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Assessing the influence of sexual self-
consciousness and sexual self-esteem in
male orgasm

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**ASSESSING THE INFLUENCE OF SEXUAL SELF-
CONSCIOUSNESS AND SEXUAL SELF-ESTEEM
IN MALE ORGASM**

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Resumo

A resposta do orgasmo é uma resposta biopsicofisiológica subjetiva que tem vindo a ser estudada, essencialmente, através de uma perspetiva fisiológica. Apesar da literatura demonstrar um importante contributo de dimensões psicológicas para o funcionamento sexual masculino, há uma escassez de estudos acerca do impacto de dimensões de natureza disposicional no orgasmo masculino. O objetivo deste estudo foi explorar a relação entre dimensões disposicionais, como a auto-estima sexual e a auto-consciência sexual, e a experiência de orgasmo masculino. Neste estudo participaram 150 estudantes universitários do sexo masculino que preencheram uma bateria de questionários de autorresposta destinada à avaliação da resposta orgásmica, a auto-consciência sexual e a auto-estima sexual. Os resultados indicaram uma correlação significativa e negativa entre a dimensão do embaraço sexual e a resposta do orgasmo. Adicionalmente, o embaraço sexual constituiu-se como preditor negativo e significativo do orgasmo masculino. Relativamente à auto-estima sexual, foi encontrada uma correlação positiva e significativa com a resposta orgásmica. A auto-estima sexual também se revelou um mediador significativo na relação entre o embaraço sexual e o orgasmo masculino. Não foram encontrados resultados significativos relativos ao auto-foco sexual. Em suma, estes resultados contribuem para um melhor conhecimento das dimensões envolvidas na experiência de orgasmo masculino e poderão ter implicações para uma futura conceptualização, mais completa e integradora, do orgasmo no homem. Espera-se que estes resultados possam também contribuir para o desenvolvimento de estratégias psicoemocionais destinadas à promoção da saúde sexual no homem, com ou sem dificuldades associadas ao orgasmo.

Palavras-chave: Orgasmo masculino, Variáveis disposicionais, Auto-consciência sexual, Auto-estima sexual, Sexualidade masculina.

Abstract

The orgasm response is a subjective biopsychological response, that has been studied, essentially, from a physiological perspective. Despite the available scientific literature demonstrating an important contribution of psychological dimensions to male sexual functioning, there is a lack of studies on the impact of dispositional dimensions on male orgasm. The objective of this study was to explore the relationship between dispositional dimensions, such as sexual self-esteem and sexual self-consciousness, and male orgasm experience. In this study participated 150 male university students who completed a battery of self-reported questionnaires assessing orgasm response, sexual self-consciousness, and sexual self-esteem. Results showed a significant and negative correlation between sexual embarrassment and male orgasm. Additionally, regression analysis indicated that sexual embarrassment constituted a negative and significant predictor of orgasm in men. Regarding sexual self-esteem, a positive and significant correlation was found with orgasmic response in men. Sexual self-esteem also mediated the relationship between sexual embarrassment and male orgasm. No significant results were found regarding sexual self-focus. Overall, findings contribute to a deeper knowledge on the dimensions involved in male orgasm experience and may have further implications on a future integrative conceptualization of male orgasm. Findings may also contribute to the development of psychoemotional strategies aimed at promoting sexual health in men with or without orgasm difficulties.

Keywords: Male orgasm, Dispositional dimensions, Sexual Self-Consciousness, Sexual Self-Esteem, Male sexuality

Introduction

The orgasm response is a multidetermined and complex biopsychophysiological process and is highly subjective and personal. Despite it has been associated with concepts of sexual pleasure and satisfaction (Arcos-Romero et al., 2019; Llanes et al., 2013; Mah & Binik, 2001), definitions of male orgasm have focused mainly on its physiological processes.

Based on extensive physiological studies, Masters and Johnson (1966) proposed a four-stage model of human sexual response composed by successive stages of excitement, plateau, orgasm, and resolution. According to the authors, male orgasmic response was characterized by a transient peak sensation of intense pleasure accompanied by body changes and two stages of autonomic response (emission and expulsion) resulting in ejaculation, and followed by a refractory period (Masters & Johnson, 1966).

More recently, male orgasm has been characterized either by its subjective experience or by its physical sensations and manifestations. Hence, it is considered as a peak in sexual arousal with the release of sexual tension leading to psychological sensations of inevitability, intense pleasure, satisfaction, and relaxation (Arcos-Romero et al., 2018; Cervilla et al., 2022; Llanes et al., 2013; Mah & Binik, 2001). Physical manifestations of orgasm include rhythmic pelvic muscular contractions linked to the beginning and the end of the perceived orgasm, rectal sphincter contractions, facial grimacing, body rigidity, hyperventilation, sweating and vocalizations (Alwaal et al., 2015; Levin, 2004; Llanes et al., 2013; Mah & Binik, 2001). This phenomenon is also accompanied by the activation of several cerebral areas and interaction between specific hormones (Alwaal et al., 2015; Mah & Binik, 2001).

Given the essential focus on physiological aspects in defining male orgasm and the lack of standardized instruments for assessing it, studies on the psychological factors involved in male orgasm are scarce (Arcos-Romero et al., 2018; Mah & Binik, 2005). However, there is evidence showing that the experience of orgasm contributes to men's overall sexual satisfaction (Frederick et al., 2017; Haavio-Mannila & Kontula, 1997), and given the close relationship between sexual satisfaction and overall well-being (Sánchez-Fuentes et al., 2014), it is of utmost importance to understand the psychological dimensions underlying male orgasm response.

1. Focus of attention and male sexual functioning

The cognitive paradigm of sexuality highlights the importance of cognitive-affective factors as important dimensions for understanding sexual response. According to this paradigm, sexual behavior is a result of a complex interaction between the meaning given to the sexual encounter and individual's cognitive, affective and behavioral responses to it (Nobre, 2006).

Research on male sexual functioning has been focusing on the role of individual's focus of attention during sexual situations as an important cognitive process for sexual response to occur. Masters and Johnson (1970) introduced the concept of *spectatoring* to describe the focus on negative self-related information during sexual activities, reducing individual's attentional resources and impairing sexual response, due to the fear of performance failure (Masters & Johnson, 1970; Sanchez & Kiefer, 2007; van Lankveld et al., 2008). Beck and colleagues (1983) studied the focus of attention by evaluating the differences on self-focus versus focus on the sexual partner during sexual encounters and found that sexually healthy participants presented a better sexual response when the focus of the attention was on the sexual partner than on the self-focus task. The opposite pattern was found in sexually dysfunctional participants who evidenced a greater attentional focus on sexual performance, interfering with their sexual responses (Beck et al., 1983).

Barlow's (1986) work further explored the role of attentional focus during sexual situations and demonstrated that sexual arousal was influenced by cognitive interference competing with the processing of erotic stimuli in sexually healthy samples. According to Barlow (1986), sexually healthy individuals differed from the sexually dysfunctional ones by their distractibility patterns in sexual encounters. In these studies, sexually dysfunctional individuals were not distracted by non-sexual-performance related stimuli, but were distracted while performing a performance-related sexual task, whereas sexually functional individuals presented the opposite pattern (Barlow, 1986). Abrahamson and colleagues (1989) also found differences between individuals with and without sexual dysfunction, showing that self-monitoring one's level of arousal and the perception of performance demand during sexual activity played an important role in participant's sexual responses. For sexually dysfunctional participants, self-focus decreased substantially their level of sexual response (Abrahamson et al., 1989).

Overall, the mentioned studies suggest that the focus of attention, namely self-focused attention, plays an important role in male sexual functioning, discriminating sexually healthy individuals from sexually dysfunctional ones, as the focus of the attention of the former is concentrated on stimuli that promote the involvement on the sexual task, whereas the focus of the attention of the later is mainly on concerns regarding sexual performance (Sbrocco & Barlow, 1996).

Janssen and colleagues' (2000) Information Processing Model represents a theoretical framework highlighting different levels of cognitive processing that are involved in sexual arousal. The model underlines the interaction between automatic and controlled cognitive processes and poses that those attentional mechanisms are disrupted or oriented towards sexual-related cues depending on how sexual stimuli are appraised on an automatic and preattentive level. If a positive and sexual meaning is given to the stimulus, attention will be directed towards sexual-related cues and facilitate sexual arousal on a continuous positive feedback loop, whereas a negative appraisal of the stimulus or its perception as non-sexual will disrupt attention and impair sexual arousal (De Jong, 2009; Janssen et al, 2000). This premise that a sexual meaning given to a stimulus generates a sexual response was further investigated by Prause and colleagues (2008) using a dot detection task. The researchers showed that higher sexual desire among participants was associated with an attentional bias towards sexual stimuli (Prause et al., 2008). Moreover, on healthy samples, the focus on one's physiological and emotional reactions during the viewing of an erotic film contributed to higher sexual arousal, whereas the focus on the stimuli as a spectator resulted in lower levels of sexual arousal (Both et al., 2011). These studies provided additional support to the association of self-focused attention with better sexual functioning, in sexually healthy individuals.

Even though research has been supporting the role of cognitive processing factors in women's and men's sexual functioning (Tavares et al., 2020), particularly regarding the importance of state self-focused attention, the extent to which individual propensity for self-focused attention (dispositional or trait dimension) is involved in male orgasm is not established yet.

2. Sexual Self-Consciousness and male orgasm

Despite the relevance of attentional processes for male sexual response, there has been a gap in the literature regarding the impact of individual's proneness for self-focused attention during sexual activity. Dispositional self-consciousness or sexual self-consciousness arises as a dispositional dimension, personality trait, or proneness for self-focus on sexual encounters (Moyano et al., 2017; van Lankveld et al., 2008). According to van Lankveld and colleagues (2008) sexual self-consciousness incorporates two dimensions, sexual embarrassment and sexual self-focus. Sexual embarrassment refers to the propensity to feel embarrassed and uncomfortable in sexual contexts, and sexual self-focus reflects the tendency to focus on physical sensations, thoughts, feelings, and on signals transmitted by the partner in sexual encounters (van Lankveld et al., 2008). Sexual self-consciousness has been shown to impact one's attentional systems as it prevents awareness of sexual arousal, leading to a poor sexual response and low sexual satisfaction, and therefore has been proposed as a risk factor for sexual difficulties (Sanchez & Kiefer, 2007; van Lankveld et al., 2008; Wyatt & de Jong, 2020). In fact, van Lankveld and colleagues (2008) found that sexually dysfunctional participants scored higher in both dimensions of sexual self-consciousness, when compared to sexually functional participants, suggesting that higher self-consciousness limits individual's attentional capacity, as all resources are on self-related information instead of on erotic stimuli (van Lankveld et al., 2008). In a different study, van Lankveld and colleagues (2004) found that men with higher scores on sexual self-consciousness presented a diminished genital response during a self-focus induced task, whereas men with lower scores on the same dimensions of sexual self-consciousness had a higher genital response in the same task. These findings showed that a certain level of self-focus in sexual encounters may be necessary for feedback mechanisms to inform individuals of body arousal, but that dispositional self-focus would interfere with attentional mechanisms necessary for the sexual response to occur (van Lankveld et al., 2004).

Sexual self-consciousness has also been found to influence erectile function in sexually healthy men and to discriminate between men with and without sexual dysfunction (Quinta-Gomes, 2012; Quinta-Gomes et al., 2013). In a study using clinical and non-clinical samples, Quinta-Gomes (2012) found higher levels of sexual self-consciousness in men experiencing erectile dysfunction, compared to sexually healthy men, and sexual embarrassment to predict negatively erectile functioning in college students. All together,

these findings indicated that individual propensity for self-focus during sexual encounters have a negative impact on overall male sexual arousal (Quinta-Gomes, 2012; Quinta-Gomes et al., 2013).

Sexual self-consciousness has also been reported to mediate the relationship between body shame, sexual pleasure and sexual problems, in female samples. Sanchez and Kiefer (2007) found body shame to be associated with increased sexual self-consciousness and decreased sexual pleasure and arousal, indicating the relevance of this dispositional dimension for female sexual functioning and satisfaction (Sanchez & Kiefer, 2007).

Despite the evidence available suggesting the role of sexual self-consciousness in male (and female) sexual functioning, no studies have been found to assess its impact in male orgasm. Therefore, it is of utmost importance to have a better understanding of the influence of such idiosyncratic dimensions in male orgasm.

3. Sexual Self-Esteem and male orgasm

The focus of attention during sexual encounters may be influenced by individual's anticipation of the consequences associated with sexual performance (Barlow, 1986). In fact, individual's perception of his (in)ability to engage sexually with a partner, along with his perception of the partner's evaluation of his sexual performance (individual's sexual self-esteem), may contribute to the way the information is processed in a sexual situation and, consequently, determine how sexual response occurs (Zeanah & Schwarz, 1996).

Sexual self-esteem has been defined as a positive view of one's sexuality and sexual encounters, and the ability to involve sexually with a partner, as a product of internal reinforcements of this capacity (Snell & Papini, 1989; Zeanah & Schwarz, 1996). This concept is closely related to general self-esteem and is influenced by one's perception of past sexual experiences, enhancing sexual engagement, functioning, and satisfaction (Peixoto et al., 2018; Sierra et al., 2018). Therefore, to assess this dimension it is necessary to account one's perception of their sexual competence, identity and self-acceptance (Peixoto et al., 2018).

Sexual self-esteem has been found to play an important role in sexual functioning, satisfaction, and desire (Ménard & Offman, 2009; Peixoto et al., 2018; Sierra et al., 2018). For example, Peixoto and colleagues (2018) found sexual self-esteem to partially mediate

the relationship between sexual functioning and sexual satisfaction in Portuguese college students (Peixoto et al., 2018). Moreover, Kontula and Miettinen (2016) found an association between higher sexual esteem and an enhanced orgasmic capacity in Finnish women and similar results were found in Chinese women for sexual functioning, including for orgasm frequency (Wu & Zheng, 2021).

Despite the limited evidence available showing sexual self-esteem impacts overall sexual response, to the best of our knowledge there are no studies about its effects on male orgasm, neither on its association with individual disposition for self-focus in sexual situations. As individual propensity for self-focus during sexual encounters may be influenced by individual's confidence to involve intimately with a sexual partner, studies should also focus on the role of sexual self-esteem in mediating the relationship between sexual self-consciousness and the experience of male orgasm.

4. Objectives

The purpose of this study is to explore the relationship between dispositional dimensions as sexual self-consciousness and sexual self-esteem, and the experience of orgasm in a sample of young adult Portuguese males. This study was designed to answer the following research question: How do sexual self-consciousness and sexual self-esteem influence the experience of male orgasm?

Despite the exploratory nature of this study, some research hypotheses are proposed based in the literature review of previous studies for overall male (and female) sexual function. Therefore, according to Hypothesis 1, it is expected that both dimensions of sexual self-consciousness (sexual embarrassment and sexual self-focus) will correlate significantly and negatively with male orgasm response. A positive and significant correlation between sexual self-esteem and male orgasm is also anticipated (Hypothesis 2). Hypothesis 3 predicts that sexual embarrassment and sexual self-focus will be significant and negative predictors of orgasm response. Finally, Hypothesis 4 predicts that the effect of sexual self-consciousness on the experience of male orgasm will be mediated by sexual self-esteem.

With this study we hope to lessen the lack of scientific knowledge on the influence of dispositional psychological variables in male orgasm, that may also constitute a vulnerability factor to the development of orgasm difficulties.

Method

1. Participants

The present study involved the participation of 150 undergraduate students identified as male. Inclusion criteria included being 18 years or older, capacity to give informed consent, ability to write and speak in Portuguese, and being sexually active with a partner in the previous month. A total of 23 participants were excluded from the sample for reporting not having engaged in sexual activities with a partner in the previous month. The final sample was composed of 127 male students, ranging between 18 and 47 years old ($M= 22.8$; $SD= 4.7$). The majority of participants self-identified as heterosexual (99.2%) and were single at the time of the study (94.5%), with only 5.5% of the participants reporting being either married or in a non-marital relationship (see Table 1).

Table 1.

Sociodemographic characteristics of the sample (N=127)

Age (years)		
	M	22.8
	SD	4.7
	Range	18-47
Sexual Orientation		N (%)
	Heterosexual	125 (99.2)
	Bisexual	1 (0.8)
	Homosexual	0
Civil Status		N (%)
	Single	120 (94.5)
	Married	5 (3.9)
	Non-marital relationship	2 (1.6)

2. Procedure

The present study was part of a global project designed to assess the impact of cognitive-emotional factors in male and female sexual functioning and received ethical approval by the Ethical Board of the Faculty of Psychology and Education Sciences of the University of Porto. Participants were recruited through advertisement in university campuses (convenience sample) and no monetary compensation or other incentives were offered for their participation. Prior to their participation, all participants were provided with information about the guarantee of anonymity and confidentiality of their responses and data protection, and information about the objectives of the study. Participants who agreed to participate in the study signed an informed consent and were invited to answer to a set of questionnaires (Appendix A to E). Participants were also informed about the possibility of withdrawing from the study at any time, if they wished to. Once filled in, the questionnaires were returned directly to the researcher in a sealed envelope.

3. Measures

3.1. Sociodemographic questionnaire.

The sociodemographic questionnaire contained information about demographics and sexuality, including age, gender, sexual orientation, relationship status, educational level, and sexual activity frequency.

3.2. The International Index of Erectile Function.

The International Index of Erectile Function (IIEF) is a widely used self-report instrument that assesses overall male sexual function (Rosen et al., 2002; Rosen et al., 1997). This instrument was developed by Rosen and colleagues (1997) and provides an index for the total sexual function (values ranging from 5 to 75), as well as for five domains of male sexual function: sexual desire (values ranging from 2 to 10), erectile function (values ranging from 1 to 30), orgasmic function (values ranging from 0 to 10), intercourse satisfaction (values ranging from 0 to 15), and overall satisfaction (values ranging from 2 to 10). The questionnaire is composed by 15 items assessing several dimensions of male sexual function over the past 4 weeks using a 5-point Likert scale.

The IIEF has good psychometric characteristics, showing good validity (Cronbach's α values of .73 and higher) and reliability (test-retest from $r=.64$ to $r=.84$) (Rosen et al., 1997). The Portuguese version was validated by Quinta-Gomes and Nobre (2012) presented similar psychometric properties, showing good validity (Cronbach's α values ranging from .72 to .86) and reliability (test retest ranging from $r=.69$ to $r=.90$ except for erectile function and sexual desire subscales showing $r=.55$ and $r=.14$ respectively) (Quinta-Gomes & Nobre, 2012). In the present study, only the orgasm dimension of the IIEF was used and presented a good internal consistency (Cronbach's $\alpha=.86$).

3.3. Sexual Self-Consciousness Scale.

The Sexual Self-Consciousness Scale (SSCS) was developed by van Lankveld and colleagues (2008) to evaluate the dispositional propensity to self-focus in sexual encounters. This scale comprises two dimensions of sexual self-consciousness, namely sexual embarrassment and sexual self-focus. The questionnaire consists of a 12 self-report items with a 5-point Likert scale (ranging from 0 “*Strongly disagree*” to 4 “*Strongly agree*”). Total scores of the SSCS range from 0 to 48.

The original version demonstrated a good internal consistency with Cronbach's alpha values of .84 for Sexual embarrassment subscale, .79 for sexual self-focus subscale and .85 for the total scores of the scale; and reliability ($r=.84$, $r=.79$ and $r=.83$, respectively). The Portuguese version of the Sexual Self-Consciousness Scale has also showed sound psychometric properties, with good internal consistency (Cronbach's $\alpha=.82$ for the total scale, $\alpha = .85$ for the sexual embarrassment subscale, and $\alpha = .72$ for the sexual self-focus subscale) (Quinta-Gomes & Nobre, 2010).

In this study, this scale also presented an acceptable internal consistency (Cronbach's $\alpha=.75$ for the total scale, $\alpha=.78$ for the Sexual Embarrassment subscale, and $\alpha=.56$ for the Sexual Self-Focus subscale).

3.4. Sexual Self-Esteem subscale.

The Sexual Self-Esteem subscale (SSEs) is a dimension of The Sexuality Scale developed by Snell and Papini (1989). This subscale measures an individual's sexual esteem defined as the positive view of one's sexuality. The assessment relies in ten items using a 5-point Likert-scale (ranging from 1 “*Disagree*” to 5 “*Agree*”). The original version showed a high reliability with Cronbach's $\alpha =.92$, and acceptable test-retest reliability ($r=.67$) (Snell

& Papini, 1989). Preliminary studies on the psychometric characteristics of the Portuguese version of this scale revealed that the SSEs had good scale score reliability (Cronbach's α ranging from .92 to .94; Oliveira, 2013; Vilarinho, 2010). In this study, this scale also presented a good internal consistency (Cronbach's α = .89).

4. Data analysis procedures

Statistical data analysis was performed using the 26th version of the IBM SPSS Statistics for Windows.

For characterization of the sample, descriptive analyses were conducted including means, standard variations, and the range. For categorical variables such as sexual orientation and civil status, numbers and percentages were displayed.

In order to test the relationships between the experience of orgasm and sexual self-consciousness and sexual self-esteem, Pearson product moment coefficients were calculated, separately. To determine the unique contribution of the two dimensions of sexual self-consciousness in predicting orgasm response, multiple regression analyses were conducted, using Enter method. Finally, to investigate the mediator role of sexual self-esteem in the relationship between dimensions of sexual self-consciousness and orgasm response, model 4 in PROCESS Macro (version 4.0), an extension of SPSS designed by Andrew F. Hayes, was used. The indirect effect, corresponding to the path from the dimensions of sexual self-consciousness (sexual embarrassment or sexual self-focus) to male orgasm through sexual self-esteem, was calculated with 95% bias-corrected bootstrap confidence intervals. Significant confidence intervals did not include 0 (Hayes, 2018).

As an indicator of statistical significance, a significance level below .05 ($p < .05$) was considered. As for Pearson correlation coefficients, the relationships' strength was analyzed according to guidelines suggested by Cohen (1988): low correlation with r ranging from .10 to .29, moderate correlation with r ranging from .30 to .49; and strong correlation with r ranging from .50 and 1.0 (Cohen, 1988).

Results

1. Initial analyses

Taking the overall responses together and as displayed in Table 2, the participants scored on average 19.04 (SD = 7.23) in the total score of the SSCS. On average, the participants score was 6.44 (SD=4.87) in the sexual embarrassment subscale and 12.59 (SD= 4.21) in the sexual self-focus subscale. As for sexual self-esteem, on average the participants scored 28.98 (SD= 6.65). On average, the scores obtained by the participants on the orgasm dimension of the IIEF was 8.62 (SD= 2.20).

Table 2.

Means, standard deviation, range, and median of Sexual Self-consciousness, Sexual Esteem and Male orgasm (N=127)

	M	SD	Range
Sexual self-consciousness (SSCS)	19.04	7.23	0-35
Sexual embarrassment	6.44	4.87	0-19
Sexual self-focus	12.59	4.21	0-23
Sexual self-esteem (sSE)	28.98	6.65	7-40
Male orgasm (IIEF)	8.62	2.20	0-10

Note: The presented scores correspond to the total scores obtained by the participants to the sexual self-consciousness scale (SSCS), sexual self-esteem sub-scale, and to the orgasm dimension of the International Index of Erectile Function (IIEF).

2. The relationship between sexual self-consciousness, sexual self-esteem, and male orgasm

To assess the relationship between sexual self-esteem, sexual embarrassment, sexual self-focus and male orgasm, a Pearson's correlation analysis was conducted separately for each dimension and orgasm. Results showed a positive and significant correlation between male orgasm (IIEF score for orgasm) and sexual self-esteem (SSE score), $r = .35, p < .001$. As for sexual self-consciousness, a significant and negative correlation was found between male orgasm and sexual embarrassment (subscale of sexual embarrassment score), $r = -.25,$

$p < .05$. No significant correlations were found between male orgasm and sexual self-focus (subscale of sexual self-focus). The strength of the association was moderate for sexual self-esteem and low for sexual embarrassment (Table 3).

Table 3.

Pearson's correlations between male orgasm and sexual self-focus, sexual embarrassment, and sexual esteem (N = 127)

	Male orgasm
Sexual Self-Focus	.002
Sexual Embarrassment	-.249*
Sexual Self-Esteem	.346*

Note: * $p < .01$

3. The predictive role of sexual self-consciousness on male orgasm

To evaluate the predictive effect of sexual self-consciousness in orgasm response, a multiple regression analysis was conducted, using the enter method, with sexual embarrassment and sexual self-focus as predictor variables (scores on each dimension of SSCS), and male orgasm (IIEF orgasm score) as the dependent variable. The analysis revealed a significant model, accounting for 5% of the variance in male orgasmic function [$F(2, 120) = 4.23, p < .05$; adjusted $R^2 = .05$]. According to the standardized regression coefficients, sexual embarrassment was the only significant predictor of male orgasm ($\beta = -.266, p < .01$; see Table 4).

Table 4.

Sexual self-consciousness as predictor of male orgasm: Multiple regression analysis, enter method (N = 127)

Predictors	B	Standard Error B	β	t	p
Sexual Self-Focus	.040	.045	.081	0.88	.379
Sexual Embarrassment	-.114	.039	-.266	-2.91	.004*

Note: * $p < .01$

4. The mediating role of sexual self-esteem on the relation between sexual self-consciousness and male orgasm

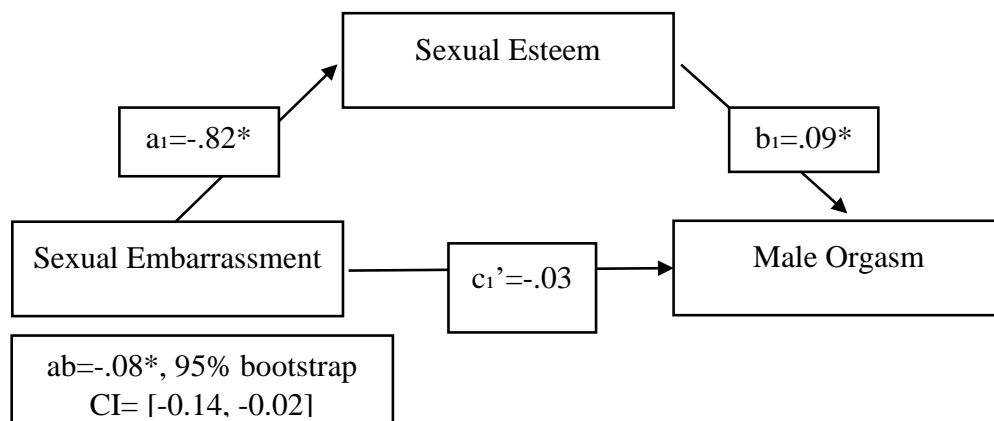
In order to test the mediating role of sexual self-esteem in the relationship between sexual self-consciousness and male orgasm, mediation analyses were conducted using an extension from SPSS, PROCESS v4.0 by Andrew F. Hayes.

Regarding the mediation role of sexual self-esteem in the relationship between sexual self-focus and male orgasm, the overall effects were non-significant. The effect between sexual self-esteem and male orgasm was significant (unstandardized coefficient = .11, $p < .001$). However, the direct, indirect and total effects of sexual self-focus did not have a significant effect on male orgasm.

Regarding the role of sexual self-esteem between sexual embarrassment and male orgasm, different results were obtained. Sexual embarrassment presented a significant effect on sexual self-esteem (unstandardized coefficient $a = -.82$, $p < .05$) and sexual self-esteem also presented a significant effect on male orgasm (unstandardized coefficient $b = .09$, $p < .05$). Sexual embarrassment had a significant indirect effect on male orgasm through sexual esteem (unstandardized coefficient $ab = -.08$, 95% bootstrap CI = [-0.14, -0.02]). The direct effect of sexual embarrassment on male orgasm was not statically significant (unstandardized coefficient $c' = -0.03$, 95% bootstrap CI = [-0.12, 0.60]). However, the total effect and the sum of the two pathways of influence were statistically significant, with an unstandardized coefficient c of -0.11, with 95% CI being -0.18 to -0.03. The proportion of the total effect mediated by the model presented was .71. Therefore, 71% of the effect of sexual embarrassment on male orgasm was mediated by sexual self-esteem (see Figure 1).

Figure 1.

Indirect effect of sexual embarrassment predicting male orgasm through sexual self-esteem (N=127)



Note: * $p < .05$

Discussion

The aim of the present study was to explore the relationship between sexual self-consciousness and sexual self-esteem in male orgasm response, in a sample of Portuguese male college students.

According to our first hypothesis, we anticipated sexual embarrassment and sexual self-focus would associate negatively to male orgasm. This hypothesis was only partially verified. Sexual embarrassment presented a negative correlation to orgasm response in male college students, which is in line with the expected interference of the propensity to experience feelings of embarrassment, shyness and discomfort in sexual situations, in the progression of individual's sexual arousal necessary for reaching orgasm. This finding is consistent with previous studies showing that sexual embarrassment has a negative impact on erectile response of sexually healthy men (Quinta-Gomes et al., 2013) and in women's sexual functioning (Sanchez & Kiefer, 2007). As for sexual self-focus, the non-significant effects found may be explained by the sexually healthy characteristics of our sample. As the sexual self-focus subscale reflects a strong propensity for self-monitoring associated to performance concerns during sexual experiences, this dimension could be more relevant for individuals experiencing sexual problems as shown in previous studies (Abrahamson et al., 1989; van Lankveld et al., 2004, 2008), which was not the case of our sample as the participants presented overall high scores in the orgasm dimension of IIEF. However, these results do not exclude the possibility of sexually healthy individuals to experience occasional performance concerns associated to generalized negative sexual beliefs (Nobre, 2006; Nobre & Pinto-Gouveia, 2006).

According to our hypothesis anticipating sexual self-consciousness to have a predictor role on orgasmic response in men, results only partially confirmed our expectation. Sexual embarrassment constituted a sole negative predictor of male orgasm. Even though the model found only explained 5% of the variance on orgasm functioning due to sexual embarrassment, these results show the relevance of this dimension for orgasm experience and offer support to previous findings on its negative impact on men's sexual arousal (Quinta-Gomes et al., 2013). This propensity to feel embarrassed in sexual encounters may disrupt individuals focus of attention from the erotic and sexual stimulus necessary for the progression of sexual arousal, to concerns related with sexual activity and its consequences

(Barlow, 1986). These findings are also in line with Janssen and colleagues' Information Processing Model (2000) highlighting the importance of sexual meaning and the focus of attention in sexual-related cues for the escalation of sexual arousal, whereas a focus on performance would disrupt attentional focus and impair sexual functioning (Janssen et al., 2000; Sbrocco & Barlow, 1996). Furthermore, as the college environment enhances the opportunity for different sexual experiences, the pressure to perform accordingly to social standards may also play an important role in how individuals behave and feel in sexual situations and experience sexual arousal and orgasm (Quinta-Gomes, 2012). As an example, sexual scripts (Séguin & Blais, 2021) reflecting ideas of a typical pattern that should be adopted during sexual activity, may contribute to the interpretation and the understanding of the way individuals act sexually (Séguin & Blais, 2021). Therefore, the experience of orgasm response may be dependent of shared ideas and beliefs people hold on how one should experience it. For men, sexual scripts regarding orgasm depict this experience as the ultimate outcome of sexual activity. Orgasm is therefore seen as a result of “real sex”, as penetration and intercourse, prevailing the idea that the quality of a male sexual partner is equivalent to his ability to experience and provide sexual pleasure to his partner, as well as the obligation of both partners to experience orgasm during sexual activity (Séguin & Blais, 2021), resembling dysfunctional sexual beliefs associated with male sexual performance (Nobre, 2006). Furthermore, the low proportion of variance in orgasm explained by sexual embarrassment suggests that other dimensions may also play a role in determining male orgasm and should be addressed in futures studies (e.g., sexual beliefs, relational dimensions).

Another objective of the present study was to explore the role of sexual self-esteem in male orgasm. Our results showed that a positive view of one's sexuality was positively associated to individuals experience of orgasm, which is in line with previous findings, although using female samples (Kontula & Miettinen, 2016; Wu & Zheng, 2021). In fact, a positive perspective towards one's sexuality has shown to be important for general sexual functioning, sexual satisfaction and pleasure (Peixoto et al., 2018; Sierra et al., 2018; Wu & Zheng, 2021), as it may facilitate individual's engagement in sexual activity and promote attentional focus towards sexual-related cues and positive sexual thoughts (Tavares et al., 2020), enhancing sexual arousal and the possibility to experience orgasm. These findings acknowledged the importance of further investigating the role of sexual self-esteem in male orgasm. Anticipating that individual's propensity for self-focused attention during sexual

encounters could be influenced by individual's confidence to engage sexually with a partner, the mediator role of sexual self-esteem in the relationship between sexual self-consciousness and orgasm was tested. Findings indicated sexual self-esteem to mediate the relationship between sexual embarrassment and male orgasm. Therefore, it may be suggested that individual's perception of his sexual competencies may balance the impact of the propensity to experience embarrassment in orgasm experience. In other words, an individual's positive view of his sexual ability to relate sexually with a partner may lessen the impact of feelings of embarrassment in the subjective orgasm experience; whilst a negative perception will increase the impact of propensity for embarrassment in orgasm response for men. This means sexual self-esteem plays a key role in the relationship between sexual embarrassment and the subjective experience of male orgasm, and suggest that this dimension may constitute a protective factor in men presenting psychological vulnerability to sexual problems (Quinta-Gomes, 2012). Since sexual self-esteem includes the capacity to involve sexually with a partner and influences individual's propensity to embarrassment in experiencing orgasm, futures studies should also regard the role of relational factors in this pathway of influence.

As mentioned earlier, this study was the first to investigate the role of sexual self-esteem and sexual self-consciousness in male orgasm response. Overall, our results show that sexual embarrassment and sexual self-esteem are relevant dimensions and play an important role in male orgasm response. Therefore, we expect that these findings may have further implications in this area of investigation as well as in sex education programs and in clinical practice. Regarding the lack of studies focusing on psychological dimensions influencing male orgasm, our results may contribute to a better knowledge and conceptualization of male orgasm experience. As for sex education, future programs should include psychoeducational strategies addressing the impact of psychological and cultural factors (e.g., sexual scripts, negative sexual beliefs) in individual's sexual experience and sexual pleasure, under a biopsychosocial approach, (Charles et al., 2011; McCarthy et al., 2012); accompanied by psycho-emotional strategies for the promotion of sexual self-esteem and overall well-being. In fact, sexual pleasure and sexual satisfaction are not currently considered in Portuguese sex education programs (Peixoto et al., 2018; Portuguese Republic Diary, 2010), while other countries have included (McCarthy et al., 2012). According to the results of this study and considering the high prevalence of sexual difficulties among Portuguese men (Quinta-Gomes & Nobre, 2014), we may speculate that sexual self-esteem

and sexual embarrassment could constitute protective and risk factors, respectively, for the development and maintenance of such problems, particularly for orgasm difficulties. Therefore, it would be of major importance to develop and implement clinical strategies targeting such dimensions. Mindfulness-based therapeutic strategies aimed at directing the focus of attention to pleasurable sensations rather than sexual performance could be crucial in accomplishing such goal. Finally and as mentioned earlier, as orgasm experience is associated to sexual satisfaction, which in turn is closely related to overall well-being, it would be of utmost importance to conduct more studies on this topic, using clinical and non-clinical samples.

The results of this study should, however, be interpreted with caution and there are some limitations to be acknowledged. It is important to account for the exploratory character of this study. Furthermore, this research reflected a convenience sample of college students that compromises the generalization of these results. The self-report questionnaires also present a limitation on the present study, since issues of social desirability could be raised. Future studies should regard these limitations and further explore the role of these dimensions using clinical populations such as individuals diagnosed with orgasmic dysfunction. In fact, as mentioned earlier, a propensity for self-focus in sexual encounters can constitute a vulnerability factor for orgasm difficulties (Quinta-Gomes et al., 2013; van Lankveld et al., 2008); whilst sexual self-esteem may have a role in preventing the development of sexual dysfunctions, since this dimension attenuates the impact of sexual embarrassment in subjective experience of male orgasm.

In conclusion, this study reflects a first approach on the role of dispositional dimensions in male orgasm. Overall, findings highlighted the importance of sexual self-esteem and sexual embarrassment in male orgasm among male university students. Future studies are required to further investigate the influence of these dimensions using clinical samples of men experiencing orgasm difficulties.

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Appendix A.

Formulário de Consentimento Informado

O estudo no qual irá participar faz parte de um projecto de investigação que se encontra a decorrer no Departamento de Educação e Psicologia da Universidade de Aveiro, sob a responsabilidade científica da Doutora Ana Quinta-Gomes e do Professor Doutor Pedro Nobre da mesma Universidade.

Este estudo tem como **objectivo** principal avaliar diferentes dimensões do funcionamento sexual e do comportamento sexual de homens e mulheres da população em geral Portuguesa, sendo apenas necessários ser maior de idade e ter o domínio escrito e falado da Língua Portuguesa para poder participar no mesmo.

A participação neste estudo implicará o preenchimento de um conjunto de questionários destinados a avaliar dimensões psicosexuais, sendo que o tempo de resposta está estimado em cerca de **30 minutos**. De forma a obtermos informação válida, é importante que responda da forma **mais sincera possível**. As respostas aos questionários são **anónimas** e servem apenas para fins estatísticos.

Depois de preenchidos os questionários, deverá colocar os mesmos no envelope que foi destinado para o efeito e devolvê-lo à Investigadora, devidamente selado, de forma a garantir a **confidencialidade e anonimato** das suas respostas.

Encontra-se também garantida a protecção de todos os seus dados, os quais serão totalmente destruídos no final do estudo e após o tratamento estatístico dos mesmos. É livre de desistir deste estudo a qualquer momento, caso seja esse o seu desejo, sem que incorra em qualquer penalização para si.

Para qualquer esclarecimento adicional, para conhecer os resultados da investigação ou na eventualidade de qualquer mal-estar associado à sua participação no estudo, poderá contactar os responsáveis do estudo, através do seguinte contacto: bisagomes@gmail.com.

Por favor, não coloque o seu nome ou qualquer outro dado que o/a identifique em qualquer parte dos questionários.

Appendix B.

Questionário Sócio-Demográfico

Ana Luísa Quinta Gomes, & Pedro Nobre

Idade: anos

Estado Civil: Solteiro Casado União de Facto Divorciado
 Separado Viúvo

Caso mantenha uma relação com um companheira/o, há **quanto tempo** dura?
..... **anos.**

Habilitações Literárias:

1º Ciclo (até 4ª Classe) 2º Ciclo (5º e 6º Ano) 3º Ciclo (7º, 8º e 9º Ano)
 Secundário (10º, 11º e 12º ano) Licenciatura/Mestrado Outro

Problemas psiquiátricos (anteriores ou actuais) diagnosticados por médico ou psicólogo:

Depressão Doença Bipolar Ansiedade Esquizofrenia
 Dependência de Drogas Alcoolismo Outro:

Ano do diagnóstico..... (por exemplo, 2001)

Orientação Sexual:

Heterossexual Homossexual Bissexual

Número de parceiros sexuais actuais:

Nenhum Um parceiro sexual Dois parceiros sexuais
 Múltiplos parceiros sexuais

Frequência de actividade sexual (qualquer prática sexual):

Nenhuma Raramente 1 vez por mês 2/3 vezes por mês
 1/3 vezes por semana Quase sempre

Alguma vez foi vítima de abuso sexual? Sim Não

É consumidor de:

Tabaco: Sim Não **Quantidade por dia:**

Álcool: Sim Não **Quantidade por dia:**

Outras drogas (haxixe, cocaína, etc): Sim Não **Qual:**

Quantidade por dia:

Apresenta alguma das seguintes situações ou toma algum tipo de **medicação** para:

- Tensão Arterial Elevada Diabetes Colesterol Problemas Cardíacos
 Doença Neurológica Deficiência de Hormonas Problemas Urológicos
 Acidente Vascular Cerebral Cancro Problemas na Coluna
 Ansiedade Depressão Outros:
-

Alguma vez procurou ajuda para dificuldades sexuais (ex: Viagra, Terapia Sexual, etc.)?

Sim Não **Qual?**

Há **quanto tempo** duram as suas dificuldades sexuais?meses.

Considera que a sua companheira/o actual apresenta algum tipo de dificuldade ou problema sexual?

Sim Não **Qual?**

Appendix C.

ÍNDICE INTERNACIONAL DE FUNÇÃO ERÉCTIL (IIEF; Rosen et al., 1997, traduzido e adaptado por Pedro Nobre, 2001)

Coloque uma cruz na resposta que mais se adequa à sua situação, tendo em conta as últimas quatro semanas

1. Com que frequência foi capaz de conseguir uma erecção durante a sua actividade sexual ?

- 0-Não tive actividade sexual
- 1-Quase nunca/nunca
- 2-Poucas vezes (muito menos de metade das vezes)
- 3-Algumas vezes (cerca de metade das vezes)
- 4-A maior parte das vezes (muito mais de metade das vezes)
- 5-Quase sempre/sempre

2. Quando teve erecções com estimulação sexual, qual a frequência em que estas erecções foram suficientemente rígidas para permitir a penetração ?

- 0-Não tive relações sexuais
- 1-Quase nunca/nunca
- 2-Poucas vezes (muito menos de metade das vezes)
- 3-Algumas vezes (cerca de metade das vezes)
- 4-A maior parte das vezes (muito mais de metade das vezes)
- 5-Quase sempre/sempre

3. Quando tentou ter relações sexuais, quantas vezes foi capaz de penetrar a sua companheira ?

- 0-Não tentei ter relações sexuais
- 1-Quase nunca/nunca
- 2-Poucas vezes (muito menos de metade das vezes)
- 3-Algumas vezes (cerca de metade das vezes)
- 4-A maior parte das vezes (muito mais de metade das vezes)
- 5-Quase sempre/sempre

4. Durante as relações sexuais, quantas vezes foi capaz de manter a sua erecção depois de ter penetrado a sua companheira ?

- 0-Não tive relações sexuais
- 1-Quase nunca/nunca
- 2-Poucas vezes (muito menos de metade das vezes)
- 3-Algumas vezes (cerca de metade das vezes)
- 4-A maior parte das vezes (muito mais de metade das vezes)
- 5-Quase sempre/sempre

5. Durante as relações sexuais, qual a dificuldade que teve para manter a sua erecção até ao fim da relação sexual ?

- 0-Não tive relações sexuais
- 1-Extrema dificuldade
- 2-Muita dificuldade
- 3-Dificuldade moderada
- 4-Ligeira dificuldade
- 5-Nenhuma dificuldade

6. Quantas vezes tentou ter relações sexuais ?

- 0-Não tentei
- 1-Uma a duas tentativas
- 2-Três a quatro tentativas
- 3-Cinco a seis tentativas
- 4-Sete a dez tentativas
- 5-Onze ou mais tentativas

7. Quando tentou ter relações sexuais, qual a frequência com que se sentiu satisfeito

- 0-Não tentei ter relações sexuais
- 1-Quase nunca/nunca
- 2-Poucas vezes (muito menos de metade das vezes)
- 3-Algumas vezes (cerca de metade das vezes)
- 4-A maior parte das vezes (muito mais de metade das vezes)
- 5-Quase sempre/sempre

8. Qual o grau de satisfação que teve com as suas relações sexuais ?

- 0-Não tive relações sexuais
- 1-Nenhuma satisfação
- 2-Pouca satisfação
- 3-Satisfação moderada
- 4-Grande satisfação
- 5-Muito grande satisfação

9. Quando teve estimulação sexual ou relações sexuais, com que frequência ejaculou ?

- 0-Não tive estimulação/relações sexuais
- 1-Quase nunca/nunca
- 2-Poucas vezes (muito menos de metade das vezes)
- 3-Algumas vezes (cerca de metade das vezes)
- 4-A maior parte das vezes (muito mais de metade das vezes)
- 5-Quase sempre/sempre

10. Quando teve estimulação sexual ou relações sexuais, com que frequência teve a sensação de orgasmo ou clímax ?

- 0-Não tive estimulação/relações sexuais
- 1-Quase nunca/nunca
- 2-Poucas vezes (muito menos de metade das vezes)
- 3-Algumas vezes (cerca de metade das vezes)
- 4-A maior parte das vezes (muito mais de metade das vezes)
- 5-Quase sempre/sempre

11. Com que frequência sentiu desejo sexual ?

- 1-Quase nunca/nunca
- 2-Poucas vezes
- 3-Algumas vezes
- 4-A maior parte das vezes
- 5-Quase sempre/sempre

12. Como classifica o seu desejo sexual ?

- 1-Muito baixo/nenhum
- 2-Baixo
- 3-Moderado
- 4-Elevado
- 5-Muito elevado

13. Qual a sua satisfação com a sua vida sexual em geral ?

- 1-Grande insatisfação
- 2-Insatisfação moderada
- 3-Igualmente satisfeito e insatisfeito
- 4-Satisfação moderada
- 5-Grande satisfação

14. Qual a sua satisfação com o relacionamento sexual com a sua parceira ?

- 1-Grande insatisfação
- 2-Insatisfação moderada
- 3-Igualmente satisfeito e insatisfeito
- 4-Satisfação moderada
- 5-Grande satisfação

15. Qual a confiança que tem em conseguir atingir e manter uma erecção ?

- 1-Muito baixa
- 2-Baixa
- 3-Moderada
- 4-Elevada
- 5-Muito elevada

16. Quando teve erecções com estimulação sexual qual o grau de dificuldade que teve para atingir o orgasmo ?

- 0-Não tive relações sexuais
- 1-Extrema dificuldade
- 2-Muita dificuldade
- 3-Dificuldade moderada
- 4-Ligeira dificuldade
- 5-Nenhuma dificuldade

17. Qual o seu nível de satisfação com a sua capacidade para atingir o orgasmo durante a actividade sexual ?

- 0-Não tive relações sexuais
- 1-Nenhuma satisfação
- 2-Pouca satisfação
- 3-Satisfação moderada
- 4-Grande satisfação
- 5-Muito grande satisfação

18. Durante as relações sexuais, com que frequência ejaculou sem o desejar, antes ou logo após a penetração?

- 0-Não tive relações sexuais
- 1-Quase nunca/nunca
- 2-Poucas vezes (muito menos de metade das vezes)
- 3-Algumas vezes (cerca de metade das vezes)
- 4-A maior parte das vezes (muito mais de metade das vezes)
- 5-Quase sempre/sempre

19. Durante as relações sexuais qual a dificuldade que teve para controlar a sua ejaculação ?

- 0-Não tive relações sexuais
- 1-Extrema dificuldade
- 2-Muita dificuldade
- 3-Dificuldade moderada
- 4-Ligeira dificuldade
- 5-Nenhuma dificuldade

20. Qual o seu nível de satisfação com a sua capacidade para controlar a ejaculação durante a actividade sexual?

- 0-Não tive relações sexuais
- 1-Nenhuma satisfação
- 2-Pouca satisfação
- 3-Satisfação moderada
- 4-Grande satisfação
- 5-Muito grande satisfação

MUITO OBRIGADO PELA COLABORAÇÃO

Appendix D.

Escala de Auto-Consciência Sexual

(SSCS; van Lankveld, Geijen, & Sykora, 2008)

(Tradução e adaptação de Ana Luísa Quinta Gomes & Pedro Nobre, 2009)

INSTRUÇÕES

Nesta secção encontrará cinco respostas possíveis às questões apresentadas: "discordo fortemente" (0), "discordo um pouco"(1), "não concordo nem discordo" (2), "concordo um pouco" (3) e "concordo fortemente" (4). Por favor assinale com um círculo a opção que melhor reflecte a sua forma habitual de agir.

	Discordo Fortemente	Discordo um Pouco	Não Concordo nem Discordo	Concordo um Pouco	Concordo Fortemente
1. Sinto-me desconfortável em situações sexuais.	0	1	2	3	4
2. Estou preocupado pela forma como me comporto sexualmente.	0	1	2	3	4
3. Presto muita atenção aos meus pensamentos e sentimentos sexuais.	0	1	2	3	4
4. Sinto-me facilmente embaraçado em situações sexuais.	0	1	2	3	4
5. Durante o sexo, muitas vezes me pergunto o que a outra pessoa estará a pensar de mim.	0	1	2	3	4
6. Muitas vezes imagino como me comporto durante o sexo.	0	1	2	3	4
7. Durante o sexo estou consciente da impressão que causo na outra pessoa.	0	1	2	3	4
8. Durante o sexo eu presto muita atenção ao que acontece dentro do meu corpo.	0	1	2	3	4
9. Sinto que é difícil "deixar-me ir" sexualmente em frente a outra pessoa.	0	1	2	3	4
10. Quando me vejo durante o sexo, estou irritantemente consciente de mim próprio.	0	1	2	3	4
11. Leva-me algum tempo a ultrapassar a minha timidez em situações sexuais.	0	1	2	3	4
12. Durante o sexo, sinto-me continuamente a ser observado pela outra pessoa.	0	1	2	3	4

Appendix E.

Subescala **ESTIMA SEXUAL** (SES) da **ESCALA SEXUAL** (SS; Snell, 1989)

(Tradução e adaptação de Sandra Vilarinho & Pedro Nobre, 2006)

As afirmações abaixo listadas descrevem determinadas atitudes que diferentes pessoas podem ter face à sexualidade humana. Não existem respostas certas nem erradas, apenas respostas pessoais. Para cada item, é-lhe pedido que indique o seu grau de concordância, assinalando com um círculo ou uma cruz a letra correspondente à sua resposta.

Para registar as suas respostas use a seguinte escala de 5 pontos: A= Concordo; B= Concordo ligeiramente; C= Não concordo nem discordo; D= Discordo ligeiramente; E= Discordo	Concordo	Concordo ligeiramente	Não concordo nem discordo	Discordo ligeiramente	Discordo
1. Sou um bom parceiro sexual	A	B	C	D	E
2. Classifico a minha competência sexual como muito elevada	A	B	C	D	E
3. Sou melhor em sexo do que a maioria das pessoas	A	B	C	D	E
4. Por vezes tenho dúvidas acerca da minha competência sexual	A	B	C	D	E
5. Não me sinto muito confiante nos encontros sexuais	A	B	C	D	E
6. Penso em mim como sendo um parceiro sexual muito bom	A	B	C	D	E
7. Como parceiro sexual classificar-me-ia de forma baixa	A	B	C	D	E
8. Tenho confiança em mim como parceiro sexual	A	B	C	D	E
9. Não tenho muita confiança nas minhas competências sexuais	A	B	C	D	E
10. Por vezes duvido da minha competência sexual	A	B	C	D	E