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# Preliminary Evidence on How the Dual Control Model Predicts Female Sexual Response to a Bogus Negative Feedback

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**Abstract**
The Dual Control Model of sexual response has been mostly tested with men. As such, there is a lack of evidence on how such model applies to women's experience of sexual arousal, particularly when they face a threatening situation such as the threat of sexual performance failure. The aim of the current study was to test whether the Dual Control Model dimensions predict women's sexual responses to a bogus negative feedback about their sexual performance. In addition,

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22 women were exposed to a sexually explicit film clip, while their genital arousal was being measured. During this presentation, a bogus negative feedback, aimed at increasing women's anxiety about their sexual performance, was provided. Vaginal photopletismography and self-report questions were used as means to evaluate women's genital and subjective sexual arousal, respectively. The Sexual Excitation/Sexual Inhibition Inventory for Women was further used to capture women's sexual dynamics. Regression analysis on the high-order factors revealed that sexual excitation proneness was the only predictor of the subjective sexual responses, while none of the factors has predicted genital arousal. "Arousability" and "Concerns about sexual function" dimensions predicted subjective sexual arousal. Sexual arousability may prevent women of lowering their subjective sexual responses in a sexually demanding situation, while "Concerns about sexual function" may have the opposite role, thus being a target of clinical interest. This work provides new data on the Dual Control Model of sexual response, and particularly on its role in women's sexual functioning.

**Keywords**
Dual Control Model, sexual excitation, sexual inhibition, genital response, false feedback

## Introduction

The Dual Control Model (DCM) of sexual response postulates that sexual arousal and associated behavior result from the balance between excitatory and inhibitory mechanisms that might be relatively independent (Bancroft, 1999; Bancroft & Janssen, 2000; Janssen & Bancroft, 2007). According to this model, it is further expected that individuals vary in their propensity for sexual excitation (SE) and sexual inhibition (SI), such that different combinations (e.g., high excitation/high inhibition and high excitation/low inhibition) may result in dysfunctional, but also adaptive sexual responses, depending on the context (Janssen & Bancroft, 2007; Velten et al., 2017). For example, it has been observed that high levels of SI are associated with the vulnerability to sexual dysfunctions (Bancroft, Carnes et al., 2005; Bancroft et al., 2009; Bancroft, Herbenick et al., 2005; Sanders et al., 2008), particularly if high SI is paired with low levels of SE (Bancroft & Janssen, 2000). In contrast, low levels of SI are associated with the likelihood of engaging in risky sexual behaviors (Bancroft et al., 2003, 2004, 2009; Turchik & Garske, 2009; Turchik et al., 2010), especially if SE is high (Bancroft et al., 2003). Also, the DCM provides that the disposition to SI is an adaptive response to threatening conditions (e.g., emotional threat and physical illness)

that may result from sexual behavior (Bancroft & Janssen, 2000; Janssen & Bancroft, 2007; Janssen et al., 2002a).

Within this context, some self-report questionnaires, aimed at capturing the DCM dimensions, have been developed (i.e., *The Sexual Inhibition and Sexual Excitation Scales*—Janssen et al., 2002a—and *Sexual Inhibition/Sexual Excitation Scales-Short Form*—Carpenter et al., 2011), yielding important findings on the mechanisms behind sexual arousal. These questionnaires assess the predisposition to SE and SI in both men and women (Carpenter et al., 2008, 2011) through a sexual excitation factor (SES: Sexual Excitation Scale) and two SI factors (Sexual Inhibition Scale (SIS) 1 or Inhibition Due to Threat of Performance Failure, and SIS2 or Inhibition Due to Threat of Performance Consequences). More recently, the *Sexual Excitation/Sexual Inhibition Inventory for Women and Men* (SESII-W/M; Milhausen et al., 2010) has estimated different components of SE and SI in both sexes (Inhibitory cognitions, Relationship importance, Arousability, Partner characteristics and behaviors, Setting-Unusual or Unconcealed, and Dyadic elements of the Sexual Interaction). Likewise, the *Sexual Excitation/Sexual Inhibition Inventory for Women* (SESII-W; Graham et al., 2006) evaluates the predisposition to SE and SI in women. The SESII-W yields specific scores in eight components (Arousability, Sexual power dynamics, Smell, Partner characteristics, Setting-Unusual or Unconcealed, Relationship importance, Arousal contingency, and Concerns about sexual function) as well as overall scores (SE and SI).

Despite the DCM and its first scales used to focus on men (Bancroft, 1999; Bancroft & Janssen, 2000; Janssen & Bancroft, 2007; Janssen et al., 2002a, 2002b), later work focused on the validation of the DCM/scales in women (Carpenter et al., 2011; Janssen et al., 2002a). Accordingly, specific dimensions have emerged (Graham et al., 2006, 2004), supporting the adequacy of the DCM to women's sexual response. For example, the predisposition to become sexually excited or inhibited has been related to different components of the female sexual response. SE has been associated with better general sexual functioning (Sánchez-Fuentes et al., 2019; Velten et al., 2016a, 2017), higher sexual desire (Moyano & Sierra, 2014), orgasm frequency (Matos-Tavares, 2016), and sexual satisfaction (Bohman-Ljung & Ekeroth, 2014). On the other hand, the sexual inhibitory trait has been related to worse general sexual functioning (Moyano & Sierra, 2014; Sánchez-Fuentes et al., 2019; Sanders et al., 2008), low dyadic and solitary sexual desire (Matos-Tavares, 2016), sexual satisfaction (Moyano & Sierra, 2014; Sanders et al., 2008), and lower orgasm frequency (Matos-Tavares, 2016). In addition, SI has predicted low sexual interest and difficulty becoming aroused and achieving orgasm (Sanders et al., 2008) and was associated with less sexual pleasure (Jozkowski et al., 2016). Furthermore, SE and SI have been investigated along with other sexual dimensions. Their relationship with erotophilia and sexual sensation seeking (Bloemendaal & Laan, 2015; Carpenter et al., 2011; Del Río et al. 2015; Graham et al., 2006; Granados

et al., 2017; Milhausen et al., 2010; Sanders et al., 2008; Velten et al., 2016a), negative mood (Lykins et al., 2006), sexual cognitions (Moyano et al., 2016), and sexual risk behaviors (Granados & Sierra, 2016; Velten et al., 2016b) have been observed.

With regard to the relationship between the SE and SI dimensions posed by the DCM (i.e., trait dimensions), and genital and subjective sexual arousal to sexual stimuli (i.e., state conditions), we highlight the work of Janssen et al. (2002b). In this work, carried out with men, those with a high excitatory trait showed higher subjective and genital sexual arousal, and only those with low SIS2 presented higher genital response to threatening sexual films (i.e., films displaying coercive sexual interactions). As for women, higher excitation proneness has been associated with increased subjective sexual arousal to sex clips (Gregory et al., 2015; Landry, 2016; Macapagal et al., 2011; Rupp et al., 2009). Furthermore, Velten et al., (2016c) demonstrated that the joint action of the SE and SI significantly predicted women's genital arousal in the laboratorial context. In addition, SESII-W inhibition factors, such as Arousal Contingency and Concerns about Sexual Function, were predictors of lower and higher subjective/genital arousal concordance in women (Velten et al., 2016c), respectively. Conversely, in the study of Clifton et al. (2015), the propensity for SE did not predict genital or subjective sexual arousal. Instead, SE had a moderating effect on the relationship between genital and subjective arousal, such that the relationship between genital and subjective sexual arousal was stronger in women who had higher SE scores compared with the lower score group.

In all, studies on the DCM have added to the literature on male and female sexual response and behavior. Yet, it is worth noting that despite the DCM is a model on sexual arousability, it has not been applied to the understanding of sexual arousal patterns emerging from sexual efficacy expectations. Sexual efficacy expectations are a key construct to the understanding of male and female sexual response, from a psychological perspective. It relates to the individuals' expectations about their sexual response and performance and is based on past sexual events (Barlow, 1986). While positive expectations are believed to direct individuals' attention to sexual cues, thus increasing sexual arousal, negative expectations are expected to direct attention toward distractive/nonerotic cues (including nonerotic thoughts), increasing the likelihood of sexual performance failure (Barlow, 1986). Studies targeting the concept of efficacy expectations have explored how the feedback on individuals' genital arousal impacts on their sexual responses. Within this regard, it was shown that, in sexually functional men, genital arousal decreased after negative feedback (i.e., after being warning that their genital arousal was lower than expected). On the other hand, subjective sexual arousal was not impacted by the negative feedback (Bach et al., 1999). In women, the reverse pattern has been observed; whereas the false negative feedback has lowered subjective sexual arousal, it did not impact genital response (McCall & Meston, 2007). The core rationale behind false feedback

studies is to understand not only the effects of false feedback on the different components of sexual arousal but also to understand the factors that shape individuals' responses when they face such situations. Eventually, these factors may have a protective role when individuals are confronted with sexual performance failure, whether this is real or imagined/anticipated sexual failure.

According to this background, the aim of the present study was to test whether the DCM dimensions may predict women's genital and subjective sexual arousal to a bogus negative feedback (i.e., when they are informed that their genital arousal is lower than expected). First, a low or nonexistent subjective/genital arousal concordance is expected (Bouchard et al., 2017; Chivers et al., 2010). Likewise, greater subjective and genital arousal will be obtained during sexual stimuli than during neutral ones. Given that low SE and/or high inhibition have been related to sexual difficulties (Bloemendaal & Laan, 2015; Quinta-Gomes et al., 2018; Sanders et al., 2008), we expect that higher levels of SE proneness (which is regarded as a protective factor for sexual difficulties in women; Bloemendaal & Laan, 2015; Quinta-Gomes et al., 2018) will predict higher sexual responses after a bogus negative feedback, while SI is expected to predict lower sexual responses, thus having a vulnerability role within this context. With that, we expect to provide preliminary evidence on how the DCM dimensions may relate to sexual arousal patterns, when women face a sexual failure situation.

## Method

### *Participants*

In total, 45 young Spanish heterosexual women completed both the questionnaires and the laboratory experiment including genital and subjective arousal measurements. This sample was obtained by convenience sampling procedure. Due to low-quality psychophysiological signals, technical problems, and drop outs, only 22 women remained in the final sample. The age of the participants ($n = 22$) ranged from 19 to 22 years ($M = 19.73$, $SD = 0.83$). The age of first sexual intercourse ranged from 13 to 20 years ($M = 16.45$, $SD = 1.63$). At the time of the study, 13.6% of participants had a relationship, with an average duration of 21.67 months (range = 12–28, $SD = 8.50$).

Participants were recruited by means of flyers, notice boards, and advertisements in social networks (e.g., Facebook). Before arriving at the laboratory, volunteers were informed—via email and phone call—about the experimental procedure, the stimuli and devices to be used, as well as the purpose of the study (the bogus feedback was omitted) and what their participation consisted.

Inclusion criteria were the following: women had to be between 18 and 25 years old and have a heterosexual orientation. Exclusion criteria were having psychological disorders, sexual and/or medical problems, and

medication use (e. g. antidepressants, antihypertensives, and antipsychotics) and/or drugs/alcohol use that could interfere with sexual function. Eligible participants received study information by email along with a copy of informed consent; participants signed the informed consent at the laboratory. This study was approved by the Ethics Committee on Human Research of the University of Granada (Spain).

## Measures

*Demographic and sexual history questionnaire.* This questionnaire included questions about age, level of education, sexual orientation, relationship status, relationship duration, age of first sexual intercourse, and number of sexual partners. Questions were also raised about psychological, medical, or sexual problems, if the participants were receiving some type of treatment (medical and/or psychological) and about the consumption of drugs and alcohol.

*Sexual excitation and sexual inhibition.* SE and SI were assessed with the Spanish version of the SESII-W (Granados et al., 2017; Sanders et al., 2008) formed by 33 items distributed in 4 factors grouped into SE (Arousability: "I get very turned on when someone wants me sexually"; Sexual power dynamics: "Feeling overpowered in a sexual situation by someone I trust increases my arousal"; Partner Characteristics: "If I see a partner interacting well with others, I am more easily sexually aroused"; and Smell: "Often just how someone smells can be a turn on") and the other four factors grouped into SI (Arousal contingency: "When I am sexually aroused, the slightest thing can turn me off"; Concerns about sexual function: "If I am concerned about being a good lover, I am less likely to become aroused"; Relationship Importance: "I really need to trust a partner to become fully aroused"; and Setting: "If it is possible someone might see or hear us having sex, it is more difficult for me to get aroused"). Each item is rated on a 4-point Likert-type scale ranging from 1 (*strongly disagree*) to 4 (*strongly agree*). The coefficients of reliability obtained in the Spanish samples were .82 and .84 on SE, and .78 and .76 on SI. Furthermore, the scores of this questionnaire correlated in the expected direction with sexual sensation seeking, erotophilia, number of sexual partners, and age of first sexual intercourse (Granados et al., 2017). In this study, the reliability was .82 on SE and SI.

*Subjective sexual arousal.* Subjective sexual arousal was evaluated with the Spanish versions of Ratings of Sexual Arousal (RSA) and Ratings of Genital Sensations (RGS) belonging to Multiple Indicators of Subjective Sexual Arousal (Mosher, 2011). RSA estimates subjective sexual arousal through five items answered on a 7-point Likert-type scale (from 1 = *no sexual arousal at all* to 7 = *extremely sexually aroused*). RGS measures the level of genital sensations through an 11-item checklist scale (from 1 = *no genital sensation* to 11 = *multiple orgasms*).

In Spanish samples, RSA showed an internal consistency reliability (Sierra et al., 2017) of .90 and its correlation with RGS was .73. In this study, a RSA Cronbach's alpha was .94 and the correlation between both scales was .81.

*Physiological sexual arousal-genital response.* Vaginal photoplethysmography (Sintchak & Geer, 1975) was used to measure the genital response of women. This device measures the vaginal pulse amplitude (VPA; Laan & Everaerd, 1995; Laan et al., 1995). The Biopac MP 150 system with Acqknowledge software was used for data acquisition and processing (BIOPAC Systems, Inc., Goleta, CA, USA). Each VPA signal was visually inspected and movement artifacts were removed. After this, peak-to-peak amplitudes were calculated. Genital responses were defined in terms of differences between sexual and baseline stimulus.

*Stimulus materials.* A 3-minute neutral content film clip was used in order to provide a baseline VPA measure. The neutral film clip was followed by a 5-minute sequence of a film displaying explicit sexual intercourse (heterosexual couple having oral and penile-vaginal sex). After 3 minutes of the sexually explicit film, a fictitious announcement appeared on the screen indicating that the genital arousal achieved by the participant was not as expected, considering the genital arousal that a woman usually achieves in a laboratory setting, to these kinds of stimuli. This manipulation was aimed not only at creating an emotional threatening situation (i.e., sexual performance failure) but also at capturing the content of the SE/SI items, mirroring sexual performance anxiety (e.g., "If I am worried about taking too long to become aroused, this can interfere with my arousal"). The sexually explicit film clip was selected by a group of women with similar sociodemographic characteristics; the film clip has produced the highest levels of subjective sexual arousal, among a set of films (Sierra et al., 2015). The duration of this warning was 20 seconds.

## Procedure

After the arrival to the lab, participants were informed about the experimental procedure, the stimuli and devices to be used, as well as the general purpose of the study and what their participation consisted of. The study was described as a "study on women's sexual responses and psychological factors"; the real aim was only unveiled after completion of the experiment. Participants were not evaluated during menstruation. In addition, they were asked to abstain from caffeine, alcohol, and sexual activity during the 24 hours prior to the experimental session to minimize possible physiological sources that might affect the responses (Bradford & Meston, 2006).

The photoplethysmographs were shown and participants were trained in their placement. In addition, it was reported that they could leave the study at any time and were asked to read and sign the informed consent. After this,

participants first answered the SESII-W on a computer. The placement of the photoplethysmograph and the experimental sequence was carried out in a soundproof room under the same conditions of temperature, light, and humidity in all cases. After the explanation, the researcher left the room, and once the participant was alone, placed the photoplethysmograph. The participant with the positioned photoplethysmograph, sitting comfortably in front of a screen, remained on hold for a 5-minute adaptation period, before the experiment began.

At the end of the film sequence, the subjective measures of sexual arousal (RSA and RGS; Sierra et al., 2017) were answered in relation to the two moments of the experimental sequence: (1) subjective sexual arousal before warning and (2) subjective sexual arousal after warning. All instructions were given through the screen. At the end of the experiment, the researcher explained that the announcement was fictitious; making sure the participant understood it. The approximate time of participation was 60 minutes.

## Results

First, correlation between physiological (VPA) and subjective sexual arousal (RSA and RGS) was examined. The correlations were not significant (RSA: $r_s = .04$, $p > .05$; RGS: $r_s = .19$, $p > .05$). Significant differences were found between genital arousal during the neutral and sexually explicit film before warning ($Z = -4.02$, $p < .0001$), between genital arousal during neutral and sexually explicit film after warning ($Z = -4.07$, $p < .0001$). No VPA differences were found between before and after warning ($Z = -0.02$, $p = .99$). As for subjective sexual arousal, significant differences were found between neutral and sexually explicit film before (RSA: $t = -9.64$, $p < .0001$; RGS: $Z = -4.06$, $p < .0001$) and after warning (RSA: $t = -6.50$, $p < .001$; RGS: $Z = -3.88$, $p < .0001$). No differences were found regarding subjective arousal between before and after warning (RSA: $t = 0.26$, $p = .80$; RGS: $Z = -1.08$, $p = .28$). Table 1 shows means and standard deviations of the subjective and genital responses before and after warning. The average percentage of increase of genital sexual arousal between neutral and sexually explicit film was 179.75% before the warning and 174.03%

**Table 1.** Mean and standard deviation of before and after warning subjective sexual arousal (RSA and RGS) and genital response (VPA).

| | Before warning | | | After warning | | |
|---|---|---|---|---|---|---|
| | RSA | RGS | VPA | RSA | RGS | VPA |
| Neutral film | 5.54 (1.09) | 1 (0) | 0.04 (0.01) | – | – | 0.04 (0.01) |
| Sexual film | 16.82 (5.65) | 3.18 (1.22) | 0.08 (0.02) | 16.57 (7.66) | 2.95 (1.53) | 0.08 (0.06) |

*Note:* RSA: Ratings of Sexual Arousal; RGS: Ratings of Genital Sensations; VPA: Vaginal Pulse Amplitude.

after it. No significant differences were found between these two moments ($Z = -0.02$, $p = .986$). In the case of subjective sexual arousal, the percentage increase was 202.81% in RSA and 218.18% in RGS before warning, and 206.09% in RSA and 195.24% in RGS after warning compared to the subjective sexual arousal in the neutral film. Accordingly, no difference was found regarding RSA ($t = -0.50$, $p = .519$) and RGS ($Z = -1.08$, $p = .280$) regarding the increase percentage between before and after warning.

Second, correlations between SESII-W scores and subjective and genital sexual arousal were obtained (see Table 2). SE (RSA: $r = .69$, $p < .001$; RGS: $r_s = .63$, $p < .01$; VPA: $r_s = .52$, $p < .01$) and SE dimension "Arousability" (RSA: $r = .62$, $p < .01$; RGS: $r_s = .51$, $p < .05$; VPA: $r_s = .43$, $p < .05$) correlated positively with the two measures of subjective sexual arousal and genital response (VPA). Furthermore, a positive correlation between SE dimension "Smell" and RSA was obtained ($r = .46$, $p < .05$). Moreover, negative correlations between SI and RSA ($r = -.44$, $p < .05$), and SI dimension "Concerns about sexual function" and RSA ($r = -.45$, $p < .05$) were found. Findings regarding the relationship between SI and RGS or VPA revealed no significant association.

Then, we verified the predictive power of the higher order factors (SE and SI), followed by the predictive role of the SE and SI dimensions showing significant associations with RSA, RGS, or VPA. Findings regarding the high-order factors showed a significant regression model that explained 43.2% (adjusted $R^2 = .43$, $p < .01$) of the variance of RSA ($F(2, 16) = 7.86$, $p < .01$). Higher order factor SE was the only predictor of RSA ($\beta = .58$, $p < .05$; see Table 3). Similarly, SE explained ($\beta = .70$, $p < .01$) 47.3% (adjusted $R^2 = .47$, $p < .001$) of the variance

**Table 2.** Correlations among SESII-W and subjective sexual arousal (RSA and RGS) and genital response (VPA).

| Variables | RSA | RGS | VPA |
|---|---|---|---|
| Sexual excitation | .69***,[a] | .63**,[b] | .52*,[b] |
| Arousability | .62**,[a] | .51*,[b] | .43*,[b] |
| Sexual power dynamics | .04[a] | .37[b] | .13[b] |
| Smell | .46*,[a] | .21[b] | .33[b] |
| Partner characteristics | .13[b] | .24[b] | –.18[b] |
| Sexual inhibition | –.44*,[a] | –.27[b] | –.08[b] |
| Setting (unusual/unconcealed) | –.31[b] | –.17[b] | .06[b] |
| Relationship importance | –.12[a] | –.32[b] | –.23[b] |
| Arousal contingency | –.12[a] | .03[b] | –.20[b] |
| Concerns about sexual function | –.45*,[a] | –.09[b] | .36[b] |

*Note:* RSA: Ratings of Sexual Arousal; RGS: Ratings of Genital Sensations; VPA: Vaginal Pulse Amplitude.
[a]Pearson correlation.
[b]Spearman correlation.
*$p < .05$. **$p < .01$. ***$p < .001$.

**Table 3.** Multiple regression analysis, enter method: SE and SI scales as predictors of subjective sexual response (RSA).

| Predictor | *B* | SE | β | *t* |
|---|---|---|---|---|
| SE | 0.66 | 0.24 | .58 | 2.69* |
| SI | –0.21 | 0.24 | –.18 | –0.84 |

*Note:* SI: sexual inhibition; SE: sexual excitation; RSA: Ratings of Sexual Arousal.
*$p < .05$.

**Table 4.** Simple regression analysis, enter method: SE scale as predictor of subjective sexual response (RGS).

| Predictor | *B* | SE | β | *t* |
|---|---|---|---|---|
| SE | 0.16 | 0.05 | .70 | 3.24** |

*Note:* SE: sexual excitation; RGS: Ratings of Genital Sensations.
**$p < .01$.

of RGS ($F(1, 17) = 17.15$, $p < .01$; see Table 4). After this, it was found that SE did not predict the genital response (VPA; adjusted $R^2 = .01$, $p > .05$; $F(1, 18) = 1.16$, $p > .05$; see Table 5).

Findings regarding the predictive role of the SE dimensions (Arousability and Smell) on RSA showed a significant model that explained 34.4% (adjusted $R^2 = .34$, $p < .01$) of the variance of RSA ($F(2, 18) = 6.24$, $p < .01$); Arousability was the only predictor of RSA ($\beta = .62$, $p < .05$; see Table 6). Also, it was shown that Arousability predicted RGS ($F(1,18) = 9.79$, $p < .01$; see Table 7), explaining 31.6% of the variance. Likewise, Arosusability did not predict the genital response (VPA; $\beta = .24$, $p > .05$), see Table 8).

As for the SI dimension (Concerns about sexual function), a significant model emerged, explaining 15.9% of the variance (adjusted $R^2 = .16$, $p < .05$) of RSA ($F(1, 19) = 4.79$, $p < .05$; see Table 9).

## Discussion

The aim of this study was to test whether the DCM dimensions predict women's genital and subjective sexual arousal to a bogus negative feedback (i.e., when they are informed that their genital arousal is lower than expected). For this, the SESII-W was used in order to provide new insights on how the DCM relates to women's sexual response.

First, and in line with previous findings (Chivers et al., 2010; Vilarinho et al., 2014), the current results supported the lack of association between subjective and physiological sexual arousal in women, which corroborates the relative

**Table 5.** Simple regression analysis, enter method: SE scale as predictor of genital response (VPA).

| Predictor | *B* | SE | β | *t* |
|---|---|---|---|---|
| SE | 0.01 | 0.01 | .25 | 1.08 |

*Note:* SE: sexual excitation; VPA: Vaginal Pulse Amplitude.

**Table 6.** Multiple regression analysis, enter method: Arousability and Smell (SE subscales) as predictors of subjective sexual response (RSA).

| Predictors | *B* | SE | β | *t* |
|---|---|---|---|---|
| Arousability | 1.12 | 0.33 | .62 | 3.40* |
| Smell | 1.14 | 1.18 | .20 | 0.97 |

*Note:* RSA: Ratings of Sexual Arousal.
*$p < .05$.

**Table 7.** Simple regression analysis, enter method: Arousability (SE subscale) as predictor of subjective sexual response (RGS).

| Predictor | *B* | SE | β | *t* |
|---|---|---|---|---|
| Arousability | 0.88 | 0.28 | .59 | 3.13* |

*Note:* RGS: Ratings of Genital Sensations.
*$p < .01$.

**Table 8.** Simple regression analysis, enter method: Arousability (SE subscale) as predictor of genital response (VPA).

| Predictor | *B* | SE | β | *t* |
|---|---|---|---|---|
| Arousability | 0.01 | 0.01 | .24 | 1.10 |

*Note:* VPA: Vaginal Pulse Amplitude.

independence of the subjective/genital responses, including when women are confronted with a sexual performance threatening situation (Elliott & O'Donohue, 1997). In this respect, it has been observed that the female genital response can be produced automatically/reflex-provoked by sexual stimuli, without being followed by subjective sexual arousal (Chivers, 2005; Chivers & Bailey, 2005; Chivers et al., 2010; Laan & Everaerd, 1995; van Lunsen & Laan, 2004) or without corresponding with the declared sexual interests (Chivers et al., 2010; Sims & Meana, 2010). Even though some studies have shown contradictory findings (Brotto & Yule, 2011; Clifton et al., 2015, Velten et al., 2016c), it is believed that the genital response may be affected by involuntary inhibition, while the subjective response

**Table 9.** Simple regression analysis, enter method: Concerns about sexual function (SI subscale) as predictors of subjective sexual response (RSA).

| Predictor | *B* | SE | β | *t* |
|---|---|---|---|---|
| Concerns about sexual function | −1.37 | 0.62 | −.45 | −2.19* |

*Note:* RSA: Ratings of Sexual Arousal.
*$p < .05$.

is not (Janssen et al., 2000). Still, other factors may be behind the lack of sexual concordance in women, such as the use of typical commercially sexual films, which focus on men's pleasure, the presentation length of the stimulus, use of VPA or vaginal blood volume instead of thermography, or the type of statistical analysis that is used (Chivers et al., 2010).

Second, findings on the effects of the bogus negative feedback on women's sexual response showed that, while both genital and subjective sexual arousal (i.e., RGS) decreased after the warning, this reduction was not statistically significant. Also, women's percent increase in subjective arousal (i.e., RSA) has actually incremented after the warning. Such findings depart from McCall and Meston's (2007) study where women lowered their subjective sexual arousal after the false negative feedback, while their genital arousal was not impacted. Accordingly, it may be hypothesized that women without sexual difficulties may be less at risk of lowering their sexual response when facing a sexual performance threatening situation, as they may have psychological protective factors that help them coping with such situations. This is congruent with Barlow's Cognitive-Affective model of sexual response, positing that men without sexual problems endorse protective cognitive *schemata*, predisposing them to deal more efficiently in sexually demanding cases (Barlow, 1986).

Also, findings on the role of SE on women's sexual response to a bogus negative feedback have shown that SE proneness including the "arousability" and "smell" dimensions were significantly associated with women's subjective sexual response; only SE and arousability sub-factor correlated with genital arousal but these factors did not show predictive power over the genital response. These dimensions (i.e., smell and arousability) have yield a significant model accounting for 34% of women's subjective sexual arousal, being "arousability" the most important predictor. Such findings may suggest that, even though the false feedback has not lowered women's subjective response (i.e., RSA), the proneness to be sexually aroused may stand as a protective factor when women have to deal with sexual failure situations. Also, these findings align with data showing that SE proneness is strongly associated with higher subjective sexual arousal (Gregory et al., 2015; Landry, 2016; Macapagal et al., 2011; Rupp et al., 2009). Accordingly, it is likely that SE proneness promotes adaptive subjective sexual responses in sexual failure situations.

On the other hand, findings revealed that SI proneness, specially captured by "concerns about sexual function" dimension, may act as vulnerability factors. Indeed, "concerns about sexual function" sub-factor was associated with decreased subjective sexual response. Thus, "concerns about sexual function" was significantly associated with decreased subjective response (i.e., RSA) and accounted for 15.9% of the subjective arousal variance. It is possible that increased concerns about sexual function relate to higher anxiety, especially when individuals are confronted with sexual performance difficulties (Palace & Gorzalka, 1990). Also, according to Hoon et al. (1977), sexual arousal is greater in an erotic context than in one that generates anxiety arousal, this may be the case of false negative feedback from the present study.

Also, is worth noting that among the high-order factors (i.e., SE and SI proneness), SE was the only one predicting subjective sexual arousal. None of the two factors predicted genital response. Despite preliminary, these findings suggest that SE proneness, rather than SI, may have a preponderant role on how women react subjectively in a negative feedback scenario. Findings further suggest that the DCM dimensions may be more relevant to explain subjective rather than genital arousal, in this specific context.

The current study presents several limitations that should be noted. First, the sample was not randomly recruited. Although this practice is common in psychophysiological studies, including human sexuality studies (Vilarinho et al., 2014), results should not be extrapolated to other groups (e.g., nonheterosexual women) or to the general population. Second, in order to ensure that the current findings are specific to a negative feedback condition, future studies should include a nonfeedback condition, so the findings could be contrasted against a comparison group. Also, subjective sexual arousal before the warning was captured at the end of the film-clip, to prevent some sort of interference during the presentation of the clip. Still, it is possible that at the end of the film-clip, the levels of subjective sexual arousal reported by women do not reflect the levels that were felt during the presentation of the clip. Finally, we must acknowledge the low sample size, that clearly prevents the generalization of findings and the formulation of definitive conclusions.

In short, findings add to the literature on the role of the DCM of sexual response, by suggesting that SE proneness may be involved on how women respond subjectively to a bogus negative feedback about their sexual response. More specifically, "Arousability" seems to be positively involved in situational subjective sexual arousal, while "Concerns about sexual function" may have a detrimental role, lowering subjective sexual response. Accordingly, and even though we cannot derive strong conclusions, we can point "Concerns about sexual function," and the cognitive distraction resulting from it, as a target for clinical procedures aimed at improving women's sexual response, particularly after their sexual performance expectations have been threatened, resulting in some kind of personal distress.

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