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QUALITY OF SEXUAL LIFE IN ADULT AND ELDERLY FEMALE COLLEGE STUDENTS FROM A UNIVERSITY IN AMAZON

Qualidade de vida sexual de estudantes adultas e idosas de uma Universidade da Amazônia

Thiago Afonso Carvalho Celestino Teixeira, Raiza Marques Vieira Campos, Karoline Wayla Costa da Silva, Maira Tiyomi Sacata Tongu Nazima

ABSTRACT

INTRODUCTION: Female sexual function arises from a complex interaction of biological, psychological, and social factors. Few Brazilian studies have addressed sexuality in the elderly population — 10–20% of individuals are sexually active. OBJECTIVES: To compare the overall quality of sexual life and its domains in adult and elderly female college students. METHODS: Female students from the University of Amapá, Brazil, were enrolled in this cross-sectional study. The Female Sexual Quotient (FSQ) questionnaire was used to assess various components of quality of sexual life in adult (34–59 years old) and elderly (60–79 years old) students. The study was approved by the institutional review board. RESULTS: A total of 123, of which 49.6% were married, participated in this study. Mean FSQ score for the elderly group was (n=66) 61.5, classified as “average” and for the adult group 71.6, classified as “partially satisfied” (p < 0.01). Statistically significant differences between adults and elderly groups were also observed for two FSQ domains: “foreplay quality” (p < 0.001), and “objective arousal and harmony with the partner” betters in the adults group (p < 0.05).

CONCLUSION: In this sample, elderly college student showed worst FSQ scores when compared to the adult ones at the same university. Compared to adult women, the quality of sexual life varies more in elderly, probably reflecting age-related morbidities as well as their partners’ health. Adult women report foreplay quality being a strong motivation to continue having sex. In the elderly students, sexual arousal is mainly affected by a lack of vaginal lubrication, which is explained primarily by menopause.

KEYWORDS: quality of life; sexual health; women’s health.

INTRODUÇÃO: Qualidade de vida sexual origina-se da interação entre fatores biopsicossociais. Existem poucos estudos sobre sexualidade em idosas brasileiras — 10–20% são sexualmente ativas. OBJETIVOS: Comparar a qualidade de vida sexual e seus domínios entre estudantes universitárias adultas e idosas. MÉTODOS: Estudantes da Universidade Federal do Amapá (UNIFAP) participaram deste estudo transversal. O Quociente Sexual — versão feminina (QS-F) — foi utilizado para avaliar a qualidade de vida sexual em estudantes adultas (34–59 anos) e idosas (60–79 anos), a qual foi mensurada pelo escore total e por domínios do QS-F. O estudo foi aprovado pelo Comitê de Ética da instituição. RESULTADOS: Um total de 123 mulheres, das quais 49,6% (n = 61) eram casadas, participaram deste estudo. A média do QS-F para o grupo das idosas (n = 66) foi 61,5, classificada como “desfavorável a regular”, enquanto para o grupo de adultas (n = 57) foi 71,6, “regular a bom” (p < 0,01). Foram observadas diferenças estatisticamente significativas entre as mulheres adultas e idosas em dois domínios do QS-F: “preliminares” (p < 0,001) e “excitação pessoal/sintonia com parceiro”, ambos sendo melhores no grupo das adultas (p < 0,05).

CONCLUSÃO: Nessa amostra, as idosas apresentaram piores escores no QS-F quando comparadas a adultas da mesma universidade. Comparadas com o grupo de adultas, a qualidade de vida sexual varia mais nas universitárias mais velhas, reflexo provavelmente das morbididades associadas ao envelhecimento, bem como da saúde de seu parceiro. Acadêmicas adultas reportaram que as preliminares são uma motivação importante para continuar o sexo. Para as estudantes idosas, a excitação é bastante afetada pela diminuição da lubrificação vaginal, decorrente primariamente da menopausa.

PALAVRAS-CHAVE: qualidade de vida; saúde sexual; saúde da mulher.

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INTRODUCTION

The development of reproductive technologies in the 20th century revolutionized female sexuality, encouraging a soaring interest in the quality of sexual life, and increasing the number of scientific publications on sexual behavior and satisfaction. These recent studies focus less on the biological aspects of the diseases/dysfunctions and more on the suffering of women who experience such problems. Sexual dysfunction is usually accompanied by intense anguish, an emotion which constitutes one of the factors that characterize the “disease" aspect of the problem. Among Brazilian women, prevalence rates of low sexual desire, arousal problems, and inability to reach orgasm are 8.2, 26.2, and 26.6%, respectively. Among women aged 40 to 65 years old, 60.6% of them have low sexual desire, 37.0% experience low arousal, and 31.1% report low orgasmic function. Similar results have been reported for older American adults aged 57 to 85 years old; more than a third of women had arousal problems, 22.9% reported lack of sexual pleasure, and 34.9% were unable to climax during sex.

Female sexual function arises from a complex interaction of biological, psychological, and social factors. Many studies have shown the negative effects of aging on the quality of women's sexual life, with a growing prevalence of sexual dysfunction in aging women. Only a small proportion of older women are sexually active, and only 10 to 20% of them have frequent sexual intercourse after their 60s.

Considering the lack of self-administrated, user-friendly and effective national questionnaires capable of evaluating various facets of female sexual function in any age group and all phases of the sexual cycle, the Female Sexual Quotient Questionnaire (FSQ) was developed as an instrument to evaluate the quality of sexual life of Brazilian women. The aims of this study were to evaluate and to compare the overall quality of sexual life and its domains, as measured by the FSQ, in adult and elderly female college students.

METHODS

Study design

This was a cross-sectional, descriptive, and quantitative study conducted in 2014 at the Federal University of Amapá, in Amapá, a city of the Brazilian Amazon. Female college students aged between 34 to 79 years old who had sexual intercourse within six months prior to the study were considered eligible.

Sample

One hundred and twenty-three heterosexual female college students were divided in two groups: the elderly group (60 to 79 years old), and the adult group (34 to 59 years old).

Main outcome measures

The instrument used in this report, the FSQ, is a self-administered questionnaire, designed to measure sexual function and satisfaction with different aspects of female sexuality. It was developed at the University of São Paulo, Medical School’s Institute of Psychiatry, on a sample of Portuguese-speaking women, who were instructed to complete it with regard to their sexual relationships within six months prior to the study. The FSQ consists of 10 questions, with answers given on a five-point Likert scale ranging from 0 (never) to 5 (always). Answers to the seventh question are analyzed differently: their score must be subtracted from 5 to obtain the final score. For the purpose of this study, the FSQ was translated into English (Figure 1).

The scores for all items were summed and multiplied by two, resulting in a final FSQ score based on a 100-point scale that estimates sexual performance and satisfaction as follow: highly satisfied (82–100), partially satisfied (62–80), average (42–60), dissatisfied (22–40), and highly dissatisfied (0–20).

The FSQ questionnaire covers several aspects of female sexual experience, including desire and sexual interest (items 1, 2, and 8), foreplay quality (item 3), objective arousal and harmony with the partner (items 4 and 5), comfort (items 6 and 7), and orgasm and satisfaction (items 9 and 10). Data on age and marital status (married, single, widowed, and divorced) were also collected from the participants. The participants were approached by researchers of the same gender, and the questionnaire was individual and private.

Ethical aspects

All participants were consulted to authorize the use of questionnaires’ information. The aims of the research and the ethical aspects involved were explained, and each participant signed an informed consent form. According to Brazilian National Health Council’s Resolution 466/2012, the project was approved by the Institutional Review Board. (Registered project CAAE No. 26348013.5.0000.0003 and No. 26349313.7.0000.0003). This research was conducted following ethical guidelines of the Declaration of Helsinki.

Statistical analysis

One-way analysis of variance (ANOVA) and Pearson’s \( \chi^2 \) test were used for between-group comparisons of...
primary and secondary outcomes. Significance level was set at $p < 0.05$. Data were analyzed using the Statistical Package for the Social Sciences (SPSS) software, version 21.0 (IBM, Somers).

The primary outcome was the FSQ score and the effect size searched was 0.50 for a 10±20 score difference. A $p < 0.05$ was established as statistically significant for a type I error, and 20% for a type II error in a two-tailed test. In order to obtain a power of 80%, sixty-three subjects were involved in each group.

In order to achieve a superior control of the confounding variable, an Analysis of Covariance (ANCOVA) test was performed. The FSQ score was used as a dependent variable; the relationship status was the independent variable (adult vs. elderly).

The ANCOVA test showed that the difference between the groups remained statistically significant ($p < 0.01$). However, the confounding variables did not show to interfere on the FSQ.

### RESULTS

**Sample characteristics and female sexual quotient questionnaire scores for each group**

One hundred and twenty-three female college students participated in this study. The elderly group ($n = 66$, mean age $= 71.4 \pm 2.0$ years old) comprised 53.6% of the sample. In this group, 50.0% of the subjects were at least 64 years old. The adult group ($n = 57$, mean age $= 46 \pm 5.8$ years old) comprised 46.4% of the sample, and 50.0% of these subjects were at least 45 years old.

The mean FSQ score in the elderly group was classified as “average”, and “partially satisfied” in the adult group. The difference between the two groups was significant ($p < 0.01$) (Table 1).

**Female sexual quotient questionnaire and marital status**

With regard to the marital status, 49.6% of the participants were married, 22.8% single, 16.5% widowed, and 11.1% divorced.

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**Table 1**

<table>
<thead>
<tr>
<th>Question</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Do you usually think spontaneously in sex, remember about it or imagine yourself in sexual intercourse?</td>
<td>Never 0, Infrequently or rarely 1, Sometimes 2, Nearly 50% of the time 3, Most of the time 4, Always 5</td>
</tr>
<tr>
<td>2. Is your interest in sex enough for you to be in the mood to participate in a sexual intercourse?</td>
<td></td>
</tr>
<tr>
<td>3. Foreplay stimulates you to continue sexual intercourse?</td>
<td></td>
</tr>
<tr>
<td>4. Do you usually get wet (lubricated) during sexual intercourse?</td>
<td></td>
</tr>
<tr>
<td>5. During intercourse, as long as your partner’s arousal increases, do you also fell more stimulated?</td>
<td></td>
</tr>
<tr>
<td>6. During intercourse, do you relax the vagina enough to facilitate penetration of the penis?</td>
<td></td>
</tr>
<tr>
<td>7. Do you usually feel pain during sexual intercourse when penis penetrates your vagina?</td>
<td></td>
</tr>
<tr>
<td>8. Can you get involved without being distracted during sex?</td>
<td></td>
</tr>
<tr>
<td>9. Are you able to reach orgasm during sex?</td>
<td></td>
</tr>
<tr>
<td>10. Does your sexual satisfaction encourage you to enjoy sex more frequently?</td>
<td></td>
</tr>
</tbody>
</table>

**Total maximum score: 50**

FSQ total score: $2 \times (Q1 + Q2 + Q3 + Q4 + Q5 + Q6 + [5 – Q7] + Q8 + Q9 + Q10)$, in which $Q =$ question.

**Female Sexual Quotient Scoring:**

- 82–100 (Highly satisfied): I am very sexually satisfied and enjoy my sex life to the maximum.
- 62–80 (Partially satisfied): I enjoy sex, but there is some room for improvement.
- 42–60 (Average): I am concerned that my sexual enjoyment really could be better.
- 22–40 (Dissatisfied): I feel that my sex life does not give me enough satisfaction.
- 0–20 (Highly dissatisfied): I am very concerned that I don’t get any satisfaction from my sex life.

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**Figure 1** Female Sexual Quotient Questionnaire (FSQ).
and 12.6% divorced (p < 0.01). There was a larger proportion of widowed and divorced subjects among the elderly when compared to the adult group (Table 1). In addition, 31.3% of the adult participants were single, compared to 14.3% among the elderly. The proportion of married subjects were 54.7 and 41.3% in the elderly and adult groups, respectively.

For the married subjects, the mean FSQ score was 70.8 ± 19.4, in the elderly group, and 64.2 ± 26.4, in the adult group, both classified as “partially satisfied” (p > 0.05). The mean FSQ score of the widowed subjects in the elderly group was 50.6 (classified as “average”), compared to 86.0 in the adult group (classified as “highly satisfied”) (p < 0.01).

Another important difference was found in the divorced subjects. In the elderly group, the mean FSQ score was 61.1 (classified as “partially satisfied”), and 82.0 (classified as “highly satisfied”) in the adult group (p < 0.01).

**Female Sexual Quotient Questionnaire domains between groups**

The FSQ domain scores for both groups are summarized in Table 2. The mean domain scores for “foreplay quality” and “objective arousal and harmony with the partner” were significantly different between the groups (p < 0.01 and p < 0.05, respectively), better in the younger group than in the older one.

The “foreplay quality” domain scores for both groups are summarized in Table 3. In the adult group, 86.0% of the subjects reported being always or most often stimulated by foreplay, compared to 51.5% in the elderly group. Moreover, 21.2% of the subjects in the elderly group reported that foreplay quality never or rarely stimulated them to continue sexual intercourse (p < 0.001; χ² = 22.7).

Scores for the “objective arousal and harmony with the partner” domain are summarized in Table 3. In the adult group, 65.0% of subjects reported having vaginal lubrication always or most often during sexual intercourse, compared to 48.5% in the elderly group. Furthermore, 30.3% of the subjects in the elderly group reported having problems with vaginal lubrication (p < 0.01; χ² = 16.3).

Compared to the subjects in the elderly group, subjects in the adult group reported experiencing a higher stimulus for intercourse as their partner’s arousal increased (56.0% vs. 61.5%, p < 0.01) (Table 3). A remarkable finding was that no subjects in the adult group reported not being stimulated by an increase in their partner’s arousal, unlike in the elderly group, of which 20.0% of them reported not being stimulated (p < 0.01; χ² = 14.7).

**DISCUSSION**

These data show that the quality of sexual life of adult female college students is better than their elderly colleagues at the same university in Brazilian Amazonia, regardless their marital status (married, divorced or widowed). The adult group has a better performance in two sexual domains: “foreplay quality” and “objective arousal and harmony with the partner”. Moreover, adult female college students are strongly stimulated to continue the sexual intercourse as their partner gets sexually excited, while this arousal has little or no influence for the elderly ones.

### Table 1 Marital status and Female Sexual Quotient Questionnaire scores for each group.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Elderly (n = 66)</th>
<th>Adult (n = 57)</th>
<th>Mean</th>
<th>p-value*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Marital status (%)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Single</td>
<td>14.3</td>
<td>31.3</td>
<td>22.8</td>
<td>0.01</td>
</tr>
<tr>
<td>Married</td>
<td>54.7</td>
<td>41.3</td>
<td>48</td>
<td></td>
</tr>
<tr>
<td>Widowed</td>
<td>30.2</td>
<td>3.1</td>
<td>16.6</td>
<td></td>
</tr>
<tr>
<td>Divorced</td>
<td>14.3</td>
<td>10.9</td>
<td>12.6</td>
<td></td>
</tr>
<tr>
<td>Mean FSQ score</td>
<td>61.5 ± 27.4</td>
<td>71.5 ± 15.1</td>
<td>66.5</td>
<td>0.01</td>
</tr>
</tbody>
</table>

*One-way analysis of variance (ANOVA); FSQ: female sexual quotient questionnaire.

### Table 2 Mean of domains assessed by Female Sexual Quotient Questionnaire comparison between groups.

<table>
<thead>
<tr>
<th>Domain</th>
<th>Elderly group</th>
<th>Adult group</th>
<th>Total</th>
<th>p-value*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Desire and sexual interest</td>
<td>16.3 ± 9.1</td>
<td>18.5 ± 5.1</td>
<td>17.3 ± 7.6</td>
<td>0.12</td>
</tr>
<tr>
<td>Foreplay quality</td>
<td>6.4 ± 3.8</td>
<td>8.7 ± 1.7</td>
<td>7.4 ± 3.2</td>
<td>0.001</td>
</tr>
<tr>
<td>Objective arousal and harmony with the partner</td>
<td>12.0 ± 6.9</td>
<td>146 ± 49</td>
<td>13.2 ± 6.2</td>
<td>0.01</td>
</tr>
<tr>
<td>Comfort</td>
<td>14.1 ± 4.8</td>
<td>15.5 ± 3.7</td>
<td>14.8 ± 4.4</td>
<td>0.07</td>
</tr>
<tr>
<td>Orgasm and satisfaction</td>
<td>12.7 ± 7.5</td>
<td>14.2 ± 4.9</td>
<td>13.4 ± 6.5</td>
<td>0.18</td>
</tr>
</tbody>
</table>

*One-way analysis of variance (ANOVA).
Sex has an important role in the quality of life of elderly people, and it loses importance in the face of insurmountable barriers like the death of a partner or a serious illness. In this study, elderly college students reported their sexual life as "average", while the students in the younger group reported being "satisfied" with their sexual lives. These data show that elderly women are less satisfied and have worse quality of sexual life when compared to their younger peers, even when they have a high educational level.

Some studies didn't report any significant relation between sexual satisfaction and the educational level, while others considered that as an important factor. Laumann et al. analyzed the data of 1,749 women from the National Health and Social Life Survey and reported that high educational level was less associated with sexual problems, especially in women attending high school and college. Also according to the same authors, more educated individuals are healthier and experience less physical and emotional stress, which may contribute to a better sexual function. In our research, due to its being a uniform sample of high educational level (more than 11 years of schooling), this epidemiological factor did not influence the results.

This difference in the quality of sexual life is due to factors inherent to age, such as poor health of both women and their partners, which negatively influence sexuality. Specific aspects of men's health and their role in society influence their life expectancy, causing women to often lose their partners faster than expected, which negatively affects female sexual function. The aging process is associated with diminished libido, possibly resulting from physiological changes. Therefore, menopause is one of the most influential factors in sexual satisfaction and sexual life in general.

Regardless the physiological changes associated to aging, half of elderly women experience some kind of sexual problems, such as low libido, lubrication difficulties, dyspareunia, lack of pleasure or inability to reach orgasm, compared to one third of young and adult women. The prevalence of sexually active people and the frequency of sexual intercourse

<table>
<thead>
<tr>
<th>Variable</th>
<th>Frequency (%)</th>
<th>Total (%)</th>
<th>p-value*</th>
<th>χ²**</th>
</tr>
</thead>
<tbody>
<tr>
<td>Foreplay Quality Domain (item 3)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Never</td>
<td>18.2</td>
<td>-</td>
<td>9.8</td>
<td></td>
</tr>
<tr>
<td>Infrequently or rarely</td>
<td>3.0</td>
<td>-</td>
<td>1.6</td>
<td></td>
</tr>
<tr>
<td>Sometimes</td>
<td>13.6</td>
<td>5.3</td>
<td>9.8</td>
<td></td>
</tr>
<tr>
<td>Nearly 50% of the time</td>
<td>13.6</td>
<td>8.8</td>
<td>11.4</td>
<td></td>
</tr>
<tr>
<td>Most of the time</td>
<td>10.6</td>
<td>31.6</td>
<td>20.3</td>
<td></td>
</tr>
<tr>
<td>Always</td>
<td>40.9</td>
<td>54.4</td>
<td>47.2</td>
<td></td>
</tr>
<tr>
<td>Objective arousal and harmony with the partner domain (item 4)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Never</td>
<td>22.7</td>
<td>-</td>
<td>12.2</td>
<td></td>
</tr>
<tr>
<td>Infrequently or rarely</td>
<td>7.6</td>
<td>12.3</td>
<td>9.8</td>
<td></td>
</tr>
<tr>
<td>Sometimes</td>
<td>16.7</td>
<td>13.9</td>
<td>15.4</td>
<td></td>
</tr>
<tr>
<td>Nearly 50% of the time</td>
<td>4.5</td>
<td>8.8</td>
<td>6.5</td>
<td></td>
</tr>
<tr>
<td>Most of the time</td>
<td>21.2</td>
<td>24.6</td>
<td>22.8</td>
<td></td>
</tr>
<tr>
<td>Always</td>
<td>27.3</td>
<td>40.4</td>
<td>33.3</td>
<td></td>
</tr>
<tr>
<td>Objective arousal and harmony with the partner domain (item 6)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>During intercourse, as long as your partner's arousal increases, do you also fell more stimulated?</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Never</td>
<td>16.7</td>
<td>-</td>
<td>8.9</td>
<td></td>
</tr>
<tr>
<td>Infrequently or rarely</td>
<td>4.5</td>
<td>5.3</td>
<td>4.9</td>
<td></td>
</tr>
<tr>
<td>Sometimes</td>
<td>15.2</td>
<td>22.8</td>
<td>18.7</td>
<td></td>
</tr>
<tr>
<td>Nearly 50% of the time</td>
<td>7.6</td>
<td>10.5</td>
<td>8.9</td>
<td></td>
</tr>
<tr>
<td>Most of time</td>
<td>12.1</td>
<td>26.3</td>
<td>18.7</td>
<td></td>
</tr>
<tr>
<td>Always</td>
<td>43.9</td>
<td>35.1</td>
<td>39.8</td>
<td></td>
</tr>
</tbody>
</table>

*One-way analysis of variance (ANOVA); **Pearson's chi-square (χ²) test.
According to Sadovsky et al., 10 to 20% of women are sexually active even after their 60s, and 30% of healthy female residents of retirement homes had recent sexual intercourse after their 80s.22

Almost half the female college students from our study were married, and 30.0% of the adult group was single when compared to 14.3% of the elderly group. Younger women prefer to stay single and their sexual lives involve higher rates of partner turnover,15 and according to McCaill and Meston, married women are more prone to low sexual desire,7 while Laumann et al. reported that single women experience sexual dysfunction more often than married women.15

We found that the quality of sexual life of married adult and elderly female students were both classified as “partially satisfied”, probably because female sexual desire and habituation to specific sexual stimuli increase with the duration of a relationship.7 Moreover, Oniz showed that women married for over 11 years experience more sexual problems16.

In the subgroup of widowed subjects from our study, the adult group reported better sexual performance than the elderly group. People with good physical health have a higher chance of having a partner or some kind of intimate relationship.6 Therefore, aging-related comorbidities can cause deterioration in the quality of sexual life.

Among divorced subjects, compared to the elderly group, the adult group reported a better quality of sexual life. In 2006, Sadovsky et al. showed that 86% of women between 40 and 49 years old were sexually active and, by contrast, only 13% in the age group between 70 and 80 years old. Reasons reported by older women to explain this situation were: lack of a partner (52%), lack of sexual interest (32%), and opinion of being too old to have sex (12%).22

In the present study, the foreplay quality domain scores showed extreme differences between the two groups. Numerous studies have shown that foreplay quality and orgasm are the most important determinants of sexual satisfaction and that women interpret touch as sexual desire gesture, consequently improving their own libido. Feeling desired by the partner is an important factor for arousal in both women and men.5,16

Colson et al. studied a sample of 1,002 participants and concluded that, during sexual intercourse, multiple orgasms and intimacy are the most important aspects for the majority of participants, followed by foreplay and vaginal penetration.23

Poor foreplay quality correlates better with orgasmic dysfunction and arousal than with sexual satisfaction. This means that some women desire better foreplay activity, targeting a better arousal or reaching an orgasm.24 In this aspect, the present study shows that 85.9% of the adult female college students feel encouraged to continue a sexual intercourse because of foreplay, which is a finding that supports the importance of this domain for sexual function in younger and adult women.

Approximately 21.0% of the elderly female college students never or rarely feel stimulated to engage in sexual intercourse with foreplay. Physiological factors related to aging cause arousal dysfunction and sometimes older women suffer impairment in these preceding stimuli of sexual intercourse because of their own widowhood or their partner’s sexual dysfunction, such as erectile dysfunction or hypoactive sexual desire.6,15

Women report poorer foreplay quality compared to men, showing that women demand more of the emotional sensitivity that accompanies the sexual act from their partners.25 The female sexual response is a process of personal engagement, usually dependent of the partner and his/her desire rather than driven by a particular purpose. Therefore, arousal can precede desire in the female sexual cycle and be the sexual trigger for some women, proving its importance for the quality of sexual life.17-26

Lubrication problems are the second most common sexual complaint in women, reported being present in up to 39% of cases.5,26 In Brazil, 27 to 37% women have arousal problems.4,13

In the present study, 64.9% of the adult female students always or most of the time got lubricated during a sexual act, compared to 48.5% of elderly students. On the other hand, 30.3% of those elderly students never or rarely experienced objective arousal, compared to only 12.3% of the adult students. These findings are similar to those by Pérez-Roncero in women aged 40 to 59 years old.27 Results from several studies are consistent with this difference, which results mainly from difficulties in vaginal lubrication occurred with normal aging processes of women.4

Despite the fact that lubrication is the objective representative of arousal, one may be unaffected even if the other changes. Therefore, it is noteworthy to report that lubrication might not be the best way to evaluate female arousal as a whole. Evaluation of female arousal problems should address both physical as mental arousal, so the prevalence of this dysfunction is uncertain since the questionnaires focused mainly on vaginal lubrication.10,28

The female sexual response is more a process of ageing than an event driven for a goal, and is usually dependent of the partner.4 When a woman feels that her partner is able and has the will to engage in a sexual intercourse, she feels reinforced in her sexual motivation.2 The harmony with the
partner is linked to a decrease in sexual inhibition in women and also decreases the risk of erectile dysfunction in men.\(^5\) In the present study, most adult students felt more stimulated for sex as the partner’s arousal increased, while a considerable number of their elderly peers never felt stimulated to do the same.

Several factors can explain this reduced arousal in elderly women. In this specific population, besides the hormonal factor previously discussed, significant portion of their partners could have sexual dysfunction and, therefore, many elderly couples adapt their priorities and sexual practices so as to cope with the changes in physiological response.\(^8\) Yiou et al. reported that female partners of men with erectile dysfunction have a significantly decreased libido, satisfaction, lubrication, and orgasms in comparison with female partners of men with normal erectile function.\(^23\) Another study showed that more than 90% of female sexual activity involves a partner, who is responsible for the beginning of the sexual intercourse in 50% of cases.\(^30\)

Satisfaction reflects a feeling of gratitude and corresponds to a positive emotional response to the fulfillment of a wish, necessity or expectancy.\(^18\) Therefore, sexual activity is influenced by partner presence and his overall health and sexual function.\(^2,4,8,14,30\)

### Limitations and strengths

This study doesn’t identify risk factors to low FSQ score such as comorbidities or lifestyle habits. In addition, to perform a complete analysis of quality of sexual life, younger groups would be required.

This research executes a free observation of variables, with no interventions. We point out that participants were approached by researchers of the same gender and the questionnaire was individual and private. We corrected the confounding variables avoiding any interference on the results.

### CONCLUSION

In this sample, elderly college female students have worst FSQ score when compared to their younger colleagues at the same university in Brazilian Amazon. It probably can be justified by senescence, comorbidities and partner’s health. Widowed or divorced elderly college students have a poorer sexual satisfaction compared to widowed or divorced adult peers, reflecting difficulties or even a lack of interest in searching for a new partner, because even these older college students usually consider themselves unsuited to a sexual relationship. The adult female college students are strongly stimulated by foreplay to begin or maintain a sexual intercourse, while in elderly students arousal is directly dependent on vaginal lubrication, which declines with menopause.

### CONFLICT OF INTEREST

The author(s) report no conflicts of interest.

### REFERENCES


