chi square; p= valor de p/p value \*Idade usada como contínua/ Age used as continuous.

with six or more live births. "Paid work", "marital status" and "use of contraception" did not show statistical significance.

The results of the final regression analysis model for induced abortion are shown in Table 3.

The variable that had the greatest influence on the practice of abortion was "always accepts abortion" (PR=, p $\leq$ 0.0001, 95%CI 2.98-11.02), followed by "no live births" (PR=, p=0.0002, 95%CI 3.23-46.19), "from two to five live births" (PR-, p=0.0108, 95%CI 1.42-14.40), "six or more live births" (PR=, p=0.0162, 95%CI 1.35-19.78),

"current age" (one year age increment in PR= p=0.0216, 95%CI 1.01-1.07) and "income"  $\leq$  R\$ 484.97 (p=0.0345, 95%CI 1.04-2.96).

### **Discussion**

The present study reveals the sociodemographic characteristics of women with a history of pregnancy, emphasizing those who had an induced abortion, and finally the regression model that exposes the main variables that jointly explain the induced abortion process.

<sup>\*\*</sup>Foram excluídas 7 mulheres na análise de renda, por terem se recusado/não saber. Seven women were excluded from the income analysis, due to refusing / not knowing

**Table 3 -** Final model of log-binomial regression analysis for induced abortion compared to no abortion for women who had been pregnant - Favela México 70, 2008.

**Tabela 3 -** Modelo final de análise de regressão log-binomial para aborto provocado (AP) em relação à sem aborto para mulheres que engravidaram – Favela México 70, 2008.

INDUCED ABORTION					95% Confidence Interval for PR		
Reference – without abortion	χ² <sub>w</sub>	DF	Р	PR	Lower limit	Upper limit	
≤ R\$ 484.97	4.5	1	0.0345	1.76	1.04	2.96	
No live births	13.6	1	0.0002	12.22	3.23	46.19	
Between two and five live births	6.5	1	0.0108	4.52	1.42	14.40	
Six or more live births	5.8	1	0.0162	5.18	1.35	19.78	
Always accepts abortion	27.3	1	≤0.0001	5.73	2.98	11.02	
Current age	5.3	1	0.0216	1.04	1.01	1.07	

 $\chi^2_{\rm w}$  = Quiquadrado de Wald / Wald's qui square ; GL = Graus de liberdade / Degrees of freedom; p = valor de p / p value ; RP (IC 95%) = Razão de prevalência (Intervalo de confiança em nível de 95%) / prevalence ratio (95% confidence interval).

The age group with the highest prevalence of women who became pregnant was that from 30 to 35 years (91.4%), while more than half of the women in the 15 to 20 year age group already had a history of pregnancy (53.5%).

The results found in the *Pesquisa* Nacional de Demografia e Saúde da Criança e da Mulher (PNDS - National Child and Women Health and Demographic Survey)6 referring to the socio-demographic characteristics of women all over Brazil show that the age structure of Brazilian women of childbearing age can be considered as that of a relatively young population, where the less than 30 years age group represents approximately 50% of the entire population. When the mean age of the interviewed women is estimated according to the macro-region of residence, women living in the South, Southeast and Center-West regions had a mean age higher than 31 years, similarly to what was found in the present study, with the 25 to 30 year age group having the highest percentage of women who became pregnant, 22.4%.

With regard to mean income, the present study showed that it was equal to or lower than one MW among 88.7% of women who became pregnant and 9% among those who had an abortion. These results were well below those obtained by the PNDS<sup>6</sup>, where

the Southeast region had a mean income of R\$ 1,674.98 or per household.

In terms of level of education, women who became pregnant and those who had an abortion most frequently reported having completed up to the 5<sup>th</sup> grade of primary school. These results are in disagreement with those found by the PNDS<sup>6</sup>, which showed that 20% of Brazilian women of childbearing age stated that they had completed up to the 5<sup>th</sup> grade of primary school, whereas 50% had more than eight years of education, i.e. they had completed primary school or higher.

With regard to the number of pregnancies and IA, the practice of abortion was high among women who did not have live births and it increased among those who had more than two live births, emphasizing the assumption that the number of abortions is directly associated with the number of pregnancies. In Colombia, Zamudio et al.10 found that housewives had less experience with abortion and that the percentage of women who had abortions also increased with the number of pregnancies. Silva and Fusco<sup>11</sup>, in a study conducted in the Inajar de Souza slum, in the city of São Paulo, found that only 33.3% of women had their first IA during the first pregnancy, whereas 66.6% had induced abortion in subsequent pregnancies, which is in agreement with the

results observed in the present study.

Women living in the Mexico 70 slum had a high fertility rate of 2.5 children per woman. This rate is similar to that found by Sorrentino<sup>12</sup> in the state of São Paulo (2.5) and higher that that found by Yazaki<sup>13</sup> (1.74). However, these results differ from those from the Fundação Seade (São Paulo State Data Analysis System Foundation)14, which shows that the fertility rate of Brazilian women has decreased throughout time, totaling 2.26 children per woman in 1995 and 2.16 children in 2000; and those from Cuba<sup>15</sup>, where there has been a great reduction since the 1970s, reaching a rate of 1.5 children per woman in 1992 and 1.55 in 2000, one of the lowest ones in Latin America. The most important factor for this decrease in fertility was the growing practice of abortion.

The prevalence of IA in the present study was 6.9%, with a higher frequency in the 40 to 45 year age group. This result was higher than that found in the city of São Paulo<sup>16</sup> (4.5%), and lower than those found in the majority of household surveys conducted in this city (8.3% in the district of Vila Madalena<sup>17</sup> and 13.6% in the Inajar de Souza slum<sup>11</sup>). In a household survey conducted in the city of Rio de Janeiro, Martins et. al.18 interviewed 1,784 women aged between 15 and 49 years living in low-income areas, where one third of them reported having had an abortion, of which 16.9% were induced. It could be assumed that the several prevalences found in different studies are due to the methodological peculiarities of each study and to the social and religious factors associated with the local dynamics and response biases caused by fear or prejudice of reporting the practice of abortion.

The final model reveals that the set of variables that explain the decision in favor of abortion are low income, number of LB, age at interview and acceptance of the practice. The following three categories of LB were included in the final model composition, showing an association between induced abortion and the number of live births: no live births (PR=12.22), between two and five live births (PR=4.52), and six or more live

births (PR=5.18). Consequently, this reveals that the number of live births can be a good indicator to predict future fertility. If the number of children considered to be ideal had been asked, the need to improve or not the access to the contraceptive methods available could be assessed.

To have an income ≤ 1MW (R\$484.97 was included in the final model of this study as a factor that was significant (PR=1.76) when correlated to the practice of abortion. Silva and Fusco¹¹ found a significant association between IA and current per capita income (PCI), thus corroborating with the finding from the present study. The same authors also worked with –"spontaneous abortion" and "no abortion" groups and observed that IA was still associated with a lower PCI, when compared to these two groups.

When study participants were asked whether they accepted the practice of abortion, the most frequent response among both women with a history of pregnancy and those who had had an abortion was that they accepted this practice. This is in accordance with what was found by the PNDS<sup>6</sup>, where 66.6% of women who had been pregnant reported that they accepted the practice of abortion.

One of the limitations of the present study, apart from those inherent in cross-sectional studies, was that researchers opted for the presence of an interviewer due to participants' low level of education and possible difficulties in understanding and writing their responses, although this resulted in fewer women reporting the practice of abortion.<sup>21,22</sup>

#### Conclusion

The fact that the highest percentage of women with induced abortion was found among older participants could be justified, as these had been more exposed to the occurrence of an unwanted pregnancy in general. On the other hand, the positive association between the presence of induced abortion and the acceptance of this practice is more difficult to be interpreted, as women

could have had an abortion because they were in favor of this practice or because they began to accept it after having an induced abortion. The cross-sectional design of the study did not enable researchers to find out what occurred first.

However, having no children was considered as a factor that promotes induced abortion and this was very significant, especially because it indicated that poor women aim at low fertility, like wealthier women. Thus, the risk of having an abortion increases by 12.22 times when women have "no children", when compared to those with "one child". Additionally, when considering the fact that, among poor women, the poorest ones are those most frequently having induced abortions, a clear public health deficit stands out in terms of meeting

the contraceptive needs of this population, precisely the ones most affected by the morbi-mortality caused by this practice. It is essential for this field of knowledge to change such situation.

Meanwhile, the legalization of abortion could certainly promote equity, in the sense that not only those who can afford this type of service, but rather all women could be cared for by doctors when facing the extreme situation of deciding for an induced abortion. The low prevalence of women who have had an abortion clearly indicates that this is not routinely performed. Based on the data from countries where induced abortion has been legalized, it is believed that the recurrence of this practice will tend to decrease as effective unwanted pregnancy prevention programs are implemented.

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