PSYCHOLOGY

Development and Validation of the Postsex Experience (P-SES) Scale

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ABSTRACT

Introduction: There is little systematized research on the postsex phase of the sexual cycle, due in part to the absence of literature on the period immediately following sexual activity.

Aim: The paper describes the development and validation of the *Postsex Experience Scale* (P-SES), an instrument designed to measure the psychological dimensions of the postsex period of the human sexual response cycle.

Methods: Scale development involved (a) item construction, selection, and subsequent validation through item analysis, and (b) a factor analysis of the item intercorrelations of the P-SES and the establishment of its factorial validity, based upon an online survey of 4,217 respondents.

Results: In the exploratory factor analysis of the psychometric structure of the scale, structures for males and females differed. 3 factors emerged, which captured the male postsex experience. These factors were labeled *Sense of Sexual Alienation, Positive Connection with Self,* and *Feeling Connected with Partner.* 4 factors best captured the female postsex experience and were labeled *Self-Loathing, Positive Connection with Self, Sense of Being Emotionally Overwhelmed,* and *Feeling Connected with Partner.*

Clinical Implications: There is strong evidence for acknowledging a wide variation in postsex experience in both men and women across sexual orientations.

Strengths & Limitations: Strengths include a large heterogeneous sample leading to the provision of a metric to investigate novel aspects of human sexuality. Limitations include the potential underreporting of experiences due to the structure of the scale and its reference to "general experiences" and presentation bias.

Conclusions: The P-SES provides a framework for assessing the postsex experience in women and men, providing opportunities to gain a better understanding of the variations in postsex experience. **Schweitzer RD, du Plessis G, Maczkowiack J, et al. Development and Validation of the Post Sex Experience (P-SES) Scale. Sex Med 2021;9:100291.**

INTRODUCTION

Traditionally, the human sexual response cycle has been conceptualized in terms of a physiological model with reference to excitement, plateaux, orgasm, and resolution phases.[1] This model has been open to criticism in terms of being heteronormative, and male-centric, while little attention has been paid to the psychological and emotional responses immediately following sexual activity. This phase is sometimes referred to as the resolution or emotional intimacy phase and remains under-researched.[2–7] One explanation for the paucity of research concerning the phenomenological experience of the phase following arousal and satisfaction phases of the sexual experience is the fact that researchers may assume the answers are obvious that people feel relaxed, calm, sleepy, a sense of intimacy or a range of other positive emotions following sex, suggesting a coherence in the postsex experience. However, recent research has instead found considerable variation in the psychological and emotional responses people experience following sexual activity,[7,8] suggesting the need to develop a more fine-grained understanding of the postsex experience.

Unsurprisingly, the phase following sexual activity remains relatively unexplored, in a context which assumes that the postsex experience is characterized as predominantly pleasurable and associated with intimacy and bonding.[9−12] These behaviors are also consistent with popular cultural beliefs that the postsex experience is a time of relaxation, contentment, and positive affect.[13] However, the presence of negative emotions following sexual activity has also been a subject of recent investigation.[7]

Negative emotional experiences following sexual activity have been found to be common, with over 80% of college students experiencing one or more negative emotion(s) following sexual activity.[4] Sex differences are observed in the types of negative emotions experienced, with males more likely to experience negative emotions associated with avoidance of bonding (irritability, anger, disgust for partner), while females are more likely to experience negative emotions associated with a need for bonding (lonely, insecure, need to be comforted).[4] A relatively unknown phenomenon characterized by *inexplicable* negative emotions following otherwise satisfactory sexual activity is referred to as Postcoital Dysphoria (PCD).

Sadock and Sadock[14] provide the first reference to the PCD phenomenon in contemporary literature. PCD has been found to occur in up to 46% of females and 40% of males, with between 3% and 4% of participants experiencing PCD on a regular basis.[2,7] Females are more likely to experiences postsex dysphoria than males.[8] Female and male differences are significant in the variation of postsex experience, which is consistent with the work of Basson.[15,16] Reported responses may be further complicated by the observation that females may be more willing to report the presence of negative feelings and emotions than do males,[17] who are often unwilling to admit to such "weaknesses". Despite popular assumptions that the phase following sexual activity is always a satisfying, relaxing, and positive, negative emotional experiences following sexual activity appear to be relatively common.[7] However, the absence of any metric to assess the experience makes it difficult to research this phenomenon.

Psychological factors, such as attachment style, current experiences of anxiety and depression, and childhood sexual abuse have also been found to influence the postsex experience.[2,3,6,7] In addition, twin studies suggest a genetic component may influence the postsex experience.[3] There may also be differences in the reported postsex experiences of males compared to females, consistent with many areas of sexual experience and sexual functioning.[16]

Despite the development of many measures related to sexuality and human sexual response,[18] currently no scales exist focussing upon the psychological and emotional aspects of the postsex experience. While some instruments (such as *The New Sexuality Satisfaction Scale*) contain single items pertaining to the resolution phase, the postsex experience appears to have been largely neglected. The current lack of a validated scale measuring the psychological and emotional aspects of the postsex experience

limits the research and hinders a more comprehensive understanding of the factors influencing people's experience.

In summary, current understandings point to significant variation in the postsex experience both within and between people and between males and females. The current study seeks to (1) develop a self-report measurement scale that can be used by researchers to study the postsex experience, and (2) to validate this scale against measures of psychological distress, PCD, and sexual satisfaction. It is expected that current psychological distress and PCD would be positively correlated with negative postsex experiences and negatively correlated with positive postsex experiences. Conversely, sexual satisfaction would be expected to form a positive relationship with positive postsex experiences and a negative relationship with negative postsex experiences.

METHOD

Participants

An anonymous online questionnaire was utilized to obtain a sample of 4,217 volunteers, of which 3,345 (2,151 females) were able to be included in the current analysis (79.25% completion rate). The age range of the total sample was 18−100 years (M = 32.3, SD = 13.01). The demographic information pertaining to the sample is displayed in Table 1.

Materials

Postsex Experience Scale

A postsex experience scale was developed. The first stage of the scale development involved the selection of items. *Postsex experience* was defined as emotions, feelings, and thoughts occurring during the period of time immediately following sexual activity in the context of consensual adult sexual relationships. The initial phase of the project involved the selection of items to be included in the *Postsex Experience Scale* (P-SES). Questions needed to focus on the period immediately following sexual activity. Initial items were informed by the researchers' knowledge of the theories relating to the human sexual cycle, as well as the contemporary critiques of traditional theory, as articulated by researchers, including Basson, who highlights the role of assigned sex in the human sexual response. Knowledge of theory was augmented by personal accounts of the postsex experience, drawn from interviews aimed at eliciting in-depth accounts of postsex experiences,[19] and personal accounts from emails and blog posts. A total of 124 items were selected, describing emotions, feelings, thoughts, and behaviors with negative and positive valence. This was to ensure a wide range of experiences were able to be captured.

For guiding the development of items, emotions were considered in terms of neurophysiological responses, or bodily sensations or reactions experienced following sexual activity, while feelings were considered in terms of the conscious or subjective expression of emotions. Experiences such as

Table 1. Demographic information

Variable	n	Percentage
Country of residence − in order of representation		
Australia	951	28.5%
USA	786	23.5%
UK	439	13.1%
Other	1,166	34.9%
Current relationship status		
Single	712	21.3%
In a relationship, but not living together	975	29.2%
Living with a partner, but not married	700	20.9%
Married	828	24.8%
Separated	46	1.4%
Other	81	2.4%
Length of current relationship		
Not currently in a relationship	839	25.1%
Less than 6 months	286	8.6%
6−12 months	260	7.8%
1−3 years	646	19.3%
3−6 years	425	12.7%
6−12 years	373	11.2%
12−24 years	307	9.2%
Greater than 24 years	206	6.2%
Current sexual relationship status		
Not in a sexual relationship	431	12.9%
Exclusive/Monogamous	2350	70.3%
Non-exclusive/Non-monogamous	561	16.8%
Exclusively heterosexual	798	65.4%
Predominantly heterosexual	182	14.9%
More heterosexual than homosexual	26	2.1%
Equally heterosexual and homosexual	10	0.8%
More homosexual than heterosexual	13	1.1%
Predominantly homosexual	69	5.7%
Exclusively homosexual	120	9.8%
No Sexual Interests	3	0.2%

Note. N = 3,342.

excitement, sadness, disgust, and anger were considered to be emotions, while feelings resulting from emotions referred to subjective feelings of desire, sadness, or feeling close to another. These constructs informed the development of items. Based upon the recommendations of Worthington and Whittaker,[20] an iterative process, in consultation with a panel of experts in the field of human sexuality, was used to finalize a total of 81 items: 41 with positive valence, 40 with negative. These items were then given to 17 members of the general community (7 males, 10 females, comprising individuals who identified as heterosexual and as homosexual) to ensure all items were sensitive and

respectful to a diverse range of people. All items were worded as "Immediately following consensual sexual activity, I generally…" and scored on a six-point Likert-type scale, where 1 = Never and 6 = All of the time. Higher scores indicated a greater frequency of experience.

Validity Measures

Psychological Distress

Current psychological distress was assessed using the Kessler Psychological Distress Scale (K10),[21] a brief measure of depression and anxiety experienced over the previous 4 weeks. The K10 contains 10 items assessed on a five-point Likert-type scale ranging from 1 = None of the time to 5 = All of the time. Higher scores indicated greater psychological distress. Used in clinical and community samples, the K10 is internally consistent, attaining a Cronbach's α of 0.89.[21] The Cronbach's α found in this study was 0.91, revealing a high level of internal consistency.[22,23]

Postcoital Dysphoria

PCD was assessed using a single item asking participants the extent to which they had experienced "inexplicable tearfulness, sadness, or irritability immediately following otherwise satisfactory sex" over the previous 4 weeks. A six-point Likert-type scale was used where 0 = Never to 5 = All of the time, with higher scores indicating more frequent experiences of PCD.

Sexual Satisfaction

A single item was used to assess sexual satisfaction, worded "How sexually satisfied are you with your current partner/s?". While various multi-item scales do exist, a single item was deemed to perform well compared to multi-item scales as per the findings of Mark and colleagues.[24] Responses were measured on a 100-point scale, with higher scores indicating greater sexual satisfaction.

Design

Procedure

The study was approved by the University Human Research Ethics Committee (Approval Number: 1600000961). Questionnaire items were generated following a two-fold process. During the first stage, items were developed by the researchers and reviewed, and items added to or modified by an expert panel of PhD researchers, all with expertise in human sexuality. The items were then reviewed by a second panel of 17 male and female participants, representing a diverse range of ages and sexual orientations, following which items were modified as required. Data was collected using Qualtrics (www.qualtrics.com), an online questionnaire platform, and participants were recruited via online articles, blogs, and social networking sites (such as Facebook and LinkedIn). Participants were provided with information about the study and its aims and were required to provide consent prior to beginning the survey. The survey took

approximately 30 minutes to complete, and data were collected from February to October 2017. Those under 18 years of age and who were not sexually active were unable to participate.

Data Analysis

The sample data were divided into male (1,193) and female (2,149) respondents. These responses were then randomly separated into an exploratory study sample (male = 597; female = 1,075) to be used in the exploratory factor analysis (EFA) and a confirmatory sample (male = 596; female = 1,074) to be used in the confirmatory factor analysis (CFA). Factor retention was determined through the consideration of Cattell's point of inflection rule,[25] Horn's parallel analysis,[26] Glorfeld's modification of Horn's parallel analysis,[27] and the Kaiser criterion.[28] A factor analysis of the intercorrelations of the 81 items generated, as described in the methodology section, was conducted using an oblique rotation (oblimin). An oblique rotation was used as it best accounts for the theoretical correlations between the supposed PCD factors to be explored.[29] Motivated by the literature review, which intimated that there are theoretical differences in postsex dysphoria, factor extraction emphasized consideration of the samples altogether, and of men and women independently. Bartlett's test of sphericity was used to determine justification for the extracting factor. The Kaiser-Meyer-Olkin (KMO) measure was used to determine the sampling adequacy.

Following the EFA, a series of focus groups were used to narrow down items that represented each factor. Individual item factor loadings and clinical judgement were used to determine item retention and grouping on factors. The Cronbach's Alpha coefficients for the scales determined through this procedure were calculated as an indication of internal consistency. A CFA was then conducted to confirm the factor structure of the final scales. The fit of the factor structures for the CFA were examined using Chi-square, comparative fit index (CFI), Tucker-Lewis index (TLI), root-mean-square error of approximation (RMSEA), and standardized root-mean-square residual (SRMR) calculations. As with the exploratory analysis, Cronbach's Alpha coefficients were calculated in the confirmatory analysis. Bivariate correlations were used to assess convergent and discriminatory validity of the final factor solutions. Bias corrected and accelerated (BCa) confidence intervals were examined. The factor solutions for males and females were compared with the measures of PCD, sexual satisfaction, and psychological distress. All data analysis was conducted in the program R (version 3.4.1).[30] As participants were required to answer every item, there were no missing values.

RESULTS

Exploratory Factor Analysis

In accordance with theory, the most appropriate factor extractions did differ for men and women. This resulted in the distinct factor analyses described below.

Males

Bartlett's test of sphericity was significant at the 1% level, χ^2 (3,240) = 34,273.29, $P < .001$, suggesting that there was sufficient justification for extracting factors. The Kaiser-Meyer-Olkin (KMO) measure was 0.97, suggesting that reliable factors could be extracted.[29] While 4 factors had eigenvalues greater than 1, examination of the parallel analyses indicated a 3-factor structure as a more robust solution. This solution explained 47% of the total variance. These factors were labeled (1) Sense of Sexual Alienation (25% variance), (2) Positive Connection with Self (17% variance), and (3) Feeling Connected with Partner (5% variance). Examination of individual item factor loadings, as well as clinical judgement regarding overlapping items, resulted in the retention of 19 items: 9 items for factor 1, 6 for factor 2, and 4 for factor 3. Only 4 items were retained for factor 3 as fewer items loaded on this factor. The factor pattern matrix of loadings for the retained items is reproduced in Table 2. This table includes a delimitation of the respective scales' Cronbach's alpha coefficients, all of which exceeded 0.82 suggesting high internal consistency.

Females

Bartlett's test was significant at the 1% level of significance, χ^2 (3,240) = 594,544.6, $P < 0.001$, suggesting that there was sufficient basis for extracting factors. The Kaiser-Meyer-Olkin measure was 0.98, suggesting a "superb" chance of finding distinct and reliable factors.[29] While 5 factors had eigenvalues greater than 1, examination of the parallel analyses indicated a 4-factor structure as a more robust solution. This solution explained 49% of the total variance. These factors are labeled (1) Self-Loathing (16% variance), (2) Positive Connection with Self (15% variance), (3) Sense of Being Emotionally Overwhelmed (8% variance), and (4) Feeling Connected with Partner (9% variance). Examination of individual item factor loadings, as well as clinical judgement regarding overlapping items, resulted in the retention of 26 items: 8 items for factor 1, 8 for factor 2, 4 for factor 3, and 6 for factor 4. The pattern matrix of loadings for the retained items is reproduced in Table 3. This table includes a delimitation of the respective scales' Cronbach's alpha coefficients, all of which exceeded 0.80 suggesting moderately high internal consistency.

Confirmatory Factor Analysis

The 3 and 4 factor models for men and women respectively were tested using a confirmatory factor analysis with the confirmatory sample described earlier (males = 596; females = 1,074). Using a maximum-likelihood estimation procedure, these analyses were informed by the posited factors and identified items as detailed in Tables 4 and 5.

Males

The model fit was acceptable. Chi-square, CFI, TLI, RMSEA, and SRMR (χ^2 = 434.74, df = 149, $P < .001$; CFI = 0.95;

Table 2. Factor pattern matrix of factor loadings for males

Item	Sense of sexual alienation[1] Cronbach's Alpha = 0.90	Positive connection with self[2] Cronbach's Alpha = 0.88	Feeling connected with partner[3] Cronbach's Alpha = 0.82
Feel a sense of regret[1]	0.75		
Have thoughts which I do not like[1]	0.71		
Feel depressed[1]	0.70		
Feel irritable[1]	0.67		
Feel like I could cry[1]	0.67		
Feel a sense of loneliness[1]	0.66		
Feel a sense of emptiness[1]	0.66		
Feel rejected[1]	0.63		
Feel a sense of homesickness[1]	0.52		
Feel desirable[2]		0.67	
Experience a sense of wellbeing[2]		0.63	
Feel joyful[2]		0.63	
Feel a sense of security[2]		0.61	
Feel calm[2]		0.57	
Feel content[2]		0.47	
Feel emotionally open to my partner[3]		0.44	0.42
Feel in love[3]			0.52
Like to be held or cuddled[3]			0.50
Feel close to my partner[3]		0.43	0.47

Note. Items retained for respective factors are marked in superscript.

TLI = 0.95; RMSEA = 0.057; SRMR = 0.046) indicated general robustness in the model. The loadings of each item on the factors are reported in Table 4. As was the case with the exploratory sample, the Cronbach's alpha coefficients (all exceeding 0.79) suggested moderately high internal consistency.

Females

The model fit was acceptable. Chi-square, CFI, TLI, RMSEA, and SRMR (χ^2 = 1, 749.55, df = 293, $P <$ .001; CFI = 0.93; TLI = 0.92; RMSEA = 0.068; SRMR = 0.057) indicated general robustness in the model. The loadings of each item on the factors are reported in Table 5. As was the case with the exploratory sample, the Cronbach's alpha coefficients (all exceeding 0.81) indicate high internal consistency.

Convergent and Discriminant Validity

Bivariate correlations assessed the convergent and discriminant validity of the final factor solutions for both males and females (Table 6). As some potential breaches in normality were observed, the bias-corrected and accelerated (BCa) confidence intervals are also reported. Table 6 presents the bivariate correlations between the 3-factor solution for males, PCD, sexual satisfaction, and psychological distress. Table 7 presents the bivariate correlations between the validity measures and the 4-factor solution for females.

The bivariate correlations provide evidence of convergent and discriminant validity for the P-SES developed for both males and females. All correlations were significant and in the anticipated direction. Moderate to strong correlations were observed between PCD scores and the developed measure of postsex experience in all except one factor relating to an emotional connection with another for both males and females. Weak to moderate correlations were observed between sexual satisfaction and the postsex experience factors for both males and females. Finally, psychological distress displayed a weak relationship with all factors across males and females, except for Sexual Alienation in males, which displayed a moderate relationship. The weak relationship observed is consistent with that between the item for PCD and psychological distress in both males, r(1006) = 0.37, $P <$ .001, BCa CI = [0.31, 0.43] and females, r(1903) = 0.27, $P <$ .001, BCa CI = [0.22, 0.31]. The results tend to show that, among both males and females, positive postsex experiences are far more common among the sample than negative experiences.

Postsex Experience Scale Descriptors

Tables 8 and 9 below present descriptive statistics for the factors within each of the 2 scales postulated in the preceding factor analysis. These descriptors are calculated by summing the items' scores contribution to each of the 7 scales (3 for males and 4 for females). Ranges, means, standard deviations, and common percentile cut-offs are reported. These can be used to both guide the scoring and interpretation of the PSE in future clinical work and studies.

Table 3. Pattern matrix of factor loadings for women

Item	Self-loathing[1] Cronbach's Alpha = 0.91	Positive connection with self[2] Cronbach's Alpha = 0.91	Sense of being emotionally overwhelmed[3] Cronbach's Alpha = 0.80	Feeling Connected with partner[4] Cronbach's Alpha = 0.88
Feel like I've done something wrong [1]	0.79			
Feel a sense of self-disgust[1]	0.78			
Feel a sense of shame[1]	0.77			
Feel guilty[1]	0.73			
Feel a sense of regret[1]	0.73			
Feel annoyed at myself[1]	0.71			
Feel dirty[1]	0.66			
Feel used for sex[1]	0.40			
Feel empowered[2]		0.79		
Feel confident[2]		0.77		
Feel a sense of pride[2]		0.76		
Feel connected to myself[2]		0.68		
Feel positive about my body[2]		0.68		
Feel desirable[2]		0.66		
Experience a sense of wellbeing [2]		0.64		
Feel content[2]		0.47		
Feel like I could cry[3]			0.68	
Need to be comforted[3]			0.49	
Feel confused about my emotions[3]			0.48	
Feel lost[3]			0.45	
Feel in love[4]				0.67
Feel close to my partner[4]				0.64
Feel emotionally open to my partner[4]				0.60
Feel loved[4]				0.55
Avoid communicating[4]*				−0.45
Avoid talking about my feelings[4]*				−0.40

The superscript number indicates the factor number where the item loads.
*Indicates that the item is reverse scored.

DISCUSSION

The primary purpose of the present study was to explore the dimensionality of the postsex experience among males and females separately by constructing and administering a scale assessing the resolution phase of the human sexual response cycle. Separate EFAs suggested that the factor structure of the postsex experience appears to differ between males and females, with a 3-factor solution emerging for males, compared to a 4-factor solution for females. This finding provides preliminary evidence for a difference in the postsex experience between males and females. Among males, the 3 factors were named *Sense of Sexual Alienation*, *Positive Connection with Self*, and *Feeling Connected with Partner*. Among females, the 4 factors were named *Self-Loathing*, *Positive Connection with Self*, *Sense of Being Emotionally Overwhelmed*, and *Feeling Connected with Partner*. The CFA revealed the robustness of these solutions.

Despite the presence of the fourth factor among females, there were some similarities between males and females. A negative emotional experience is present for both males and females (*Sense of Sexual Alienation* for males, and *Self-Loathing* for females). Similarly, *Positive Connection with Self* emerged as a factor for both males and females, as did *Feeling Connected with Partner*. However, it appears that the female postsex experience may be more heavily influenced by the presence of particularly intense emotions, which can be overwhelming. This is evidenced by the presence of a fourth factor (*Sense of Being Emotionally Overwhelmed*), which did not emerge in the male subsample.

Working Definition of the Postsexual Experience Factors

We acknowledge that the term postsexual experience is not an ideal term as there is some fluidity between each of the phases of human sexual interaction. Nevertheless, we believe that this term best captures the idea that there is a period of arousal and sexual experiences which are followed by a less active, but nevertheless important, encounter both in terms of one's experience of oneself and of the other, within an intimate relationship.

Table 4. Confirmatory factor analysis —Factor loadings for men

Item	Sense of sexual alienation[1] Cronbach's Alpha = 0.89	Positive connection with self[2] Cronbach's Alpha = 0.88	Feeling connected with partner[3] Cronbach's Alpha = 0.79
Feel a sense of regret[1]	0.74		
Have thoughts which I do not like[1]	0.70		
Feel depressed[1]	0.83		
Feel irritable[1]	0.67		
Feel like I could cry[1]	0.60		
Feel a sense of loneliness[1]	0.83		
Feel a sense of emptiness[1]	0.80		
Feel rejected[1]	0.54		
Feel a sense of homesickness[1]	0.52		
Feel desirable[2]		0.63	
Experience a sense of wellbeing[2]		0.84	
Feel joyful[2]		0.81	
Feel a sense of security[2]		0.76	
Feel calm[2]		0.73	
Feel content[2]		0.72	
Feel emotionally open to my partner[3]			0.75
Feel in love[3]			0.80
Like to be held or cuddled[3]			0.39
Feel close to my partner[3]			0.92

Note. Items retained for respective factors are marked in superscript.

For males, 3 factors were identified: (1) Sexual Alienation, (2) Connection with Self, and (3) Feeling Connected with a partner. Sexual Alienation refers to general dysthymia, which may be characterized by a range of feelings from emptiness to loneliness, regret, and in extreme instances, tearfulness. Connection with self comprises a range of experiences often associated with a sense of security, desire, joy, and contentment. Feeling Connected with Partner is essentially an interpersonal dimension that relates to a sense of closeness and emotional connection with the other, and satisfaction found through physical intimacy. Importantly, this latter factor is most closely associated with feelings of love.

For females, 4 factors were identified: (1) Self-Loathing, (2) Positive Connection with Self, (3) Sense of Being Emotionally Overwhelmed, and (4) Feeling Connected with a Partner. Self-loathing was most often associated with such feelings as shame, guilt, and regret. At the more extreme end of the continuum, this factor included a sense of self-disgust and/or feeling used for sex. The Positive Connection with Self factor relates to an experience of self, including a sense of connection with one's body, with one's sense of who one is, a sense of contentment, and feelings of empowerment. Importantly, this is also related to feeling positive about one's body. Sense of Being Emotionally Overwhelmed involves dysphoric emotions such as a need to be comforted, feeling lost or confused, or a general sense of unease. Feeling Connected with Partner for females refers to the interpersonal dimension involving closeness and being emotionally open to one's partner, communicative, and importantly, with a sense of feeling loved.

Significantly, there are overlaps between the constructs for males and females, and also some unique differences. In both males and females, there is a strong interpersonal dimension to the sexual experience. However, the notion of being emotionally overwhelmed, which included notions of self-disgust and feeling used, was unique to females. Some of these findings are consistent with stereotypes involving men and women. But importantly, the range of experiences for females are also consistent with Basson's writing in which she suggests that the female experience is more relational than conceived by previous physiological theories, which have been proposed to describe the sexual cycle. The experience is iterative and involves a significant complexity of experiences, both personal and interpersonal, which at times might even be dysphoric, leading to an appreciation of the diversity of the postsexual experience. These notions certainly challenge prevailing ideas around sex as a linear experience and also support the need to appreciate the dimensionality in the experiences of men and women in conceptualizing the human sexual experience.

Validity Measures

The subscales that emerged for males and females were assessed against the measures of psychological distress, sexual satisfaction, and PCD. As hypothesized, psychological distress and PCD were positively associated with negative postsex experiences (males: Sexual Alienation; females: Self-Loathing and Emotionally Overwhelmed) and negatively associated with positive postsex experiences (males: Positive Connection with Self

Table 5. Confirmatory factor analysis factor loadings for women

Item	Self-loathing[1] Cronbach's Alpha = 0.93	Positive connection with self[2] Cronbach's Alpha = 0.91	Sense of being emotionally overwhelmed[3] Cronbach's Alpha = 0.81	Feeling Connected with partner[4] Cronbach's Alpha = 0.89
Feel like I've done something wrong[1]	0.81			
Feel a sense of self-disgust[1]	0.89			
Feel a sense of shame[1]	0.90			
Feel guilty[1]	0.81			
Feel a sense of regret[1]	0.81			
Feel annoyed at myself[1]	0.74			
Feel dirty [1]	0.74			
Feel used for sex[1]	0.62			
Feel empowered[2]		0.74		
Feel confident[2]		0.88		
Feel a sense of pride[2]		0.67		
Feel connected to myself[2]		0.74		
Feel positive about my body[2]		0.72		
Feel desirable[2]		0.76		
Experience a sense of wellbeing[2]		0.79		
Feel content[2]		0.70		
Feel like I could cry[3]			0.72	
Need to be comforted[3]			0.52	
Feel confused about my emotions[3]			0.79	
Feel lost[3]			0.84	
Feel in love[4]				0.79
Feel close to my partner[4]				0.86
Feel emotionally open to my partner[4]				0.80
Feel loved[4]				0.81
Avoid communicating[4]*				−0.63
Avoid talking about my feelings[4]*				−0.62

The superscript number indicates the factor number where the item loads.
*Indicates that the item is reverse scored.

and Feeling Connected with Partner; females: Positive Connection with Self and Feeling Connected with Partner). In contrast, sexual satisfaction was found to be positively associated with positive postsex experiences (males: Positive Connection with Self and Feeling Connected with Partner; females: Positive Connection with Self and Feeling Connected with Partner) and negatively associated with negative postsex experiences (males:

Sexual Alienation; females: Self-Loathing and Emotionally Overwhelmed).

Scale Administration and Interpretation

The factors and their constituent items are summarized in Tables 8 and 9. Descriptive statistics for each of the factors are

Table 6. Bivariate correlations between factors 1-3 and measures of validity for males

Validity Measure	Factor 1 (sexual alienation)		Factor 2 (positive connection with self)		Factor 3 (feeling connected with partner)	
	Pearson's r	BCa 95% CI	Pearson's r	BCa 95% CI	Pearson's r	BCa 95% CI
PCD	0.71*	[0.66, 0.75]	−0.50*	[−0.56, −0.44]	−0.35*	[−0.42, −0.28]
Sexual Satisfaction	−0.36*	[−0.43, −0.30]	0.40*	[0.35, 0.46]	0.37*	[0.31, 0.44]
K10	0.52*	[0.47, 0.57]	−0.36*	[−0.41, −0.29]	−0.19*	[−0.26, −0.13]

Note. N = 1006. r = Pearson's correlation; BCa = Bias-corrected and accelerated; CI = Confidence Interval.
*P < .001

Table 7. Bivariate correlations between factors 1-4 and measures of validity for females

Validity Measure	Factor 1 (self-loathing)		Factor 2 (positive connection with self)		Factor 3 (emotionally overwhelmed)		Factor 3 (feeling connected with partner)	
	Pearson's r	BCa 95% CI	Pearson's r	BCa 95% CI	Pearson's r	BCa 95% CI	Pearson's r	BCa 95% CI
PCD	0.49*	[0.43, 0.53]	−0.43*	[−0.47, −0.39]	0.64*	[0.61, 0.68]	−0.38*	[−0.42, −0.34]
Sexual Satisfaction	−0.33*	[−0.38, −0.28]	0.40*	[0.35, 0.44]	−0.26*	[−0.30, −0.22]	0.44*	[0.44, 0.52]
K10	0.39*	[0.34, 0.43]	−0.35*	[−0.39, −0.30]	0.39*	[0.35, 0.42]	−0.27*	[−0.31, −0.22]

Note. N = 1908. r = Pearson's correlation; BCa = Bias-corrected and accelerated; CI = Confidence Interval.
*P < .001

presented. By using these descriptors, future researchers will be guided in the scoring of items insofar as they contribute to factors, and the stated means and percentile scores provide guidance as to their interpretation, relative to the sample examined in this paper. For the purposes of administering the scale, it is recommended that the order of items, as presented in Tables 8 and 9, be reordered.

Strengths and Limitations

As the first known study to examine the factor structure of the postsex experience, the present study had several strengths.

Firstly, the large and diverse international sample included males and females, as well as heterosexual and homosexual participants, allowing for a wide range of experiences to be captured. The model underpinning the conceptualization of the postsex phase of the human sexual response cycle,[1] might be criticized as reflecting a male-centric linear model of human sexuality. However, the current study examined both male and female experiences and was able to provide robust evidence of both commonalities and differences in the postsex experience between men and women. Findings on female experiences are consistent with and complement Basson's female-centered sexual response

Table 8. Descriptive Statistics for Men's Scale for the Whole Sample

Factors and Scale Items	Mean	SD	Percentiles				
			25th	50th	75th	90th	95th
Sense of Sexual Alienation (possible range: 9—54)	14.64	7.18	9.0	12.0	17.0	25.0	31.4
1. Feel a sense of regret							
2. Have thoughts which I do not like							
3. Feel depressed							
4. Feel irritable							
5. Feel like I could cry							
6. Feel a sense of loneliness							
7. Feel a sense of emptiness							
8. Feel rejected							
9. Feel a sense of homesickness							
Positive Connection with Self (possible range: 7—42)	25.12	7.74	20.0	27.0	30.0	33.0	35.0
1. Feel desirable							
2. Experience a sense of wellbeing							
3. Feel joyful							
4. Feel a sense of security							
5. Feel calm							
6. Feel content							
7. Feel emotionally open to my partner							
Feeling Connected with Partner (possible range: 4—24)	16.76	5.35	13.0	18.0	20.0	22.0	23.0
1. Feel emotionally open to my partner							
2. Feel in love							
3. Like to be held or cuddled							
4. Feel close to my partner							

These summarize the items particular to each of the seven scales. Frequency distributions based on the 6-point likert scale described in the methodology (where 1 represents "Not at all true of me" and 6 represents "Very true of me", and all items particular to a scale are summed) facilitate an interpretive guideline.

Table 9. Descriptive statistics for Women's scale for the whole sample

Factors and Scale Items	Mean	SD	Percentiles				
			25th	50th	75th	90th	95th
Self-Loathing (possible range: 8—48)	13.5	6.91	8.0	11.0	15.0	24.0	31.0
1. Feel like I've done something wrong							
2. Feel a sense of self-disgust							
3. Feel a sense of shame							
4. Feel guilty							
5. Feel a sense of regret							
6. Feel annoyed at myself							
7. Feel dirty							
8. Feel used for sex							
Positive Connection with Self (possible range: 8—48)	30.26	10.84	23.0	32.0	38.0	41.0	43.0
1. Feel empowered							
2. Feel confident							
3. Feel a sense of pride							
4. Feel connected to myself							
5. Feel positive about my body							
6. Feel desirable							
7. Experience a sense of wellbeing							
8. Feel content							
Sense of Being Emotionally Overwhelmed (possible range: 4—24)	8.45	4.72	5.0	7.0	11.0	15.0	18.0
1. Feel like I could cry							
2. Need to be comforted							
3. Feel confused about my emotions							
4. Feel lost							
Feeling Connected with Partner (possible range: 6—36)	27.58	7.37	23	29	33	35	36
1. Feel in love							
2. Feel close to my partner							
3. Feel emotionally open to my partner							
4. Feel loved							
5. Avoid communicating *							
6. Avoid talking about my feelings *							

*These items have been reverse scored.

cycle work,[16] contributing to notions of a more relational motivational model. Finally, by examining a wide range of possible psychological and emotional reactions following sexual activity, a reliable picture of the factors of the postsex experience was able to be captured.

There were also several limitations of the present study, which should be kept in mind when interpreting the results. It is possible that respondents had never before considered their personal experience following sex and therefore answered in ways that align with popular cultural ideas about how one "should" feel. Another limitation is that we did not define the term "sexual activity" and questions were framed as relating to experiences that occur "generally". Respondents might not have reported negative experiences if they occurred rarely. Thus, variation between sexual encounters may not have been captured. Further, the sampling did not adequately assess gender identity, nor sexual fluidity. Future studies may take a more nuanced approach to human sexuality. Another limitation relates to the varied time periods of the K-10 and the

P-SES. These limitations should be addressed in future studies exploring the utility and properties of the proposed scales. Finally, despite the questionnaire being anonymous, it is also possible that negative experiences were not reported due to self-presentation bias.

Implications for Therapists

The findings have the capacity to assist clinicians to be receptive to a broader range of sexual experiences and to challenge a prevailing myth that sexual acts are invariably followed by positive affect. Psychoeducation may assist some couples to move past the challenges they are experiencing as part of their intimate relationships, and through a process of normalization, foster more open communication within relationships. While further research is required to assess the validity of the scales across samples, the preliminary evidence suggests that the current findings point to unique components of the postsex period between males and females, with some males describing experiences identified as sexual alienation and some females experiencing self-

loathing and emotional overwhelmed. Gaining an understanding of the potential and often unique factors which may be contributing to such experiences may well represent a first step in assisting couples in engaging in open communication, enhance the quality of their sexual relationship, and achieve greater intimacy and improved communication.

Future Research and Conclusion

As a preliminary investigation, the present study provides initial evidence for the factor structure of the postsex experience, pointing towards possible differences between males and females. T produced 2 scales, one for males and one for females, for the assessment of the postsex experience. These results provide a foundation for further examination of the postsex experience. Future studies are required to confirm the factor structure, validity, and reliability of both scales. These may include further validation and internal consistency analyses, such as ecological validity examination and test-retest reliability analyses. Greater refinement would also lead to the substantive identification of cut-off points in the scoring of these scales. Moreover, these studies should facilitate a robust determination of the theorized constructs. By generating an understanding of the postsex experience, as well as a measurement tool, it is believed the findings of the present study will facilitate further investigation into this under-researched area.

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