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Research Article

Female Sexuality in a University Population: An Observational Study

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Abstract

Background: Sexuality is a fundamental dimension of women's health and quality of life. Despite its importance, published evidence on the prevalence and nature of sexual difficulties in the Portuguese female population remains limited. This study aimed to determine the prevalence of sexual difficulties, their comorbidity, and the level of associated sexual distress.

Methods: This observational, cross-sectional, descriptive study enrolled 60 female students from the University of the Algarve aged 18–25 years. Participants completed a sociodemographic questionnaire together with three validated instruments: the Female Sexual Function Index (FSFI), the Female Sexual Distress Scale–Revised (FSDS-R), and the Sexual Satisfaction Scale for Women (SSS-W). Descriptive analysis of prevalence and comorbidity of sexual difficulties was performed.

Results: At least one sexual difficulty was identified in 75% of participants. Lack of sexual desire/interest was the most prevalent difficulty (42%), followed by difficulty achieving orgasm (37%), dyspareunia (22%), lubrication difficulties (10%), and arousal difficulties (7%). Regarding sexual satisfaction, 27% of participants reported dissatisfaction with their current sex life, while 7% reported distress attributable to their sexual difficulties.

Conclusions: Sexual difficulties are highly prevalent in this cohort of young, highly educated women, although only a minority report associated sexual distress. These findings underscore the importance of promoting sexual health information and open discussion, specifically targeting this age group.

Introduction

According to the World Health Organization (WHO), sexuality is defined as “a central aspect of being human throughout life” encompassing “sex, gender identities and roles, sexual orientation, eroticism, pleasure, intimacy and reproduction,” and influencing “thoughts, feelings, actions and interactions, and thereby mental and physical health” [1]. Despite its centrality to well-being, sexual health — particularly in women — has historically received insufficient clinical attention. Sexual disorders, including lack of sexual desire/interest, inability to achieve orgasm, and pain during intercourse, are relatively common yet remain underdiagnosed and undertreated [2].

Globally, the prevalence of sexual difficulties in women is estimated to range from 25% to 63%, with the most frequent: lack of sexual desire/interest, lubrication deficits, and orgasmic dysfunction [4,5,7,8].

In the United States, approximately 43% of women report sexual difficulties [4], and studies from the United Kingdom document rates of 40–41% [5,6]. A Portuguese study found that approximately 38% of women report at least one sexual problem, with rates of 40–74% [3,7]. Data on sexual difficulties by sexual orientation are inconsistent: some studies suggest that lesbian women experience sexual difficulties less frequently than heterosexual women, while others find no significant differences across heterosexual, lesbian, and bisexual women [9,10,11].



Female sexuality is multifactorial and multisystemic, shaped by biological, sociocultural, ethical, religious, psychological, and interpersonal determinants; adequate sexual functioning requires a balance among these factors. The female sexual response cycle [12] has been extensively studied, and any disruption of its phases may give rise to sexual dysfunction. The Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM-5 TR), defines sexual dysfunction as a clinically significant disturbance in one or more phases of the sexual response cycle — desire, arousal, orgasm, or genitopelvic pain — that prevents the individual from engaging in or deriving satisfaction from sexual activity [13].

Most epidemiological studies of sexual difficulties have sampled broad age ranges. University student populations, however, present distinctive characteristics: entry into higher education represents a major transitional period marked by new personal, social, emotional, and academic challenges that may influence sexual behavior and experience [14]. A targeted investigation of this population is therefore warranted. This study sought to determine the prevalence and comorbidity of sexual difficulties and the level of associated distress in a female university population.

Given previous epidemiological findings and the psychosocial characteristics associated with university populations, we hypothesised that sexual difficulties would be highly prevalent among young female university students, particularly difficulties related to desire and orgasm, but that only a minority of participants would report clinically significant sexual distress associated with these difficulties.

Material and methods

Study design and setting

This was an observational, cross-sectional, descriptive study conducted during March and April 2022 at the University of the Algarve, a public higher education institution located in southern Portugal. Recruitment occurred across multiple campus locations frequented by undergraduate and postgraduate students. It was approved by the Ethics Committee of the University of the Algarve (approval number: 07/2022).

All participants provided written informed consent. Participation was voluntary, and responses were fully anonymised.

The manuscript was written according to the Strengthening the Reporting of Observational Studies in Epidemiology (STROBE) guidelines for cross-sectional studies [15]. A completed STROBE checklist is provided as supplementary material.

Participants

Eligible participants were female students aged 18–25 years enrolled at the University of the Algarve. The final sample consisted exclusively of participants who self-identified informally as cisgender during recruitment and participation

procedures; however, gender identity was not formally assessed using structured questionnaire items. A convenience sample of 60 participants was recruited through random distribution of paper-based questionnaires across the campus. Students who did not meet the age criterion or who declined to provide informed consent were excluded.

Instruments

Data were collected using the following instruments:

- (1) Sociodemographic and gynecological history questionnaire — developed specifically for this study. Variables included: level of education, employment status, duration of current intimate relationship, area of residence, age at menarche, use of contraception (method and duration), and history of infertility.
- (2) Female Sexual Function Index (FSFI) — a validated Portuguese-language, 19-item questionnaire assessing six domains of sexual function: desire (items 1–2), subjective arousal (items 3–6), lubrication (items 7–10), orgasm (items 11–13), satisfaction (items 14–16), and sexual pain (items 17–19). Higher scores indicate better sexual function; a total score ≤ 26.55 is considered the clinical threshold for sexual dysfunction risk. The Portuguese-validated version demonstrated good psychometric properties, with high internal consistency (Cronbach's alpha values between 0.88 and 0.93), in addition to convergent and discriminant validity [16,17]. We should also point out that several FSFI items assess related but conceptually distinct dimensions of sexual functioning. To improve interpretability, the present study distinguished between behavioural frequency indicators and subjective appraisal measures when describing results. Specific FSFI items were selected a priori to operationalise prevalence estimates because they most directly reflected frequency-based symptom occurrence. Complementary items within the same domains were analysed descriptively to provide additional contextual information regarding subjective satisfaction, confidence, or perceived severity.
- (3) Female Sexual Distress Scale–Revised (FSDS-R) — a 13-item scale that quantifies distress arising from sexual difficulties. It consists of 13 items related to possible situations causing discomfort related to sex in women. For each item, one of the five possible answers must be selected related to the frequency with which each situation bothered the individual in the last 30 days: “Never” (0), “Rarely” (1), “Occasionally” (2), “Often” (3), and “Always” (4). The final score is obtained through the sum of the items, which can range from 0 to 52, where the higher the score, the higher the level of discomfort. A score above 11 corresponds to a high level of distress. The Portuguese-validated version demonstrated good psychometric indices, internal consistency with Cronbach's alpha values > 0.88 , and discriminant validity. [18,19].

(4) Sexual Satisfaction Scale for Women (SSS-W) — a 30-item questionnaire that aims to assess female sexual satisfaction and discomfort associated with sexual difficulties, evaluating five dimensions: contentment, communication, compatibility, relational concern, and personal concern. It is answered according to a five-point Likert scale (Strongly agree (1); Agree (2); Neither agree nor disagree (3); Disagree (4); Strongly disagree (5)). The total score varies between 6 and 30 values and is obtained by adding the items from each domain, with the relational and personal concern domains being added later, and this value is divided by 2. Higher scores reflect higher levels of sexual satisfaction. The validated Portuguese version demonstrated adequate psychometric properties and can be used as a valid and reliable measure for assessing sexual satisfaction in women: it had an overall Cronbach's alpha of approximately 0.94, and Cronbach's alpha values exceeding 0.80 for the individual domains [20,21]. Internal consistency reliability of the FSFI, FSDS-R, and SSS-W within the present sample was also assessed using Cronbach's alpha coefficients.

Procedure

Questionnaires were administered in paper format in university common areas and classrooms during March–April 2022. Potential participants were approached in person by members of the research team and invited to participate voluntarily. Before questionnaire completion, participants received verbal and written information regarding the study objectives, confidentiality procedures, and anonymity of responses. Participants completed the questionnaires individually in a self-administered format without researcher interference. No identifying personal information was collected. Completed questionnaires were returned anonymously.

The total number of returned questionnaires confirmed the sample size. Following data collection, quantitative analysis was performed according to the following variable groups:

- I. Sociodemographic: Academic degree, marital status, area and region of residence, existence of a current intimate relationship.
- II. Gynecological History: Age at menarche; use of contraception, method and duration of use; presence of known infertility, type and etiology.
- III. Sexual Difficulties: Lack of sexual desire/interest; Difficulties with sexual arousal; Difficulties in reaching orgasm; Genito-pelvic pain (dyspareunia); Lubrication deficit; Satisfaction with sex life (Figure 1).

The Sociodemographic Questionnaire used is available in Supplementary Material 2. Due to copyright restrictions associated with the validated psychometric instruments used in this study (FSFI, FSDS-R, and SSS-W), full questionnaires are not reproduced. However, operational definitions and questionnaire domains relevant to the present analyses are described above.

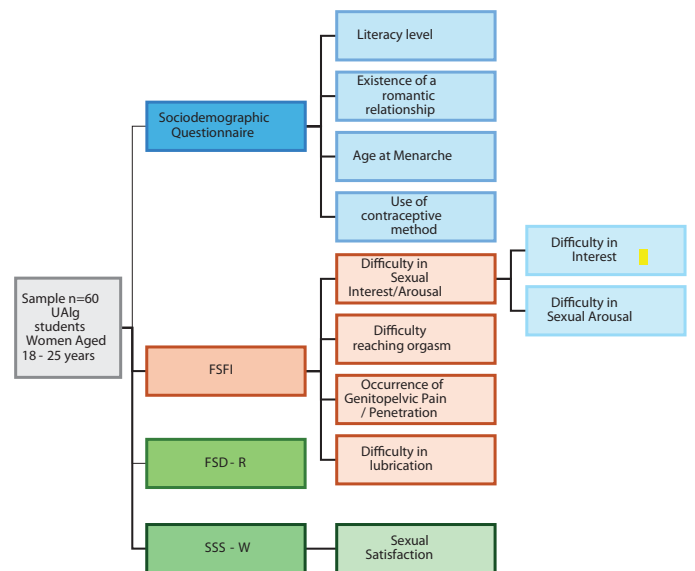


Figure 1: Scheme of applicability of questionnaires to the variables under study.

No sampling process was carried out. The number of responses confirmed the sample.

Outcome definitions

Frequency distribution tables were constructed. Selected individual FSFI items were used to estimate the prevalence of specific sexual difficulties rather than calculating formal FSFI domain dysfunction classifications. This approach was chosen because the primary objective was descriptive and exploratory, focusing on the frequency of self-reported difficulties in specific phases of the sexual response cycle within a young university population. Individual FSFI items were therefore used as symptom indicators rather than diagnostic measures. The present findings should be interpreted as reflecting self-reported sexual difficulties rather than clinically established sexual dysfunctions.

Sexual difficulty in each of the six domains was operationalised as follows: for desire/interest (item 1), arousal (item 3), lubrication (item 7), and orgasm (item 11), a difficulty was recorded when responses indicated the difficulty occurred in approximately half or more of sexual encounters. For dyspareunia (item 17), a difficulty was recorded when pain impeded penetration in approximately half or more of encounters. Although DSM-5 TR requires symptoms to be present in $\geq 75\%$ of encounters for a clinical diagnosis, the present study adopted a 50% threshold to capture borderline or transient difficulties. Severity was classified as borderline/transient (approximately 50% of encounters) or moderate-to-severe ($\geq 75\%$ of encounters) (Table 1).

Sexual satisfaction was determined by item 6 of the SSS-W: "I feel satisfied with how my sex life is currently." Responses of "reasonably satisfactory," "very satisfactory," or "completely satisfactory" were classified as satisfied with their sexual life, and those who answered "not at all satisfactory" or "not very satisfactory" were considered as dissatisfied.



Table 1: FSFI items used to operationalise each sexual difficulty

Difficulty	FSFI Question
Desire / Interest	1 – "How often have you felt sexual desire or interest?"
Sexual Arousal	3 – "How often have you felt sexually excited during any sexual activity or relationship?"
Lubrication	7 – "How often have you been lubricated (wet) during any activity or sexual intercourse?"
Orgasm	11 – "When you had sexual stimulation or sexual intercourse, how often did you reach orgasm (climax)?"
Dyspareunia	17 – "How often have you felt pain or discomfort during vaginal penetration?"

of the five domains evaluated in this study: difficulty in desire/interest, difficulty in sexual arousal, difficulty in reaching orgasm, genito-pelvic pain, and difficulty in lubrication (Figure 2).

The most prevalent difficulty was lack of sexual desire/interest, affecting 42% of participants (n = 25). Difficulty reaching orgasm ranked second, with a prevalence of 37% (n = 22). Genito-pelvic pain (dyspareunia) was present in 22% (n = 13), followed by lubrication difficulties (10%) and arousal difficulties (7%).

Statistical analysis

Statistical analysis was performed using IBM SPSS Statistics® software, version 28 for Mac IOS®.

Associations between categorical variables were evaluated using Pearson’s chi-square test or Fisher’s exact test when expected cell frequencies were small. Statistical significance was defined as $p < 0.05$. Chi-square statistics are reported with corresponding degrees of freedom and p-values. Given the exploratory nature of the study and the limited sample size, inferential analyses were interpreted cautiously.

The study design and statistical approach were selected in accordance with recommendations for exploratory cross-sectional observational studies using self-report psychometric instruments and categorical prevalence outcomes.

Results

Sample characteristics

Sixty cisgender, heterosexual female students were enrolled. All participants reported being unmarried/single in terms of marital status, although 57% reported currently being in an intimate relationship. Sociodemographic and gynecological characteristics are presented in Table 2. The majority were pursuing higher education (73.3%), living in urban areas (74.6%), and residing in the Algarve Sotavento region (59.3%). More than half (56.7%) were in an intimate relationship, and 68.3% were using contraception — predominantly hormonal methods (86.8%).

Sexual function

The psychometric instruments demonstrated satisfactory internal consistency in the present sample. Cronbach’s alpha coefficients were 0.83 for the FSFI, 0.91 for the FSDS-R, and 0.81 for the SSS-W, indicating good-to-excellent reliability.

The mean total FSFI score was 28.14 (SD 6.92; maximum 36), indicating overall adequate sexual function, as scores ≤ 26.55 are considered to indicate dysfunction risk. At least one sexual difficulty was identified in 75% of participants; 33% reported two or more concurrent difficulties.

Prevalence of individual sexual difficulties

Sexual difficulty was defined as the presence of at least one

Table 2: Sociodemographic and Reproductive Characteristics of the Sample (N=60).

Variable	n (%) or Mean \pm SD [Median (IQR)]
Education Level	
High school (12th grade)	16 (27%)
Higher education	44 (73%)
Employment Status	
Student only	51 (85%)
Student and employed	9 (15%)
Area of Residence (n = 59)	
Urban	44 (75%)
Rural	15 (25%)
Region of Residence (n = 59)	
Algarve Sotavento	35 (59%)
Algarve Barlavento	5 (9%)
Outside Algarve	19 (32%)
Marital Status and Relationship Characteristics	
Single/unmarried	60 (100%)
Currently in an intimate relationship	34 (57%)
Menstrual History	
Age at menarche, years	12.3 \pm 1.8 [12.0 (11.0 – 13.5)]
Contraception	
Currently using contraception	41 (68%)
Method – hormonal only (n = 38)	33 (87%)
Method – hormonal + barrier (n = 38)	4 (11%)
Method – calendar/barrier only (n = 38)	1 (3%)
Duration of use, years	2.4 \pm 2.6 [1.5 (0 – 4.0)]
Reproductive History	
History of infertility *	1 (2%)

Note: IQR = Interquartile Range; SD = Standard Deviation. * Denotes single case. * Secondary infertility. SD = standard deviation; IQR = interquartile range

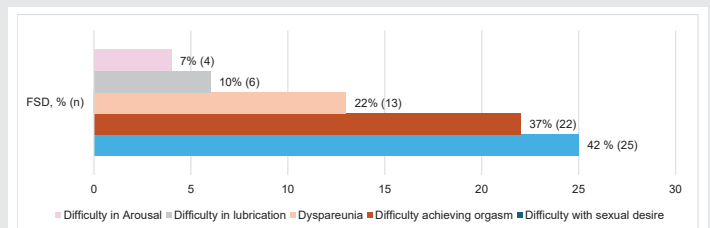


Figure 2: Prevalence of sexual difficulties in the study sample (N=60). Values represent the percentage of participants reporting each difficulty. Data: Desire/Interest 42.4%, Orgasm 36.7%, Dyspareunia 21.7%, Lubrication 10.0%, Arousal 6.7%

Difficulty with Sexual Desire/Interest and Arousal

The most prevalent difficulty was lack of sexual desire/interest, present in 42% of participants. Of those, 36% reported this occurring in approximately half of sexual encounters (borderline/transient), and 7% in a few or no encounters (moderate-to-severe) (Figure 3).

Of the 60 respondents, 48% (29) described their sexual desire as moderate, while a cumulative percentage of 3% (2) described it as low, very low, or absent in the last four weeks. Additionally, 19% (11) reported feeling troubled at least frequently by having little sexual desire: 7% (4) often and 12% (7) sometimes (Table 3).

Difficulty with arousal was the least common finding, reported by 7% of participants; 85% percent reported becoming sexually aroused at least most of the time during sexual activity (Figure 4).

Among all respondents, 68% (41) still report feeling satisfied with their arousal at least more than half of the time, while 25% (15) reported satisfaction only half of the time or less. Regarding the degree of arousal, the majority, 75% (45), rated their arousal as high to very high, with 17% (10) rating it as moderate or low. Additionally, 62% (37) reported high or very high confidence in their ability to become aroused, while 33% (n = 20) described their confidence as moderate or lower (Table 4).

Difficulty in reaching orgasm

Difficulty achieving orgasm was the second most prevalent difficulty (37%). A total of 57% (34) of participants reported having reached orgasm at least more than half of the time during sexual stimulation, while 15% (9) did so only about half of the time. More than a fifth of respondents, 22% (13), reported reaching orgasm less than half the time or never (Figure 5).

Most women, 80% (47), considered themselves at least moderately satisfied with their ability to reach orgasm during sexual activity (Table 5).

Dyspareunia

Dyspareunia was reported by 22% of participants. Of those, 60% reported pain occurring infrequently, and 20% reported

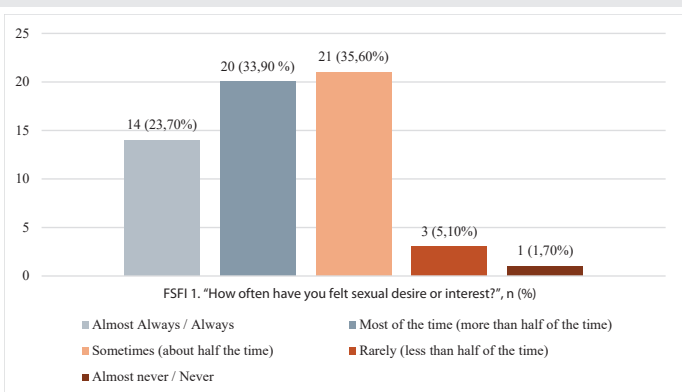


Figure 3: Desire/Interest difficulty frequencies.

Table 3: Distribution of responses to the FSFI desire item and the FSDS-R distress item.

	FSFI	FSDS-R
Response category	Q2. "How would you rate your level of sexual desire/interest?"	Item 13. "Troubled by feeling little sexual desire/interest."
	n (%)	n (%)
Very high / Never	9 (15)	37 (63)
High / Rarely	20 (33)	11 (19)
Moderate / Sometimes	29 (48)	7 (12)
Low / Often	1 (2)	4 (7)
Very low or none / Always	1 (2)	0 (0)

FSFI = Female Sexual Function Index; FSDS-R = Female Sexual Distress Scale-Revised. FSDS-R item 13: n = 59 (1 missing value). Response categories for the two instruments are shown in parallel rows (FSFI: Very high → Very low or none; FSDS-R: Never → Always). Percentages are calculated using valid responses for each item independently.

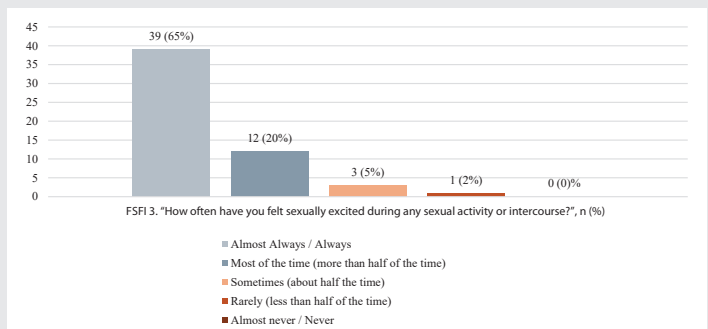


Figure 4: Frequencies of Sexual Arousal Difficulty

pain in approximately half of their encounters. Pain severity was rated as moderate by 17% and low-to-very-low by 72% (Table 6).

Difficulty in lubrication

Lubrication difficulties were reported by 10% of participants. The majority (85%) reported adequate lubrication during sexual activity in most encounters, and 72% reported maintaining lubrication until the end of sexual activity. Approximately one-fifth of women (22%, n = 13) reported maintaining lubrication only half the time or less (Figure 6).

Regarding difficulty maintaining lubrication during sexual activity, 38% (n = 23) reported some degree of difficulty, with the majority of these (32%, n = 19, approximately one third of the total sample) classifying it as slightly difficult. A similar pattern was observed regarding difficulty maintaining lubrication until the end of sexual activity, with 46% (n = 27) reporting some difficulty; notably, 15% (n = 9) described it as at least difficult to remain lubricated (Table 7).

Comorbidity of sexual difficulties

One-third of participants (33%) reported two or more concurrent sexual difficulties. Notable co-occurrences included: 44% of women with desire/interest difficulties also reported orgasmic difficulties. Arousal dysfunction, though



Table 4: Satisfaction and Confidence of Sexual Arousal.

Frequency of Sexual Arousal & Satisfaction						
	I have not had any sexual activity	Almost Always / Always	Most of the time (> half)	Sometimes (~ half)	Rarely (< half)	Rarely / Never
Q6. "How often have you felt satisfied with your sexual arousal during any sexual activity or relationship?", n (%)	4 (7%)	25 (42%)	16 (27%)	12 (20%)	3 (5%)	0 (0%)
Confidence in Self-Arousal						
	I have not had any sexual activity	Very High Confidence	High Confidence	Moderate Confidence	Low Confidence	Very Low / None
Q5. "How confident are you in being able to arouse yourself during any sexual activity or relationship?", n (%)	3 (5%)	16 (27%)	21 (35%)	15 (25%)	5 (8%)	0 (0%)

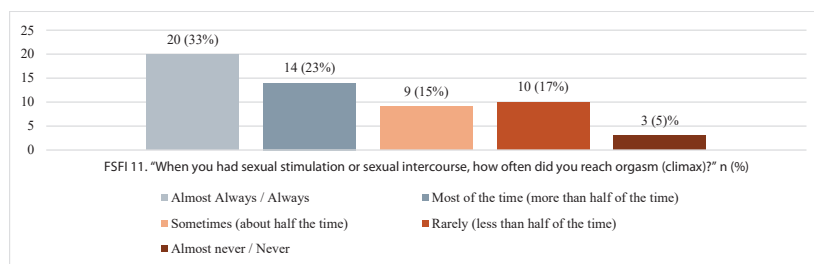


Figure 5: Frequencies of Orgasm Difficulty.

Table 5: Difficulty and Satisfaction with Reaching Orgasm.

	I have not had any sexual activity	Extremely difficult or impossible	Very difficult	Difficult	Slightly difficult	No difficulty
Q12. "When you have had sexual stimulation or sexual intercourse, how much difficulty did you have reaching orgasm?" n (%)	5 (9)	2 (3)	3 (5)	3 (5)	30 (52)	15 (26)
	I have not had any sexual activity	Very satisfied	Moderately satisfied	Equally satisfied and dissatisfied	Moderately dissatisfied	Very dissatisfied
Q13. "How satisfied were you with your ability to reach orgasm (climax) during any sexual activity?" n (%)	5 (9)	25 (42)	22 (37)	2 (3)	4 (7)	1 (2)

Table 6: Genito-pelvic pain (dyspareunia).

	I didn't try to have sex.	Almost Always / Always	Most of the time (more than half of the time)	Sometimes (about half the time)	Rarely (less than half of the time)	Almost never / Never
Q17. "How often did you feel pain or discomfort during vaginal penetration?", n (%)	5 (8)	0 (0)	1 (2)	12 (20)	23 (38)	19 (32)
Q18. "How often have you felt pain or discomfort after vaginal penetration?" n (%) (1 missing)	5 (9)	0 (0)	0 (0)	12 (20)	16 (27)	26 (44)
	I didn't try to have sex.	Very high	High	Moderate	Low	Very low / None
Q19. "How would you rate your level of pain or discomfort during or after vaginal penetration?", n (%)	5 (8)	0 (0)	2 (3)	10 (17)	22 (37)	21 (35)

less common (n=4), showed the highest comorbidity rates, with 50–75% of affected women reporting dysfunction across every other domain. Orgasmic dysfunction (n = 33) co-occurred most notably with desire problems (33%). Dyspareunia (n = 13) showed a particularly strong association with orgasmic dysfunction (60%), suggesting that pain during intercourse

frequently compromises the ability to reach orgasm. Overall, the pattern indicates that sexual difficulties rarely occur in isolation; comorbidity across domains was the rule rather than the exception, with orgasmic and arousal difficulties emerging as the most consistently overlapping problems (Table 8).

Sexual satisfaction

Most participants (73%) reported satisfaction with their current sex life. Among those who were dissatisfied (27%), 15% rated their sex life as slightly unsatisfactory and 12% as not at all satisfactory. No statistically significant associations were found between current sexual satisfaction and the presence of at least one sexual difficulty (p=1.0), or between being in an intimate relationship and sexual satisfaction (p=1.0). Sexual distress, as assessed by the FSDS-R, was reported by 7% of participants (Figure 7).

Discussion

This epidemiological study conducted in Portugal specifically examined the prevalence of sexual difficulties among female university students aged 18–25 years.

The study was conducted within a single university population; no formal a priori sample size calculation was performed. It was primarily designed to provide preliminary descriptive data regarding the prevalence and comorbidity of

sexual difficulties among young Portuguese university women, a population for which limited national data are available. Consequently, the findings should be interpreted as exploratory and hypothesis-generating rather than confirmatory, particularly given the modest convenience sample size (N = 60).

The main finding is a high prevalence (75%) of at least one sexual difficulty in this cohort of young, highly educated women — consistent with figures reported in prior Portuguese studies [7,8] — despite an overall mean FSFI score within the functional range. Only 7% of participants reported sexual distress, indicating that most difficulties were not perceived as causing significant personal distress, at least at this stage of life.

Low sexual desire/interest was the most prevalent difficulty (42%), consistent with patterns documented in other Portuguese studies and international research [4,5,7,8]. Most desire difficulties were borderline or transient in nature (occurring in approximately half of sexual encounters). Orgasmic difficulties were the second most common finding (37%), a rate slightly higher than observed in comparable samples [22,23]. These two difficulties also showed substantial comorbidity: 44% of women reporting desire difficulties also reported orgasmic difficulties.

Dyspareunia (22%) was more prevalent than the estimates reported for the general female population (8–21%) [24,25].

Lubrication difficulties (10%) were among the least prevalent findings and were slightly below the approximately

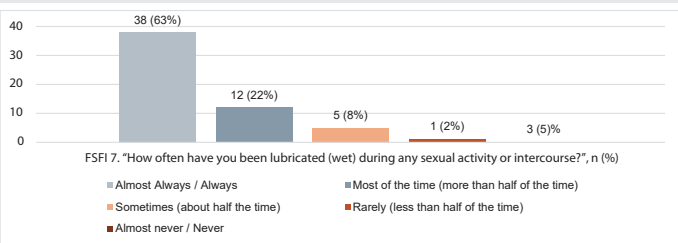


Figure 6: Frequencies of Lubrication Dysfunction.

Table 7: Frequencies of Lubrication Dysfunction.

	I have not had any sexual activity	Almost Always / Always	Most of the time (more than half of the time)	Sometimes (about half the time)	Rarely (less than half of the time)	Rarely / Never
Q7. "How often have you been lubricated (wet) during any activity or sexual intercourse?", n (%)	3 (5)	38 (63)	12 (22)	5 (8)	1 (2)	0 (0)
Q9. "How often did you maintain your lubrication until the end of sexual activity or intercourse?", n (%)	4 (7)	32 (53)	11 (18)	11 (18)	2 (3)	0 (0)
	I have not had sexual activity	Extremely difficult or impossible	Very difficult	Difficult	Slightly difficult	No difficulty
Q8. "How difficult was it for you to stay lubricated (wet) during any activity or sexual intercourse?", n (%)	3 (5)	1 (2)	1 (2)	2 (3)	19 (32)	34 (57)
Q10. "How difficult was it for you to maintain your lubrication until the end of any activity or sexual intercourse?" n (%) (1 missing)	3 (5)	1 (2)	2 (3)	6 (10)	18 (31)	29 (49)

Table 8: Comorbidity of sexual difficulties: percentage of women with the primary difficulty who also reported each secondary difficulty.

Primary Difficulty	Secondary difficulty				
	Desire n (%)	Arousal n (%)	Orgasm n (%)	Dyspareunia n (%)	Lubrication n (%)
Desire/Interest	—	3 (12)	11 (44)	4 (16)	2 (8)
Arousal	3 (75)	—	2 (50)	2 (50)	2 (50)
Orgasm	11 (33)	2 (9)	—	6 (27)	3 (14)
Dyspareunia	4 (16)	2 (15)	6 (60)	—	2 (15)
Lubrication	2 (33)	2 (33)	3 (50)	2 (33)	—

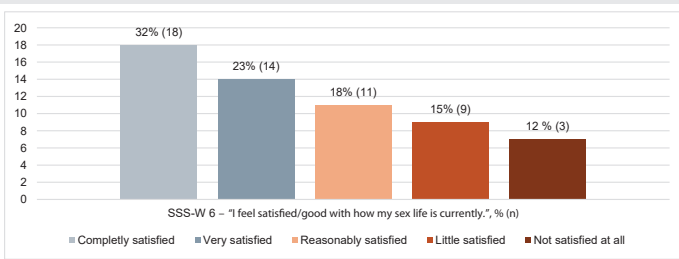


Figure 7: Frequencies of Satisfaction with current sex life.

13% reported for the general Portuguese female population [3]. Arousal difficulties (7%) were also notably below the approximately 15% estimated for Portuguese women in general [3]. This difference may reflect the age of the sample, as androgenic hormones, which modulate arousal and lubrication, peak during the primary reproductive years [26,27].

The finding that 73% of participants reported sexual satisfaction despite the high prevalence of specific difficulties is noteworthy and parallels findings from a 2019 Brazilian study of 100 university students [28]. This apparent dissociation between the presence of specific difficulties and overall satisfaction may reflect the complexity and multidimensionality of sexual satisfaction, which extends beyond isolated functional difficulties to encompass relational, emotional, and contextual factors.

Limitations

The primary limitations of this study include the relatively small, convenience sample of single women from a single institution. This reduces statistical power and limits the precision and generalisability of prevalence estimates. Small subgroup sizes may also have constrained the reliability of inferential analyses, particularly chi-square comparisons involving low expected cell frequencies. Consequently, these findings should be considered preliminary and hypothesis-generating.

Gender identity and sexual orientation were not assessed as well, limiting the ability to characterise the sample more precisely and restricting the interpretation and generalisability of findings across gender- and sexually-diverse populations.

An additional limitation relates to the use of individual FSFI items to operationalise sexual difficulties rather than validated FSFI domain scores. Although this strategy allowed the identification of specific symptom patterns and facilitated exploratory prevalence analyses, single-item measures are less metrically robust than multidimensional domain scoring approaches and may not fully capture the complexity, severity, or persistence of sexual dysfunction.

Suggested revision

The exclusive reliance on self-report measures, the cross-sectional design precluding causal inference, and the lack of clinical diagnostic confirmation of reported difficulties are additional constraints. Furthermore, the absence of a comparison group and the sample's limited demographic

variability (all single; predominantly hormonal contraceptive users) restricts the scope of associative analyses.

Conclusions

This study identifies a high prevalence of sexual difficulties in a cohort of young, highly educated Portuguese women, particularly in the domains of sexual desire/interest and orgasm, thereby supporting the initial study hypothesis. However, only a minority reported associated sexual distress, suggesting that many reported difficulties may reflect transient or context-dependent sexual experiences rather than clinically established dysfunction. Entry into higher education represents a transitional life period with unique psychosocial demands that may influence sexual health. These findings reinforce the subjective nature of female sexuality and highlight the importance of distinguishing between sexual difficulties and distress-associated sexual dysfunction.

Consequently, sexual health promotion strategies targeting young women in higher education settings should incorporate accessible information, non-stigmatising discussion of sexuality, and broader psychosocial perspectives on sexual wellbeing.

Future research should employ larger, more diverse samples and longitudinal designs to better characterise the determinants and trajectories of sexual difficulties in this population.

Author contributions

EC: study conception and design; development of data collection instruments; manuscript drafting, revision, and final approval. AL: study conception and design; data collection and analysis; manuscript drafting and final approval. AM: data analysis; statistical review; final approval. MP: manuscript review and final approval. AMA: data analysis; statistical review; manuscript revision and final approval.

Ethics approval and consent to participate

All procedures were conducted in accordance with the ethical standards of the responsible committee on human experimentation (Ethics Committee of the University of the Algarve) and with the Helsinki Declaration as revised in 2013. Written informed consent was obtained from all participants.

Data availability

The authors confirm compliance with the University of the Algarve's protocols regarding data publication. The datasets used and/or analysed during the current study are available from the corresponding author on reasonable request.

Disclosure statement

No potential conflict of interest was reported by the authors in relation to the present work.

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(Supplementary-Materials)

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