National Abortion Survey – Brazil, 2021

Pesquisa Nacional de Aborto – Brasil, 2021

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Abstract *The National Abortion Survey 2021 (PNA 2021) utilized face-to-face structured interviews and a self-administered questionnaire placed in a sealed box to collect data on abortions in Brazil. Interviews were held with a nationally representative sample of 2,000 women, randomly selected from among literate women ages 18 to 39 residing in urban areas. We compared some of the results with previous waves of the survey, PNA 2010 and PNA 2016. Findings show that abortion is in decline but remains a major public health issue. Around 10% of the women interviewed in 2021 said they had had at least one abortion in their lives (compared to 15% in 2010). We estimate that nearly one in every seven women (15%) have had an abortion by the age of 40. We identified a decline in the proportion of women who needed to be hospitalized to finalize their abortions (55% in 2010; 43% in 2021; p = 0.003) and in the proportion of women who used medication for the abortion (48% in 2010; 39% in 2021; p = 0.028). Abortion is an event that generally happens early on in women's reproductive lives: the PNA 2021 found that 52% of women were 19 years old or younger when they had their first abortion. Higher rates were detected among respondents with lower educational levels, Black and Indigenous women, and women residing in poorer regions.*

Key words *Induced abortion, Health surveys, Brazil*

Resumo *A Pesquisa Nacional de Aborto 2021 (PNA 2021) empregou questionários estruturados face a face e um questionário autoadministrado depositado em uma urna para coletar informações sobre aborto no Brasil. As entrevistas foram realizadas em uma amostra representativa de 2.000 mulheres selecionadas aleatoriamente com idades entre 18 e 39 anos e residentes em áreas urbanas. Comparamos alguns dos resultados com ondas anteriores da pesquisa, PNA 2010 e PNA 2016. O aborto está em declínio, porém segue como importante questão de saúde pública. Cerca de 10% das mulheres em 2021 disseram ter feito ao menos um aborto na vida (15% em 2010). Estimamos que aproximadamente uma em cada sete mulheres (15%) teve um aborto aos 40 anos. Houve declínio na proporção de mulheres que foram hospitalizadas para finalizar o aborto (55% em 2010; 43% em 2021; p = 0,003) e na proporção de mulheres que usaram medicamentos para o aborto (48% em 2010; 39% em 2021; p = 0,028). O aborto é um evento que ocorre no início na vida reprodutiva das mulheres: a PNA 2021 constatou que 52% tinham 19 anos ou menos quando fizeram o primeiro aborto. Taxas mais altas foram detectadas entre as entrevistadas com menor escolaridade, negras e indígenas e residentes em regiões mais pobres.*

Palavras-chave *Aborto induzido, Inquéritos epidemiológicos, Brasil*

Introduction

Abortion is only legal in Brazil if the pregnant person's life is at risk, if the pregnancy is the result of a rape, or in cases of fetal anencephaly. Despite these legal restrictions, data from the National Abortion Survey for 2010 (PNA 2010) and 2016 (PNA 2016), which used self-administered questionnaires deposited in sealed boxes ('ballot boxes') to reduce the rate of false answers, found that abortion is a common event in the reproductive lives of Brazilian women[1,2]. According to PNA 2010 and 2016, approximately one in five women had had at least one abortion by the age of 40, with higher rates detected among respondents with lower educational levels, Black and Indigenous women, and women residing in poorer regions[1,2]. PNA 2019, which was conducted only in Northeast Brazil, corroborates these findings regionally[3].

Methods

The PNA 2021 household survey was fielded during November 13-21, 2021. Interviews were held with a representative sample of 2,000 women, randomly chosen from among literate women ages 18 to 39 residing in urban areas. The cluster sampling was done in three stages: 125 municipalities were selected using the probability proportional to size (PPS) method; clusters were next selected from census tracts; and, lastly, a fixed number of people were selected within each cluster, controlling for age, educational level, and employment status. The margin of error was ± 2% and the confidence interval was 95%.

Two data collection instruments were used. The first was a face-to-face structured interview consisting of a series of socio-demographic questions, including age, educational level, household income, type and size of municipality, religion, race, marital status, occupation, and number of live births. The second was a self-administered questionnaire which the respondent filled out and then placed in a sealed box ('ballot box'); this questionnaire asked questions about abortion ("Have you ever had an abortion?", "How many abortions have you had?", "Age at first abortion," "Age at last abortion," "Did you have an abortion in 2020?", "Did you use medication for your last abortion?" and "Did you need to be hospitalized during your last abortion?"). The two questionnaires were linked using cryptographic codes to ensure confidentiality. Unlike PNA 2010 and

PNA 2016, PNA 2021 included a question about the respondent's age at the time of their first abortion. The three PNA surveys used the same sampling design, interview methods, and self-administered questionnaire design. For purposes of analysis, data from PNA 2021 (n = 2,000) were compared with data from PNA 2010 (n = 2,002) and PNA 2016 (n = 2,002), with the p-values for the difference in proportions presented in brackets. The research project was approved by the Research Ethics Committee of the Institute of Human Sciences at the University of Brasília.

Abortion is a cumulative event; therefore, the age structure of the population may affect the results. In order to control this, we present an estimate of the proportion of women who had had one or more abortions by the age of 40. This estimate is based on the adjustment of a trendline obtained by linear regression of the proportion of abortions by age, from 18 to 39 years, and extrapolating the line to the age of 40 years. This line has a constant = - 0.0227, and the parameter for age, = 0.0044 (r^2 = 0.34).

Results and discussion

In PNA 2021, the abortion rate dropped in comparison with the 2010 and 2016 surveys. Table 1 shows that around 10% of the women interviewed in 2021 said they had had at least one abortion in their lives, compared with 13% in 2016 and 15% in 2010 (p = 0.014 for 2016-2021; p = 0.000 for 2010-2021). This finding may reflect the worldwide decline in unwanted pregnancies, including rates in developing countries[4]. Data from Latin America and the Caribbean show an upward trend in the use of reversible and long-acting contraceptive methods, although disparities are more prevalent among women who are younger and poorer, have a lower educational level, are Indigenous, or live in rural areas[5]. Despite the increase in contraception, PNA 2021 found a still high proportion of unintended pregnancies. In 2021, two in every three pregnant women (66%) had not planned that pregnancy (not shown in Table 1).

In 2021, the PNA asked for the first time about the total number of abortions that a woman had had in her reproductive life. Among those who have had an abortion, more than ⅕ (21%) have had two or more abortions (67% had the last abortion between 20-39 years old; 74% among Black women; not shown in Table 1). This data reveals a sub-group of women who face height-

Table 1. Characteristics of women who have had abortions in Brazil, 2010, 2016, and 2021.

Variable	"Have you ever had an abortion?"								
	2010			**2016**			**2021**		
	Yes		**Total**	**Yes**		**Total**	**Yes**		**Total**
	n	**%**		**n**	**%**		**n**	**%**	
All women	296	15	2,002	251	13	2,002	205	10	2,000
Had an abortion the previous year[a]	...	...	...	28	11	251	14	7	205
Used medication to abort	141	48	296	115	48	251	80	39	205
Was hospitalized because of an abortion	164	55	296	115	48	251	88	43	205
Number of abortions	...	...	...	...	...	...	..	..	205
1	...	...	...	...	...	...	154	75	..
2 or more	...	...	...	...	...	...	43	21	..
Did not know/did not answer	...	...	...	...	...	...	8	4	..
Age at first abortion (years)[b]	...	...	...	...	...	...	..	..	205
12-14	...	...	...	...	...	...	13	6	..
15-19	...	...	...	...	...	...	93	45	..
20-29	...	...	...	...	...	...	65	32	..
30-39	...	...	...	...	...	...	15	7	..
Did not know/did not answer	...	...	...	...	...	...	19	9	..
Age at last abortion (years)	..	..	296	..	..	251	..	..	205
13-15	13	4	..	19	8	..	16	8	..
16-19	83	28	..	54	21	..	67	33	..
20-29	132	45	..	102	41	..	79	38	..
30-39	25	8	..	32	13	..	21	10	..
Did not know/did not answer	43	15	..	44	17	..	22	11	..
Current age (years)	296	15	2,002	251	13	2,002	205	10	2,000
18-19	11	6	191	17	9	188	9	5	169
20-24	36	7	483	38	9	445	29	7	434
25-29	84	17	488	50	11	442	45	10	441
30-34	79	17	452	64	14	461	56	13	446
35-39	86	22	388	82	18	466	66	13	510
Race	...	...	...	251	13	2,002	205	10	2,000
White	...	...	...	58	9	676	47	9	529
Black	...	...	...	49	15	322	40	11	372
Brown	...	...	...	129	14	912	109	11	1,010
Asian	...	...	...	8	13	63	5	8	66
Indigenous	...	...	...	7	24	29	4	17	23
Marital status	296	15	2,002	251	13	2,002	205	10	2,000
Married/stable union	188	16	1,140	163	14	1,169	131	11	1,193
Single	91	12	770	63	9	725	58	8	713
Separated/widow	17	19	91	25	23	108	16	18	90
Did not know/did not answer	-	-	1	-	-	-	-	-	4

it continues

ened vulnerability in their reproductive lives and are likely exposed to increased negative health outcomes. Studies have shown that offering post-abortion counseling and increasing access to and availability of contraceptive methods are the most efficient mechanisms to prevent repeated unsafe abortions[6].

Results from PNA 2021 also indicate a decrease in the proportion of women who needed to be hospitalized to finalize their abortions (55% in 2010; 43% in 2021, p = 0.003); the same phenomenon is observed when analyzing the number of hospitalizations at public hospitals over the last ten years that were related to abortion com-

Table 1. Characteristics of women who have had abortions in Brazil, 2010, 2016, and 2021.

Variable	"Have you ever had an abortion?"								
	2010			**2016**			**2021**		
	Yes		**Total**	**Yes**		**Total**	**Yes**		**Total**
	n	**%**		**n**	**%**		**n**	**%**	
Religion	296	15	2,002	251	13	2,002	205	10	2,000
Catholic	175	15	1,168	141	13	1,060	85	10	890
Evangelical/Protestant	72	13	552	63	10	607	65	10	650
Other religion	13	16	80	18	16	113	16	11	140
No religion	35	18	198	27	13	209	32	12	274
Did not know/did not answer	1	25	4	2	15	13	7	15	46
Level of education	296	15	2,002	251	13	2,002	205	10	2,000
≤ 4th grade	44	23	191	25	22	112	9	14	63
5th- 8th grade	80	19	429	54	16	334	44	18	251
High school	115	12	974	114	11	1,007	92	9	1,019
Higher education	57	14	408	58	11	549	60	9	667
Employment status	296	15	2,002	251	13	2,002	205	10	2,000
Yes	179	14	1,260	150	12	1,275	122	10	1,218
No	117	16	742	101	14	727	83	11	782
Monthly household income[c]	296	15	2,002	251	13	2,002	205	10	2,000
≤ USD 233	69	17	402	70	16	442	79	13	624
USD 233-466	92	16	566	90	13	696	52	9	595
USD 467-1,165	103	13	793	61	10	581	49	10	467
> USD 1,165	26	14	184	16	8	199	10	6	174
Not declared	6	11	57	14	17	84	15	11	140
Region	296	15	2,002	251	13	2,002	205	10	2,000
North/Central-West	59	19	308	49	15	336	44	12	352
Northeast	102	20	504	88	18	490	59	12	480
Southeast	110	12	910	96	11	896	88	10	896
South	25	9	280	18	6	280	14	5	272
Type of municipality	296	15	2,002	251	13	2,002	205	10	2,000
State capital	138	21	644	100	16	637	79	12	680
Rural	158	12	1,358	151	11	1,365	126	10	1,320
Size of municipality (population)	296	15	2,002	251	13	2,002	205	10	2,000
≤ 20,000	25	11	238	24	11	210	21	8	248
> 20,000 to 100,000	58	12	469	44	11	413	40	10	384
> 100,000	213	16	1,295	183	13	1,379	144	11	1,368

[a] Question not posed in 2010; [b] question not posed in 2010 or 2016; [c] the monthly minimum wage serves as a reference for defining income brackets in Brazil. In 2022, the minimum wage was BRL 1,212, or roughly USD 233. The brackets in the table correspond to ≤ 1; >1 – 2; >2 – 5; and >5 monthly minimum wages.

Source: Pesquisa Nacional de Aborto 2010; Pesquisa Nacional de Aborto 2016; Pesquisa Nacional de Aborto 2021.

plications[7]. The use of safer abortion methods, the falling abortion rate, or both of these factors may explain these findings[4,8]. Little research has been conducted to date on how the COVID-19 pandemic has affected the fall in hospitalizations[9].

Similarly, PNA 2021 found that the proportion of women who had medical abortions fell, from 48% in 2010 to 39% in 2021 (p = 0.028).

While none of the three surveys asked respondents which specific medication they used to have an abortion, other studies have found that misoprostol is the most common choice in Brazil[10]. One possible explanation to account for the lower rate of medical abortions might be a higher rate of in-clinic abortion care[10,11], especially among middle- and high-income women; how-

ever, this is hard to know given the criminalization of abortion in Brazil.

One important finding from PNA 2021 was the age of respondents at the time of their first abortion: half (52%) were adolescents (19 or younger). Since this population is especially vulnerable to the effects of criminalization on abortion needs[12], the finding demonstrates the critical need for an integrated reproductive justice policy in Brazil, from comprehensive sexual education to the decriminalization of abortion. In gener-

al terms, there was no substantial change in the overall profile of women who had abortions: they reflect all age ranges, religions, educational levels, races, social classes, and geographical regions.

Over the last eleven years (2010-2021), evidence shows that abortion remains a common event in women's lives and a large-scale public health issue in Brazil. A linear extrapolation from PNA 2021 data estimates that nearly one in every seven women (13%) has interrupted a pregnancy by the age of 40.

Collaborations

D Diniz, M Medeiros and A Madeiro participated equally in all stages of preparation of the article.

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