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USE OF CONTRACEPTIVE METHODS BY WOMEN IN BRAZIL: ANALYSIS OF NATIONAL HEALTH RESEARCH 2013

| **Bruno Santos Campos Gomes** | Federal University of Santa Catarina, Brazil. |
| **Alexandra Crsipim Boing*** | Federal University of Santa Catarina, Brazil. *Corresponding Author |

ABSTRACT

To identify the prevalence of contraceptive use among women aged 18 to 49 years and associated factors in Brazil. Data from the National Health Survey. The present study used women of reproductive age from 18 to 49 years (n = 52,069) with a national representative sample as reference population. The endpoint used for the present study was to use some contraceptive method to avoid pregnancy. In the analysis of the factors associated with the use of contraceptive methods, Logistic Regression was used. This study identified a prevalence of contraceptive use of 61.1%, being associated with use was higher in the South region (4.15 times), among women aged 18-29 (3.90 times), with high school (1.84 times), who live with a spouse or partner (49.0%). The study also showed that some factors, such as low schooling, are related to the lower use of contraceptive methods.

INTRODUCTION

Sexual health is gaining increasing attention from public health professionals because of its importance to the health and well-being of the population. Research has shown that the dissemination of information related to sexuality is an issue that requires urgent attention, since unsafe sexual practices pose great risks to the health of the population (Who, 2015). Contraceptive methods are gaining increasing prominence. They have revolutionized sexuality in the last decades of the twentieth century by dissociating the concepts of sexual intercourse and procreation and providing non-contraceptive benefits (Machado, 2014).

In low-income countries, it is estimated that some 225 million women use a modern method of contraception, which is often ineffective due to misuse, either due to lack of sex education, difficulty in accessing methods or any other reason that hinders proper adherence. This misuse of contraceptive methods has contributed to some 74 million unintended pregnancies, 290,000 maternal deaths and 2.9 million newborn deaths each year (Singh, 2014). According to the latest checklist for health plans on quality of contraceptive care made by the World Health Organization (Who) in 2017 it is estimated that about 225 million women worldwide have unmet need for modern contraception (Who, 2017).

In Brazil, in 2006, according to PNDS (National Survey of Demography and Health), the prevalence of contraceptive use was 67.8% and according to National Survey on Access, Use and Promotion of Rational Use of Medicines (PNAUM) (MS, 2009, Rocha, 2016). However, when we refer to the Brazilian reality, the greater prevalence of the use and effectiveness of methods may depend, in addition to educational level, on other factors such as motivation, culture, religion and socioeconomic level, making Brazilian family planning a part of a set of educational actions aimed at women and the family with global and integral health care (Molina, 2015).

The expansion of access not only to women, but to the couple to information and contraceptive methods is one of the essential actions to ensure the exercise of reproductive rights in the country. Due to few studies in the area and national coverage, the present study aims to identify the prevalence of contraceptive use among women aged 18 to 49 years and associated factors.

METHODS

The present study analyzed data from the National Health Survey (PNS), a household survey conducted in Brazil in 2013 by the Brazilian Institute of Geography and Statistics (IBGE) in partnership with the Ministry of Health (MS). The population studied was made up of adult residents aged 18 years and over residing in private households throughout the country. Cluster sampling was used, divided into three stages, with the census tracts as primary units, households as secondary units and an adult (≥18 years old).. After the collection was completed, interviews were conducted in 64,348 households and 60,202 residents had answered the individual questionnaire, which resulted in a non-response rate of 8.1%. The interviews were conducted between August 2013 and February 2014. Additional details on the PNS, the sampling process and instruments used are described in the official survey report (IBGE, 2014).

The present study used women of reproductive age of 18 to 49 years (n = 52,069) as reference population. The outcome of the present study was the use of some contraceptive method to avoid pregnancy, and was obtained by the following question: "Do you use any method of contraception to prevent pregnancy?" (Yes / no). As exploratory variables were used: residence region, age range (18-29, 30-39, 40-49), race / color self-referenced (white, black and brown), schooling (without education, elementary, middle, (yes / no), participation in family planning group (yes / no), yes / no, and community agent visit in the last 12 months (yes / no). In addition, the most commonly used types of contraceptive methods were also checked with: pill; table; male condom; female condom; diaphragm; intrauterine device; injectable contraceptives; implants; cream / ovum; emergency contraceptive and other method to avoid pregnancy.

Data were analyzed in Stata 14 statistical program. Prevalences were described with their respective 95% confidence intervals (95% CI). In the analysis of factors associated with the use of contraceptive methods, logistic regression was used. Initially, a bivariate analysis was performed, with p-value <0.20 being included in the multiple model. The exposures with p-value <0.05 were maintained in the final model. All analyzes incorporated the weights and design effect of complex samples.

RESULTS

It was found that 83.2% (95% CI 82.2-84.2) of women between the ages of 18 and 49 had sexual intercourse in the last 12 months. Among these women, the prevalence of contraceptive use was 61.1% (95% CI: 59.8-62.4), being higher among those 18 to 29 years of age, white with higher education, who did not live with and who never became pregnant (Table 1).

Table 1 – Prevalence of the use of contraceptive methods among women aged 18 to 49 according to sociodemographic variables and related to the health service.Brasil, 2013.

Variables	n (%)	Prevalence of use of contraceptives methods (IC$_{95\%}$)
Region of residence		
Northeast	12,504 (24.0)	51.8 (49.0-54.7)

North	16,356 (31.4)	51.3 (49.0-53.6)
Southeast	11,347 (21.8)	65.9 (63.5-68.3)
South	5,620 (10.8)	73.6 (70.8-76.3)
Midwest	6,242 (12.0)	55.4 (52.6-58.2)
Age group		
18-29	20,786 (39.9)	75.2 (73.5-76.9)
30-39	16,997 (32.6)	57.8 (55.8-59.8)
40-49	14,286 (27.5)	42.8 (40.4-45.3)
Schooling		
No schooling	4,422 (8.5)	41.4 (37.8-45.2)
Fundamental	13,801 (26.5)	51.3 (49.1-53.5)
Medium	21,734 (41.7)	65.9 (64.0-67.7)
Higher school	12,112 (23.3)	69.9 (67.3-72.5)
Live with partner		
Sim	30,984 (59.5)	56.4 (54.9-57.9)
Não	21,085 (40.5)	72.6 (70.5-74.8)
Participation in Family planning group		
Yes	759 (4.3)	66.5 (61.6-71.4)
No	17,050 (95.7)	60.8 (59.5-62.2)
Previous Pregnancy		
Yes	16,811 (74.3)	56.3 (54.8-57.9)
No	5,810 (25.7)	74.6 (72.4-76.9)
Race/color		
White	19,747 (38.5)	65.8 (63.9-67.6)
Black	4,498 (8.8)	55.8 (52.0-59.5)
Brown	26,995 (52.7)	57.1 (55.4-58.9)
Visit the community agente in the last 12 months		
Yes	44,902 (82.4)	58.7 (56.8-60.5)
No	9,612 (17.6)	64.2 (61.0-67.3)
Total	**52,069 (100.0)**	**61.1 (59.8-62.4)**

Among the contraceptive methods used, we found that the three main drugs used were pill (61.6%), condom (36.7%) and female condom (11.1%).

When analyzing the associated factors, it was verified in the crude analysis that the odds of contraceptive use were 2.59 times higher among women living in the southern region. In addition, it was higher among younger, white women with a higher education level. It was also identified a prevalence of about 2 times higher among women who do not live with spouse or partner, 2.28 times, higher among those who already became pregnant, 52.0% higher among whites and about 20.0% among women who did not receive visits from community agents (Table 2).

Tabela 2: Analyse crude and adjusted women aged 18 to 49 years among women who used contraceptive methods and exploratory variables.Brazil, 2013.

Variáveis independents	Crude	Ajusted
Region of residence		
Northeast	1.00	1.00
North	0.98 (0.84-1.13)	1.15 (0.93-1.43)
Southeast	1.80 (1.54-2.10)	2.28 (1.80-2.87)
South	2.59 (2.16-3.11)	4.15 (3.21-5.40)
Midwest	1.15 (0.98-1.36)	1.30 (1.04-1.65)
Age group		
18-29	1.00	1.00
30-39	1.82 (1.59-2.09)	1.76 (1.46-2.12)
40-49	4.00 (3.50-4.68)	3.90 (3.21-4.74)
Schooling		
No schooling	1.00	1.00
Fundamental	1.48 (1.20-1.83)	1.20 (0.92-1.57)
Medium	2.72 (2.21-3.35)	1.84 (1.41-2.38)
Higher school	3.27 (2.60-4.11)	1.79 (1.31-2.44)

Live with partner		
Sim	1.00	1.00
Não	2.05 (1.81-2.32)	1.49 (1.26-1.77)
Participation in Family planning group		
Yes	1.00	*
No	1.28 (0.92-1.78)	
Previous Pregnancy		
Yes	1.00	*
No	2.28 (1.97-2.65)	
Race/color		
White	1.00	*
Black	1.05 (0.86-1.30)	
Brown	1.52 (1.24-1.87)	
Visit the community agente in the last 12 months		
Yes	1.00	1.00
No	0.79 (0.66-0.95)	0.86 (0.16-0.39)
Total		

In the adjusted analysis all variables with significant association in the crude analysis were maintained. The prevalence of contraceptive use was higher in the Southern region, among women aged 18 to 29 years, with higher schooling, living with spouse or partner and who did not receive a visit from the community health agent (Table 2).

DISCUSSION
The present study identified a prevalence of contraceptive use of 61.1% among women aged 18 to 49 years, being associated with macroregion, age, schooling, living with spouse and visiting the community health agent.

The prevalence found was similar to other studies, such as the National Survey of Demography and Health in Brazil (PNDS) of 1996 and 2006, which showed a prevalence of 55.4% and 67.8%, respectively (BEMFAM, 1997, MS, 2009).

According to the National Family Growth Survey The United States, as it has shown in 2012 that the use of long-term contraceptive methods in North American women aged 15-44 is 11.6%. The analysis also points out that the use of these methods has been increasing due to governmental incentive programs and policies (Kavanaugh, 2015). In the same way, although the American study does not address exactly the same age range and also only verify the long-term methods, making a comparison between the prevalences, it can be suggested that in Brazil the incentive programs and governmental policies are being effective.
When we talk about the North region, for example, it probably has a lower prevalence of contraceptive use because it is the less developed region in terms of schooling (Brasil, 2010), and this region is more dependent on the public and private system for access less medical diagnoses generated by difficulties in accessing medical services, and also a probable lower number of places to buy medicines in the private sector than in other Brazilian regions (Bertoldi, 2016).

Regarding age, the study showed that the prevalence of contraceptive use is higher in women between the ages of 18 and 29 years, about 3.9 times more than the upper age groups of the present study. When we compared the use of only hormonal methods, this finding is similar to the results of the Canadian Health Survey in the period between 2007 and 2011 in women between 15 and 49 years of age, which showed a decrease in the use of oral hormonal contraceptive methods with the increasing, being significantly smaller in those older than 35 years (Rotermann, 2015).

Another factor that may corroborate the fact that the prevalence of contraception is lower in women over 29 years is the increase in gestations in women over 35 years. In Brazil, births from women aged 35 years and over increased from 7.95% of the total number

of live births in 1996 to 9.55% in 2006. Data from the Live Birth Information System for the year 2005 show that women aged 35 years or older had 279,190 children born alive, while in 2010 this number was 299,183, an increase of 7.2% (Gonçalves, 2012). This change in the maternal age pattern in which an increase in pregnancies occurs in older women (older than 35 years) associated with a decrease in pregnancies in children under 20 years of age, evidenced not only in Brazil, but also in the whole world, has been shown associated with a better socioeconomic, educational level, marriage delay and lower parity (Tomic, 2008; Carolan, 2011; Mclntyre, 2009), a fact that may explain in part this higher prevalence of contraception use between 18 and 29 years, evidenced in the because a greater number of pregnancies in old age points to a lower use of contraceptives in this range.

Regarding the greater use by women with higher level of education, the result was consistent with the integrative review of 19 articles on contraceptive choice in Brazil, and we can correlate this result with the fact that low schooling is a of the factors that contribute to the non-knowledge of the methods or the non-adherence to them on a regular basis (Santos, 2016). In 2015, the Public Health Department of England evidenced the strong positive relationship between a greater educational level and a greater use of contraceptive methods in adolescents (Girma, 2015). Another important study, which involved the analysis of Demographic and Health Surveys data from 27 sub-Saharan African countries, also showed a strong correlation of contraceptive use in women with more study. The study reports this correlation probably to the fact that women with more schooling are better informed about the various methods and their availability and have greater geographic and financial access to family planning, and these theories are possible explanations of use of contraceptive methods and higher schooling in the present study (Emina, 2014).

Living with the partner was shown to be a factor associated with lower contraception. A possible explanation can be explained from results of a study conducted on the vulnerability to HIV / AIDS in heterosexual couples in the Federal District, which explains that one of the causes of less use of contraception by married or in a consensual union is based on partner issues in the sense that the couple living together believe that they have a higher level of trust between them and that they do not need contraception methods that would also protect them from STDs and become somewhat more vulnerable to acquiring HIV (Maia, 2008) . Another explanation that would add up to answering the reason for the correlation of the lower use of contraceptives with living with the conjugate would be because most of the planned pregnancies, needing sexual intercourse without contraceptives, come from stable couples or that they live together. According to a Brazilian cross-sectional study, with a sample of 23 894 women nationwide, most women who have a desired pregnancy live with their partners (Theme-filha, 2016), corroborating the idea that women who live with their spouses would be more likely to use fewer contraceptive methods, since they may be wanting to get pregnant.

The limitations of the present study include those inherent in any cross-sectional study based mainly on individual reports, and memory bias or the possibility of reverse causation may occur.

Finally, it is worth remembering that the lack of use or inadequate use of contraceptive methods are responsible for thousands of unwanted pregnancies and maternal deaths in the world. Considering the results obtained in the study in question, the low level of education is strongly linked to the lower use of these methods and, consequently, the complications that result. There is also a need for actions aimed at increasing the instructional level of the Brazilian population, avoiding school dropout and ensuring a higher quality of education as a whole.

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