

Sexual function of undergraduate women: a comparative study between Brazil and Italy

Função sexual de universitárias: estudo comparativo entre Brasil e Itália
La función sexual de universitarias: estudio comparativo entre Brasil e Italia

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How to cite this article:

Bezerra KC, Feitoza SR, Vasconcelos CTM, Karbage SAL, Saboia DM, Oriá MOB. Sexual function of undergraduate women: a comparative study between Brazil and Italy. Rev Bras Enferm [Internet]. 2018;71(Suppl 3):1428-34. [Thematic Issue: Health of woman and child] DOI: <http://dx.doi.org/10.1590/0034-7167-2016-0669>

Submission: 02-14-2017

Approval: 12-09-2017

ABSTRACT

Objective: to evaluate the sexual function of Italian and Brazilian nursing students using the Female Sexual Function Index (FSFI), to estimate the prevalence of sexual dysfunctions and related factors. **Method:** this is a cross-sectional study involving 84 Brazilian and 128 Italian undergraduate. For the evaluation of sexual function, the Female Sexual Function Index (FSFI) questionnaire was used. **Results:** Italian women presented significantly higher sexual dysfunction index ($n=78/60.9\%$) than the Brazilian women ($n=32/38.1\%$) ($p=0.00$). Only the “desire” and “excitation” domains showed no difference between groups. Younger, single and without a steady relationship women had a higher rate of sexual dysfunction ($p<0.05$). **Conclusion:** the high rate of sexual dysfunction in a young public suggests the need for more research to increase knowledge about the influence of psychosocial and related factors on female sexual function, directing care towards the promotion of sexual and reproductive health.

Descriptors: Sexuality; Women’s Health; Psychogenic Sexual Dysfunctions; Nursing; Nursing Students.

RESUMO

Objetivo: avaliar a função sexual de acadêmicas de enfermagem italianas e brasileiras utilizando o *Female Sexual Function Index* (FSFI), estimar a prevalência das disfunções sexuais e os fatores relacionados. **Método:** estudo transversal, o qual participaram 212 universitárias, sendo 84 brasileiras e 128 italianas. Para a avaliação da função sexual, empregou-se o questionário *Female Sexual Function Index* (FSFI). **Resultados:** As italianas apresentaram índice de disfunção sexual significativamente superior ($n=78/60,9\%$) do que as brasileiras ($n=32/38,1\%$) ($p=0,00$). Apenas os domínios “desejo” e “excitação” não apresentaram diferença entre os grupos. As mulheres mais jovens, solteiras e sem relacionamento estável apresentaram índice de disfunção sexual maior ($p<0,05$). **Conclusão:** o elevado índice de disfunção sexual em um público tão jovem sugere a necessidade da realização de mais investigações que incrementem o conhecimento sobre a influência dos fatores psicossociais e relacionais na função sexual feminina, direcionando o cuidado para a promoção da saúde sexual e reprodutiva.

Descritores: Sexualidade; Saúde da Mulher; Disfunções Sexuais Psicogênicas; Enfermagem; Estudantes de Enfermagem.

RESUMEN

Objetivo: evaluar la función sexual de académicas italianas y brasileñas de enfermería utilizando el *Female Sexual Function Index* (FSFI), estimar el predominio de las disfunciones sexuales y los factores relacionados. **Método:** estudio transversal, de lo cual participaron 212 universitarias, siendo 84 brasileñas y 128 italianas. Para evaluar la función sexual, se utilizó el cuestionario *Female Sexual Function Index* (FSFI). **Resultados:** Las italianas presentaron índice de disfunción sexual significativamente superior ($n=78/60,9\%$) en comparación con el de las brasileñas ($n=32/38,1\%$) ($p=0,00$). Sólo los dominios “deseo” y “excitación” no presentaron diferencia entre los grupos. Las mujeres más jóvenes, solteras y sin relación estable presentaron un índice de disfunción sexual más alto ($p<0,05$). **Conclusión:** el elevado índice de disfunción sexual en un público tan joven sugiere la

necesidad de realizar más investigaciones que incrementen el conocimiento sobre la influencia de los factores psicosociales y relacionales en la función sexual femenina, dirigiendo el cuidado para la promoción de la salud sexual y reproductiva.

Descripciones: Sexualidad; Salud de la Mujer; Disfunciones Sexuales Psicogénicas; Enfermería; Estudiantes de Enfermería.

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INTRODUCTION

The proper sexual function is an important factor of satisfaction and general quality of life; even so, female sexual dysfunction remains highly prevalent at rates ranging from 20 to 91%⁽¹⁻⁴⁾. Despite the impact on women's lives, few are those who seek health services capable of relieving the difficulties they encounter⁽²⁾.

Because of shame, frustration or failures of subprofessional treatment, only a fraction of women have the initiative to talk about their sexual problems⁽³⁾. In this regard, the World Health Organization (WHO) recognizes sexual dysfunction as a public health problem and recommends its investigation because it causes important changes in the quality of life⁽⁵⁾.

Under different approaches and in various areas of knowledge, the topic of sexuality has attracted attention, being investigated in different groups. In the University, there are still few studies that evaluate the sexual function, however, the investigations already carried out indicate a wide range of prevalence in this population, with rates ranging from 25% to 91%^(4,6-7).

Based on the initiative of the *Núcleo de Estudo e Pesquisa em Promoção da Saúde Sexual e Reprodutiva* (freely translated as Center of Study and Research in Promotion of Sexual and Reproductive Health/NEPPSS) in researching sexual dysfunctions in different populations and the informal verification of university complaints on the subject, the interest arose in identifying and evaluating this issue using a specific instrument called the Female Sexual Function Index (FSFI). Thus, the following question arose: Do Italian undergraduates have the same rate of sexual dysfunction as Brazilian undergraduates?

OBJECTIVE

To evaluate the sexual function of Italian and Brazilian nursing students using the Female Sexual Function Index (FSFI) and to compare the prevalence of sexual dysfunctions (dyspareunia, lack of desire, dissatisfaction and decrease of vaginal lubrication) between groups.

METHOD

Ethical aspects

The Universal Declaration on Bioethics and Human Rights was taken into account, respecting the aspects of autonomy, nonmaleficence, beneficence and justice. The study was authorized by the Ethics Committee of the Federal University of Ceará and *La Sapienza* University.

Design, place of study and period

This is an exploratory, analytical and cross-sectional study developed at two public universities. The population studied was

composed of regularly enrolled nursing students in a Brazilian Federal University and an Italian Public University in the year 2013. The study was carried out from January 2013 to December 2015, with the data collection developed in the city of Rome-Italy and Fortaleza-Brazil, from February to December 2014.

Sample and criteria of exclusion and inclusion

To carry out this research, the probabilistic sampling was adopted. For the calculation, we considered the sample error of 5%, a prevalence of 27% of the phenomenon⁽⁸⁾ for a population of 234 Italian nursing students and 324 Brazilian nurses regularly enrolled in 2013. It should be emphasized that the calculations were made isolated for each population, being a sample of 106 Brazilian and 135 Italian. Inclusion criteria were: Brazilian or Italian nationality, having a steady partner or being over 18 years old.

Due to the objectives of this study, 22 (20.8%) Brazilian women and seven (5.2%) Italian women were excluded from the analysis, making a sample of 212 academics, 84 Brazilian and 128 Italian.

Study protocol

Data collection was developed in the city of Rome-Italy and Fortaleza-Brazil through the Female Sexual Function Index (FSFI) and a form with socio-demographic and obstetric-gynecological variables. The FSFI is a questionnaire originally produced in English⁽⁹⁾ and already validated into Portuguese⁽¹⁰⁾ and Italian⁽¹¹⁾. It is specific and multidimensional, to evaluate the female sexual response, accessing its domains. The questionnaire consists of 19 questions, which report on five domains of sexual response: subjective desire/stimulation, lubrication, orgasm, satisfaction, and pain/discomfort. Individual scores are obtained by summing the items that comprise each domain (simple score), which are multiplied by the factor of that domain and provide the weighted score. The final score (total score: minimum of 2 and maximum of 36) is obtained by the sum of the weighted scores of each domain, and the higher the score the better the sexual function⁽⁹⁾. After the signature of the Consent Term and other procedures of submission by the coordinators of the courses the procedure was approved by the Ethics Committee. The operation of the data collection took place as follows: 1st Stage: the students of each year in a group were clarified on the existence of the research, then they were invited to participate in the study, as the filling of the scale, and the socio-demographic and obstetric-gynecological form could be answered anywhere they trust or feel comfortable or via the internet. At the moment, the Informed Consent was also read, clarifying possible doubts.

Stage 2: After the signature and delivery of the term, the students answered the scale, and the socio-demographic and

gynecological-obstetrical form, via electronic, in their place of preference.

A participant who scored less than or equal to 26⁽¹²⁾ was considered a cutoff point for sexual dysfunction. All the instruments were made available in the online format through the Google Docs application to avoid possible biases, because of intimidation or shame.

Analysis of results and statistics

Data analysis was performed using Statistical Package for Social Sciences (SPSS), version 20 for Windows. First, the Kolmogorov-Smirnov test was applied in order to verify if the continuous variables had a normal distribution. Pearson's χ^2 was used to compare the nominal variables between the groups; and for the continuous variables the Mann-Whitney U test, due to the abnormal distribution of the data. Continuous variables were described on average and 95% confidence interval (95% CI). Pearson's χ^2 was used to verify the association between the dependent variable of the study (sexual dysfunction) and the independent variables (socio-demographic data, personal and obstetrical history, and sexual history). To analyze the strength of the association, we used the *Odds Ratio* (OR) with a 95% Confidence Interval (95% CI).

RESULTS

The age bracket of undergraduates ranged between 18 and 39 years old. The Brazilian women were older and had lower family incomes. The Italians, on the other hand, had their menarche and age of sexual debut earlier ($p < 0.05$) (Table 1).

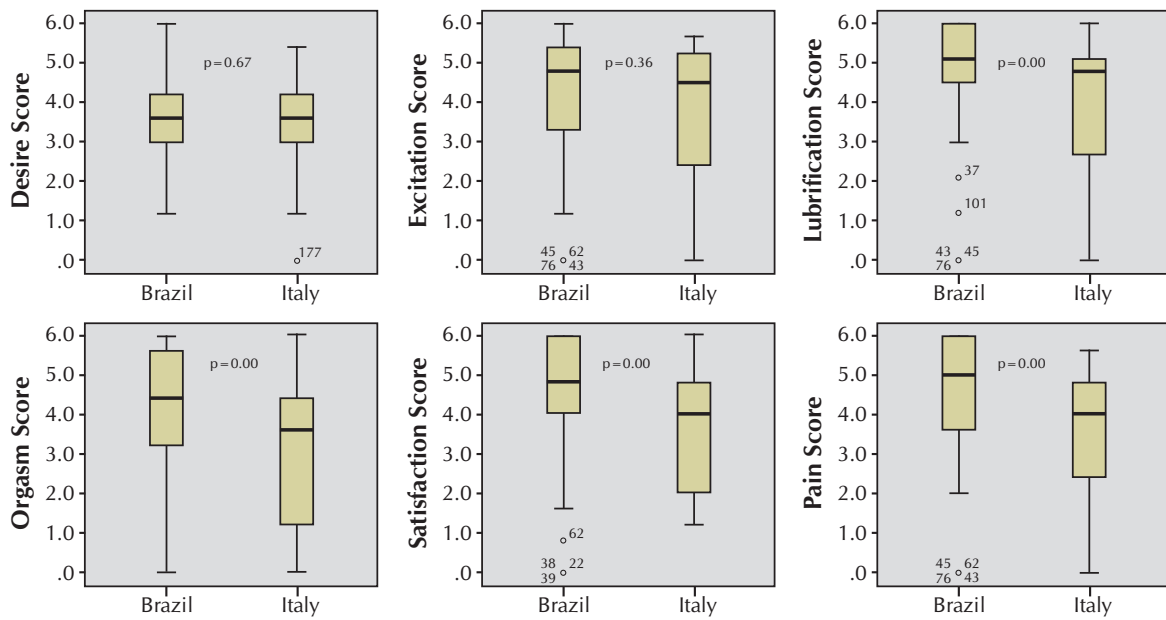
Overall, both Brazilian and Italian women had a mean FSFI score of less than 26, however, the Brazilian sexual function was statistically better (BRA: $M = 25.3$ 95% CI: 23.5-27.2/ ITA: $M = 21.7$ 95% CI: 20.3-23.1) ($p = 0.00$). When analyzed separately, only the "desire" and "excitation" domains showed no difference between the groups (Figure 1).

When analyzed by percentage, the Italians presented more dysfunction ($n=78/60.9\%$) than the Brazilian ones ($n=32/38.1\%$) ($p=0.00$). The domain with the lowest scores for Brazilian women was "desire" ($M=3.6$) and for Italian women it was "orgasm" ($M=3.1$). The domain with the highest scores were "lubrication" ($M=4.6$) and "excitation" ($M=3.8$) for Brazilian and Italian, respectively.

In order to evaluate the factors related to the presence of dysfunction, the sample was divided into two groups: women without ($n=103/48.6\%$) and with dysfunction ($n=109/51.4\%$). Younger, single and without a steady relationship women had a higher rate of sexual dysfunction ($p < 0.05$) (Table 2).

Table 1 – Description of the social and sexual characteristics of the study participants between Brazil and Italy

Variables	Brazilian women (n = 84)		Italian women (n = 128)		P
Age (years)	M=22.9 CI95%:22.3-23.4		M=21.8 CI95%:21.2-22.4		0.00
Income (dólar)	M=1438.46 CI95%: 1220.51-1656.41		M=5081.10 CI95%:4452.73-5709.47		0.00
Menarche (years)	M=11.9 CI95%:11.6-12.2		M=11.6 CI95%:11.3-11.8		0.03
Age of Sexual Debut - ASD (years)	M=18.1 CI95%:17.6-18.6		M=16.0 CI95%:15.6-16.3		0.00
Marital Status	n	%	n	%	0.00
Single	71	84.5	126	98.4	
Married/Common-law marriage	13	15.5	02	1.6	
Children					0.00
Yes	06	5.7	00	0.0	
No	78	94.3	128	100	
Sexual Orientation					0.69
Heterossexual	81	96.4	122	95.3	
Homossexual	03	3.6	06	4.7	
Religion					
Catholic	62	73.8	95	74.2	
Evangelical	09	10.7	10	7.8	
Spiritist	04	4.8	03	2.3	
Agnostic	00	0.0	20	15.6	
Another	09	10.7	00	0.0	



Note: *Mann Whitney test

Figure 1 – Comparison of Female Sexual Function Index (desire, excitement, lubrication, orgasm, satisfaction and pain) domains between Brazilian and Italian women

Table 2 – Association between social and clinical variables and the presence of sexual dysfunction

Variables	Without dysfunction (n = 103/48.6%)		With dysfunction (n = 109/51.4%)		p (Mann Whitney U test)	
Age (years)	M = 22.9 CI95%:22.2-23.7		M = 22.3 CI95%:21.6-22.9		0.01	
Income (dólar)	M = 1438.46 CI95%: 1220.51-1656.41		M = 5081.10 CI95%:4452.73-5709.47		0.21	
Menarche (years)	M = 11.7 CI95%:11.4-12.1		M = 11.6 CI95%:11.2-11.9		0.43	
Age of Sexual Debut (years)	M = 17.1 CI95%:16.6-17.6		M = 16.8 CI95%:16.3-17.3		0.6	
Marital Status	n	%	n	%	p(χ ²)	OR (IC95%)
Single	92	89.3	105	96.3	0.04	0.3 (0.0-1.0)
Married/Common-law marriage	13	15.5	02	1.6		
Children						
Yes	04	3.9	02	1.8	0.36	
Sexual Orientation						
Heterosexual	97	94.2	106	97.2	0.26	
Masturbation						
No	17	44.7	21	55.3	0.60	
Steady relationship						
Yes	94	53.1	83	46.9	0.00 3.2 (1.4-7.3)	
Gynecological examination						
Yes	99	48.5	105	51.5	0.93	
Sexually Transmitted Infection						
Yes	09	47.4	10	52.6	0.91	

DISCUSSION

Although the epidemiological data on sexual dysfunction are widely known worldwide, their values among undergraduates are still insufficient, with unusual investigations evaluating sexuality in undergraduates in Brazil and Italy. The young and vibrant public of undergraduates is concentrated, which most of the time does not have pathologies or signs and symptoms that have a negative impact on quality of life and sexuality⁽¹³⁻¹⁴⁾.

Although the sample had these characteristics, we found high rates (51.4%) of sexual dysfunction (FSFI total scores below 26). When compared to studies conducted specifically with undergraduates, Brazilian women presented the lowest percentages (38.1%), followed by African women (47% to 53.3%)⁽⁶⁻⁷⁾. The Italians presented percentages for the dysfunction, lower only to the Iranian ones (91%)⁽⁴⁾, which reinforces the influence of sociocultural factors on sexuality.

Despite the exhaustive search in the literature, no study was conducted to evaluate the presence of female sexual dysfunctions with nursing students using the FSFI, which is the appropriate instrument to evaluate the risk of sexual dysfunction. However, a study carried out with the objective of evaluating the sexual function of nursing undergraduates used the Female Sexual Function Index (FSFI) as an instrument, in which 28.4% of the students presented unfavorable and bad sexual performance patterns⁽¹⁵⁾.

The prevalence of sexual dysfunction in general populations using FSFI varies widely. In women under 59 years old and with no underlying diseases, prevalence was 43% among American women and 52.8% among Egyptian women⁽¹⁶⁾. In Hong Kong, the incidence is 37.9% of sexual dysfunction among young and middle-aged married women⁽¹⁷⁾. Meanwhile, an internet survey reported a 43.1% incidence of sexual dysfunction among Korean women under the age of 40⁽¹⁸⁾.

It is observed that the prevalence of sexual dysfunctions among the students here was high, when compared with other investigations with non-university women present in the literature, suggesting that despite their degree of knowledge regarding physiology, female anatomy and human sexuality, this population has difficulty in fully and effectively exercising their own sexuality.

It should be noted that prevalence data for sexual dysfunctions, in general, are highly diverse due to the existence of different classificatory systems, methods of evaluation and the population groups in these studies⁽¹⁹⁾.

In relation to "excitation", "lubrication", "orgasm", "satisfaction" and "pain", the data here presented confirms with other studies⁽²⁰⁾ that, when sexual dysfunctions were evaluated it was found that "orgasm" was the most affected domain (55%), followed by "excitation" (40%), "desire" (39%) and "pain" (31%). "Orgasm" and "desire" were also identified as the main domains affected in other studies⁽²¹⁾.

In this study, variables, age, marital status and steady relationship showed significant relationships with the presence or absence of sexual dysfunction. Age was a risk factor especially among younger undergraduates. On the other hand, a previous study outlined the sexual profile of the Brazilian

population and identified that older individuals reported greater dissatisfaction with their quality of sexual life⁽²²⁾. Among the 100 women attending a urology service in São Paulo, age was negatively correlated ($p < 0.001$) with the "satisfaction" and "desire" domains ($p = 0.046$), and the overall FSFI score ($p = 0.044$)⁽¹⁰⁾. Such studies reinforce the assumption that as women age, the higher the possibility of sexual dysfunction due to vaginal atrophy and its consequences⁽²³⁾.

On the other hand, other researchers point out that the prevalence of sexual dysfunction may be higher in single and under 20-year-old women due to dyspareunia, which is higher among younger women⁽²⁴⁾. A study that traced the sexual profile of the Brazilian population in seven cities in the country, said that age, marital status and schooling have long been known to influence the prevalence rates of sexual disorders⁽²²⁾. The results of the present investigation confirm these findings.

It is also worth noting the significant correlation of marital status with the presence or absence of sexual dysfunction. A similar result was found in a study that evaluated sexual dysfunction according to the relationship status (single, steady and married partnership) in young women (20-29 years) through an online survey⁽²⁵⁾. In this study, single women presented a significantly higher prevalence of problems in the "lubrication" ($M = 3.38$, 45.3%), "orgasm" ($M = 3.01$, 53.1%), "satisfaction" ($M = 2.82$, 67.2%) and "pain" ($M = 3.06$, 50%), as well as in the Total Female Sexual Function Index ($M = 19.43$, 60.9%), in comparison with the other groups (steady and married partnership)⁽²⁵⁾.

These findings confirm the importance of the sexual partner in the female sexual performance and of the marital relationships in the satisfactory sexual response⁽²⁶⁾.

Study limitations

The results of this study should be interpreted in light of its limitations. Sexual dysfunction was measured only by self-report and online, not allowing the university to direct the researcher to any questioning, if necessary. Most of the studies only presented data on the incidence of sexual dysfunction, but did not present the specific means of each domain, which compromised the more detailed analysis. It is also worth noting that the absence of a specific clinical diagnosis, which evaluates the organic conditions of the participants involved, that may be influencing the sexual function, may be relevant. Another limitation is that the study applied only the FSFI without associating other tools of clinical evaluation so that it was possible to infer some factor associated with sexual dysfunction.

Contributions to the area of nursing, health or public policy

The study brings as contribution the evaluation of sexual dysfunction, among undergraduates, little investigated in this aspect. The data revealed a surprising rate of dysfunction among undergraduates, which needs to be better investigated, especially as to the type and quality of the sentimental relationships in which they are inserted. In the society in which we live, more sentimental relationships are more fleeting with less commitment and intimacy with the partner. Such factors

may be negatively influencing the promotion of sexual dysfunction in this population.

CONCLUSION

The high prevalence of sexual dysfunction evidenced in this study legitimates the relevance of the subject. From the FSFI scores, it was possible to verify which students have sexual dysfunctions or a greater chance of developing them.

The findings of this study should be analyzed with caution, since the sample was not representative of all geographic regions of the countries involved in the study, and their data cannot be generalized. However, the high incidence of sexual dysfunction in such a young public suggests the need for

further research to increase knowledge about the influence of psychosocial and relational factors on female sexual function, directing care towards the promotion of sexual and reproductive health. A priori, younger women should be more fit and satisfied with their sexual function, but that was not what the study revealed. Among younger women, sociocultural factors may be influencing more than purely biological factors.

FUNDING AND ACKNOWLEDGMENTS

We wish to thank the *Ciências sem Fronteiras* (Science without Borders) Program, the Coordination for the Improvement of Higher Education Personnel - CAPES and the National Council for Scientific and Technological Development - CNPq.

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