

## SEXUAL BEHAVIORS AND THE USE OF CONTRACEPTIVE METHODS AMONG UNDERGRADUATE FEMALE STUDENTS OF THE HEALTH AREA

### COMPORTAMENTOS SEXUAIS E O USO DE MÉTODOS CONTRACEPTIVOS EM UNIVERSITÁRIAS DA ÁREA DA SAÚDE

### COMPORTAMIENTO SEXUAL Y USO DE MÉTODOS ANTICONCEPTIVOS EN UNIVERSITARIAS DEL ÁREA DE LA SALUD

Maria do Socorro Ribeiro de Araújo Sarmiento<sup>1</sup>  
Jaqueline Carvalho e Silva Sales<sup>1</sup>  
Fernando José Guedes da Silva Júnior<sup>1</sup>  
Adriana da Cunha Meneses Parente<sup>1</sup>

<sup>1</sup> Universidade Federal do Piauí – UFPI, Departamento de Enfermagem, Teresina, PI – Brazil.

Corresponding author: Jaqueline Carvalho e Silva Sales. E-mail: jaqueline-carvalho@hotmail.com  
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## ABSTRACT

This study aimed to describe the sexual behavior and the use of contraceptive methods by undergraduate students in the health area of a public higher education institution. It is a cross-sectional study, developed with 177 students of physical education, nursing, pharmacy, medicine, nutrition and dentistry programs. A questionnaire composed of closed questions was used. The data were arranged for analysis using the Statistical Package for the Social Science software, version 19.0. Univariate analyzes were performed using simple descriptive statistics. In inferential statistics, a bivariate hypothesis test (Chi-square and Fischer's exact test) was applied. The level of significance was set at  $p \leq 0.05$ . The results showed that the female university students had a mean age of 20.5 years; were Catholics from Teresina who had attended high school in public institutions, lived with their families, had no children and had a family income of up to three minimum wages. The use of contraceptive methods in the first sexual intercourse was reported by most university students and the male condom the method chosen by most couples. Regarding the frequency of use of male condom in the previous 30 days, a significant portion stated they had not opted for this method in that period. The use of alcohol and other drugs before the last sexual intercourse had a significant association with the use of contraceptive methods. The present study can help health professionals in the implementation of preventive, curative and educational actions, considering that young people have a sense of empowerment with regard to health that reflects in a reduced demand by this group in the search for services.

**Keywords:** Sexual Behavior; Contraception; Students, Health Occupations; Women.

## RESUMO

Objetivou-se descrever o comportamento sexual e o uso de métodos contraceptivos por universitárias da área da saúde em uma instituição de ensino superior público. Trata-se de estudo transversal desenvolvido com 177 estudantes dos cursos de Educação Física, Enfermagem, Farmácia, Medicina, Nutrição e Odontologia. Utilizou-se questionário composto por questões fechadas. Os dados foram dispostos para análise mediante a utilização do software Statistical Package for the Social Science, versão 19.0. Foram realizadas análises univariadas, por meio de estatísticas descritivas simples. Na estatística inferencial foi aplicado teste de hipóteses bivariado (qui-quadrado e exato de Fischer). O nível de significância foi fixado em  $p \leq 0,05$ . Os resultados mostraram que as universitárias possuíam, em média, 20,5 anos, eram pardas, católicas, procedentes de Teresina, cursaram ensino médio em instituições públicas, residiam com a família, não possuíam filhos e com renda familiar de até três salários mínimos. O uso de métodos contraceptivos na primeira relação sexual foi referido pela maioria das universitárias e o preservativo masculino o método de escolha. Quanto à frequência da escolha do preservativo masculino, nos últimos 30 dias, significativa parcela afirma que nunca optou por esse método. Observou-se que o uso de álcool e outras drogas antes da última relação sexual possui associação significativa com o uso de métodos contraceptivos. O estudo pode auxiliar os profissionais da saúde na implantação de ações preventivas, curativas e educativas, considerando-se que na juventude há um sentimento de empoderamento em relação à saúde, que se reflete em demanda retraída desse grupo na busca pelos serviços.

**Palavras-chave:** Comportamento Sexual; Anticoncepção; Estudantes de Ciências da Saúde; Mulheres.

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## RESUMEN

*Estudio con miras a describir el comportamiento sexual y los métodos anticonceptivos de alumnas del área de la salud de una universidad pública. Se trata de un estudio transversal con 177 estudiantes de los cursos de Educación física, Enfermería, Farmacia, Medicina, Nutrición y Odontología. La recogida de datos se realizó en un cuestionario con preguntas cerradas. Los datos se analizaron mediante el software Statistical Package for the Social Science, versión 19.0. Se efectuaron análisis estadísticos descriptivos univariados. En la estadística inferencial se utilizó la prueba de hipótesis bivariada (chi cuadrado y exacto de Fischer). El nivel de significancia se fijó en  $p \leq 0,05$ . Los resultados indicaron que las alumnas tenían edad promedio de 20,5 años, eran morenas, católicas, de la ciudad de Teresina, egresadas de colegios públicos, vivían con su familia, sin hijos, ingreso familiar de hasta tres salarios mínimos. La mayoría mencionó que en la primera relación sexual optaron por el preservativo masculino. Sobre la frecuencia de uso del preservativo durante los últimos 30 días, gran parte afirmó no haber optado nunca por tal método anticonceptivo. Se observó que el uso de alcohol y de otras drogas antes de la última relación sexual está significativamente asociado con el uso de anticonceptivos. Este estudio podría colaborar para que profesionales de la salud establezcan medidas preventivas, curativas y educativas considerando que en la juventud hay un sentimiento de empoderamiento respecto de la salud que se refleja en la demanda retraída de este grupo en la búsqueda de los servicios.*

**Palabras clave:** Conducta Sexual; Anticoncepción; Estudiantes del Área de la Salud; Mujeres.

## INTRODUCTION

The sexuality of young Brazilians suffers from social, cultural, educational, health, income and gender influences that determine their sexual behaviors.<sup>1</sup> Early sexual initiation and frequent partner change make young people more vulnerable to unwanted pregnancy, abortion and other socioeconomic, psychological and biological problems.<sup>2</sup>

Sexual behavior encompasses several elements, attitudes and positions of the human being related to sex.<sup>3</sup> In this perspective, everyday knowledge and practices related to the use of contraceptive methods and protection against sexually transmitted infections (STIs) are highlighted with regard to the health of young people, since different pathways can be experienced in the juvenile sexual trajectory.<sup>4</sup>

College students, specifically, are considered at-risk group for these problems. Studies carried out with health graduates reveal that although they have knowledge about STIs, they still maintain sexual behaviors considered to be at risk.<sup>2-5</sup> This reality is a reflection of the understanding of youth as a stage of autonomous and emancipatory life. However, immaturity and inexperience are also co-responsible for these behaviors.<sup>6-7</sup>

Therefore, contraceptive methods represent an important mechanism of protection against the possible consequences of sexual risk behaviors. Although there is an increase in condom use in the beginning of sexual life, young people remain as a vulnerable group to STIs because of the occasional and incorrect use. This can be due to several factors, such as the absence of the condom in the moment of the intercourse, the interference of this method in feeling pleasure, as well as the trust relations between partners.<sup>6,8</sup>

In this sense, investigating the sexual behavior and the use of contraceptive methods in the perspective of university female students is relevant, considering that risk behaviors can cause school dropout and limit access to the labor market, compromising the academic and professional trajectory. In addition, the university environment should contribute to the

discussion of cross-cutting issues that affect the life of the university community and which, therefore, lead to the development of health promotion actions.

In this context, the objective was to describe the sexual behavior and the use of contraceptive methods by university female students of the health area in a public higher education institution.

## MATERIAL AND METHODS

This is a cross-sectional study developed at the Health Sciences Center of a federal higher education institution in the city of Teresina, Piauí, Brazil.

The reference population of the study corresponded to 266 female students of physical education, nursing, pharmacy, medicine, nutrition and dentistry programs. The choice of this specific group (university women) was due to their predominance in these programs, as well as the changes in the social roles related to sexual and reproductive health provided by female empowerment.

In order to meet the study objectives, a sample was calculated. We adopted an assumed prevalence of male condom use among young people of 39%,<sup>9</sup> 95% confidence level and tolerable error of 4%, with a sample of 177 students. To maintain the representativeness of the group, a proportional stratification was carried out among the students of the referred undergraduate programs. Thus, a total of 36 nursing students, 36 nutrition students, 32 pharmacy students, 27 physical education students, 25 dentistry students and 21 medical students were recruited. It should be noted that there were no losses of the calculated sample.

The inclusion criteria were being women, aged 18 years and over, enrolled in the first and second semesters of the said programs. Those withdrawn from academic activities due to illness or in institutional exchange were excluded.

Data collection took place from September to November 2016. Students were recruited through a random lottery using the =ALEATORIOENTRE function in Excel 2010 software, con-

sidering the enrollment number available in the Academic Activities Management System (SIGAA in Portuguese).

We used a structured questionnaire composed of closed questions, which allowed the characterization of university students regarding socioeconomic, demographic and family variables, sexual behavior and contraceptive methods. The instrument was developed by the researchers. A pilot test was performed with 10% of the sample (18 university women) for the purpose of testing the instrument. The information from this stage did not compose the database for analysis.

The questions addressed in the instrument were multiple choice. The variables contraceptive methods used in the first relationship and currently used contraceptive methods allowed more than one response.

The instruments were delivered in envelopes and later returned. The participants were informed about the purpose and method of the study and were invited to sign the Informed Consent Form (ICF).

This procedure ensured the confidentiality and privacy of the participants, so that the ethical and legal guidelines related to human research, indicated by Resolution 466/2012 of the National Health Council, were met. The study was approved by the Research Ethics Committee of the *Universidade Federal do Piauí* (Opinion No. 1,687,126).

Data were analyzed using the Statistical Package for Social Science (SPSS), version 19.0. Univariate analyzes were performed using simple descriptive statistics with absolute frequency distribution, simple percentages, and central tendency measures (mean, minimum and maximum) and dispersion measure (standard deviation). The variables age and age of beginning of sexual practice were recoded for analysis purposes.

To verify the association between the qualitative variables, a chi-square test was used, with the aim to select the possible factors that may explain the relation with the use of contraceptive methods. When the frequency of the cells was less than 20% or less than 5, we used the Fischer's exact test. For all other analyzes, the significance level of 0.05 was set for rejection of the null hypothesis, with a confidence interval set at 95%.

## RESULTS

Table 1 shows that the mean age was 20.5 years ( $\pm 3.7$ ). There was a predominance of university students aged between 18 and 21 (79.1%), brown (61.6%), Catholics (66.7%) from Teresina (61.0%), who had attended high school in public institutions (54.8%), lived with the family (72.3%), had no children (95.5%) and had a family income of up to three minimum wages (48.6%).

Table 2 shows that 97.2% of the interviewees were heterosexual, 61.0% had already had sexual intercourse, having started after 16 years of age (54.6%) and with the boyfriend (91.7%). Re-

garding the use of contraceptive methods in the first sexual intercourse, 83.3% said they had used it, and the male condom was the method by 90.1% of the interviewees. The most frequent reason for not using these methods was "not thinking about it at the time" (53.0%). The use of contraceptive methods at the time of data collection was reported by 74.1%, and the male condom (70.3%) and the birth control pill (39.6%) were the most cited.

Table 1 - Sociodemographic and economic characterization of university female students. Teresina, Piauí, Brazil, 2016 (n=177)

Variable	n(%)	$\bar{x}$	$\pm$	95% CI	Min-Max
<b>Age group</b>		20,5	3,7	19,9; 21,1	18; 38
18 to 21 years old	140(79.1)				
22 to 29 years old	27(15.3)				
30 and more	10(5.6)				
<b>Skin color</b>					
White	37(5.1)				
Black	22(12.4)				
Yellow	9(5.1)				
Brown	109(61.6)				
<b>Religion</b>					
Catholic	118(66.7)				
Spiritist	3(1.7)				
Evangelical	27(15.3)				
Others	29(16.4)				
<b>Origin</b>					
Teresina	108(61.0)				
Interior of Piauí state	36(20.30)				
Another state	33(18.6)				
<b>Type of institution in which completed high school</b>					
Private	80(45.2)				
Public	97(54.8)				
<b>Living with</b>					
Family	128(72.3)				
Friends	17(9.6)				
Partner	13(7.3)				
Alone	9(5.1)				
Others	10(5.6)				
<b>Having children</b>		1.1	0.4	0.8; 1.4	1; 2
Yes	8(4.5)				
No	169(95.5)				
<b>Family income (*)</b>					
Up to 3 MW	86(48.6)				
4 to 6 MW	62(35.0)				
More than 6 MW	29(16.4)				

Legend:  $\bar{x}$ =mean,  $\pm$  standard deviation, 95% CI = confidence interval, Min-Max = minimum and maximum, MW = minimum wage and (\*) categorical variable.

Table 2 - Sexual behavior and use of contraceptive methods by university students. Teresina, Piauí, Brazil, 2016 (n=177)

Variable	N	%
<b>Sexual orientation</b>		
Heterosexual	172	97.2
Homosexual	1	0.6
Bisexual	4	2.3
<b>Usually having sexual intercourse</b>		
Yes	108	61.0
No	69	39.0
<b>Age at which started having sexual intercourse (n=108)</b>		
Up to 16 years old	49	45.4
After 16 years old	59	54.6
<b>Degree of relationship with first partner (n=108)</b>		
Boyfriend	99	91.7
Husband	3	2.8
Casual date	1	0.9
Friend	3	2.8
Others	2	1.9
<b>Use of contraceptive method at first sexual intercourse (n=108)</b>		
Yes	90	83.3
No	18	16.7
<b>Contraceptive methods used in the first intercourse (*)</b>		
Male condom	82	90.1
Birth control pill	25	27.5
Calendar Method	1	1.1
Female condom	1	1.1
Morning-After Pill	10	11.0
Withdrawal (Pull Out Method)	2	2.2
<b>Reason for not using contraceptive methods (n=18)</b>		
I had not thought about it at the time	9	53.0
I did not like to use	1	5.9
My partner did not like to use	1	5.9
I did not have it at the moment	6	35.3
Other reasons	1	5.9
<b>Currently using some method (n=108)</b>		
Yes	80	74.1
No	17	15.7
Sometimes	11	10.2
<b>Contraceptive methods currently used (*)</b>		
Male condom	64	70.3
Birth control pill	36	39.6
Calendar Method	8	8.8
Female condom	1	1.1

Continued...

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Table 2 - Sexual behavior and use of contraceptive methods by university students. Teresina, Piauí, Brazil, 2016 (n=177)

Variable	N	%
<b>Contraceptive methods currently used (*)</b>		
Morning-After Pill	6	6.6
Withdrawal (Pull Out Method)	12	13.2
Another method	4	4.4

Legend: (\*) The question allowed more than one answer.

Table 3 showed that 71.2% of the interviewees had had only one partner in the last 30 days, 31.5% said they had not chosen a male condom in the last 30 days, 11.1% had used alcohol and other drugs in the last sexual intercourse and 69.4% had not sought a health practitioner before sexual intercourse.

Table 3 - Risk sexual behavior by university students. Teresina, Piauí, Brazil, 2016 (n=108)

Variable	N	%
<b>Number of partners in the last 30 days</b>		
None	26	24.1
One	79	71.2
Two	2	1.9
Three	1	0.9
<b>Frequency of use of male condoms in the last 30 days</b>		
I have not used it	34	31.5
I have rarely used it	14	13.0
I have sometimes used it	10	9.3
I have used it most of the times	17	15.7
I have always used it	32	29.6
Others	1	0.9
<b>Having used alcohol and/or other drugs in the last sexual intercourse</b>		
Yes	12	11.1
No	96	88.9
<b>Having sought a health practitioner before intercourse</b>		
Yes	33	30.6
No	75	69.4

Table 4 shows the association of the use of contraceptive method with alcohol and/or other drugs during the last sexual intercourse (p-value = 0.04). The use of contraceptive methods was predominant among those who had not used alcohol and/or other drugs at the last sexual intercourse (77.1%).

Table 4 - Association of sociodemographic variables, use of alcohol and other drugs before intercourse and search for health professionals with using contraceptive methods by university students. Teresina, Piauí, Brazil (n=177)

Variable	Use of contraceptives		p-value
	Yes n(%)	No/ Sometimes n(%)	
Program			
Nursing	14(70.0)	6(30.0)	0.54**
Medicine	12(92.3)	1(7.7)	
Nutrition	17(77.3)	5(22.7)	
Dentistry	11(78.6)	3(21.4)	
Pharmacy	13(65.0)	7(35.0)	
Physical education	12(66.7)	6(33.3)	
Skin color			
Yellow	5(71.4)	2(28.6)	0.71**
White	15(78.9)	4(21.1)	
Brown	51(75.0)	17(25.0)	
Black	8(61.5)	5(38.5)	
Religion			
Catholic	57(79.2)	15(20.8)	0.18**
Spiritist	2(66.7)	1(33.3)	
Evangelical	9(75.0)	3(25.0)	
Others	11(55.0)	9(45.0)	
Origin			
Teresina	50(76.9)	15(23.1)	0.08**
Interior of Piauí state	13(56.5)	10(43.5)	
Another state	16(84.2)	3(15.8)	
Having children			
Yes	5(62.5)	3(37.5)	0.44**
No	74(74.7)	25(25.3)	
Having used alcohol and/or other drugs prior to intercourse			
Yes - Alcohol	6(50.0)	6(50.0)	0.04*
No	73(76.8)	22(23.2)	
Having sought a health professional before the first sexual intercourse			
Yes	26(81.3)	6(18.8)	0.25**
No	53(70.7)	22(29.3)	

Legend: \*The p-value was obtained by the chi-square test. \*\* The p-value was obtained by Fischer's exact test. The level of statistical significance was set at  $p \leq 0.05$ .

## DISCUSSION

The participants were university female students with a mean age of 20.5 years, Catholics, from Teresina, who had attended high school in public institutions, lived with the family, had no children and had a family income of up to three minimum wages. These findings corroborate other studies characterizing university female students in Brazil and abroad.<sup>7,10-11</sup>

Most university students said they did not have children. Similar data were found in a study that found that 97.5% of college students did not have children.<sup>6</sup>

A research carried out with students from a public institution in Rio de Janeiro showed that the majority of the participants had income of three to four minimum salaries and had exclusively attended high school in public schools. These data converge with the findings of the present study.<sup>1</sup>

Admission to university is a motivating factor for the expression of previously unexplored dimensions, which includes sexuality. During this period, there is the emergence of new questions on beliefs and values that greatly encourage young people to live autonomously. In this context, the participants were able to declare their sexual orientation and age of onset of their sexual activity, and there was prevalence of heterosexuality and onset of sexual activity after the age of 16.

A study with incoming health students revealed that the age of the first sexual intercourse was between 15 and 18 years old (56.2%).<sup>8</sup> There are differences in relation to the beginning of this practice in the international scenario. In Nigeria, the onset of sexual activity is late, as shown by research conducted at two universities located in the Dar es Salaam, in Tanzania, which found that most participants had begun sexual activity between the ages of 19 and 24 (74.7%).<sup>12</sup>

Regarding the variable degree of relationship with the first partner, the majority of participants in this study claimed it had been a boyfriend. A similar result was found in Rio Grande do Sul, since the majority (87.2%) of the young women had their first sexual relationship with their boyfriend.<sup>4</sup>

The use of contraceptive methods in the first sexual intercourse was reported by most university women, and the male condom was the main method of choice. In the literature, the choice of the condom is associated with the ease of purchase, the low cost, as well as the absence of side effects<sup>13</sup>. This demonstrates that, in addition to prevention of pregnancy, there is concern about the prevention of sexually transmitted infections (STIs), which reinforces the adoption of safe sex practices.

The university students of the present study who had not used contraceptive methods at the first sexual intercourse justified this practice by stating that they "had not thought about it at the time". The fact that young people do not use contraceptive methods adequately and continuously expose them to STIs. A study shows that young people justify the non-use of contraceptive methods by mentioning the causality of sexual intercourses, decrease of pleasure and trust in the partner.<sup>14</sup>

Regarding the current use of contraceptive methods, the university women state that the male condom is the most frequently adopted method, followed by the birth control pill. Similar data have been found in studies conducted at national and international levels on sexual behaviors in public institutions.<sup>5-15</sup>



Thus, in line with the literature<sup>8</sup>, the present study also shows that the university students had had only one partner in the last 30 days.

As for the search for health professionals before beginning the sexual life, most participants emphasized that they had not done it. This data converges with research conducted in another study centered on the demand for health professionals for advice on sexual and reproductive health among young people.<sup>1</sup>

Regarding the frequency of the use of the male condom in sexual intercourse in the last 30 days, a significant portion mentioned that they have never opted for this method. Considering the use of alcohol and other drugs in the last sexual intercourse, most reported not having used it. Data found in a study developed in the Triângulo Mineiro region show that 61.8% had not consumed alcohol and other drugs during sexual intercourse.<sup>8</sup>

However, a study about the sexual behavior of young people in Rio Grande do Sul showed that 10.7% of participants with active sexual life had ingested alcoholic beverages during the last sexual intercourse, which may show different exposures to complications in the sexual behavior of young people.<sup>16</sup>

The use of alcohol and other drugs before the last sexual intercourse has a statistically significant association with the use of contraceptive methods ( $p$ -value = 0.04), and there was prevalence of those who reported not having used alcohol and/or other drugs. In general, alcohol has a modulating effect on sexual practices, with prejudice to safe behaviors for a significant portion of the sexually active population.<sup>17</sup>

The use of psychoactive substances, especially alcohol, leads university students to engage in sexual activity with more than one partner and without the use of a contraceptive method. Among women, the consumption of alcoholic beverages concomitant with the oral hormonal contraceptive method can generate drug interaction and even cancel the effect of the method, besides exposing the university women to unwanted pregnancy.<sup>18</sup>

It is important to reflect that, currently, the phenomenon of drugs has become part of women's daily lives, especially young women, although they have symbolic values and distinct characteristics from the gender perspective. This symbolic perspective demonstrates that for women this practice begins as a seduction/domination tool and for men it is related to mechanisms to strengthen machismo.<sup>19</sup>

In this context, there has been growing concern about women's drinking habits, since although men are still more likely than women to drink heavily and have alcohol-related problems, there has been an expansion of this practice among women, putting them at risk for sexual behavior.<sup>20</sup>

This reality is a reflection of the liberalization of use, economic deregulation of beverages, increased accessibility and availability of alcohol and other drugs, as well as the sophisti-

cated marketing of alcohol and tobacco brands aimed at women, with an emphasis on young women, since they are more susceptible and have a sharpened sense of experimentation.<sup>21</sup>

This reflection can help health professionals to develop a broader and more humanized vision for this group, as well as planning and implementation of preventive, curative and educational actions, considering that young people have a sense of empowerment towards health that reflects on reduced demand for services by this group.

## CONCLUSION

The undergraduate female students had, on average, 20.5 years old, were Catholics, from Teresina, had attended high school in public institutions, lived with the family, had no children and had a family income of up to three minimum wages.

The use of contraceptive methods in the first sexual intercourse was reported by the majority of university students, and the male condom was the main method chosen (90.1%). Regarding the frequency of use of male condom, a significant proportion had not chosen this method in the last 30 days. It was found that the use of alcohol and other drugs before the last sexual intercourse has a significant association with the use of contraceptive methods.

The study had as limitation the choice of only female students and, therefore, the impossibility of making comparisons about sexual behavior and the use of contraceptive methods from a gender perspective.

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