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Sex Differences in Attributions to Positive and Negative Sexual Scenarios in Men and Women With and Without Sexual Problems: Reconsidering Stereotypes

David L. Rowland¹ · Christopher R. Dabbs¹ · Mia C. Medina¹

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Abstract

People with sexual problems are more likely to attribute negative sexual experiences to themselves, in contrast to sexually functional individuals who attribute negative sexual experiences to external factors such as the circumstance or partner. We investigated attribution patterns in 820 men and 753 women, some of whom reported an orgasmic problem, to assess differences between the sexes and those with and without an orgasmic difficulty. Specifically, using an Internet-based approach, we compared attribution responses to four sexual scenarios, one representing a positive sexual experience and three representing negative sexual experiences. Women were more likely to attribute positive outcomes to their partner than men. Women were also more likely to attribute negative outcomes to themselves than men, but they more readily blamed their partner and circumstances for negative outcomes than men as well. Those with orgasmic problems were less willing to take credit for positive outcomes and more willing to accept blame for negative outcomes. Interaction effects between sex and orgasmic problems further highlighted differences between men's and women's attribution patterns. These results are interpreted in the context of traditional notions that men's attributions tend to be more self-serving and women's attributions more self-derogatory.

Keywords Attribution · Sex differences · Orgasm · Female orgasmic disorder · Premature ejaculation · Relationship satisfaction

Introduction

The way in which individuals attribute cause or explanation for their feelings, thoughts, attitudes, and behaviors undoubtedly affects their perception of control over them (Heider, 1958; Kelley, 1973). Such attribution processes are important because they affect one's overall sense of "self-efficacy," a construct developed by Bandura (1989) that refers to the perceived ability to be effective at a given task based on previous experiences. Self-efficacy plays an important role in what people choose to do or not to do—they select activities and goals at which they think they can succeed and avoid ones that might result in failure. Even when not avoiding such situations altogether, they often set themselves up both cognitively and emotionally for a cycle of self-perpetuating failure.

Attribution Processes

The understanding of attribution processes and locus of control has significant implications for individuals experiencing sexual problems—specifically, after experiencing a negative outcome as occurs with a sexually dysfunctional response, individuals typically attach meaning to the incident and make inferences about its cause (Kelley, 1973). According to attribution theory and locus of control, people generally make self-serving inferences that reduce negative feelings surrounding a bad event, such as blaming another person or the circumstances (Mezulis, Abramson, Hyde, & Hankin, 2004; Snyder & Higgins, 1988). Specifically, an important dimension of attribution and locus of control is that of the internal versus external continuum, the internal typically referring to stable factors lying within the self, whereas the external referring to changing, unstable, and modifiable factors lying outside oneself, often related to the particular situation.

For most negative situations or outcomes, the locus and stability of causal attributions tend to favor strategies that minimize negative emotional impacts (Abramson, Metalsky,

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& Alloy, 1989). But this pattern is not necessarily typical of individuals who experience difficulties such as depression or sexual impairment (Beck, 1987); specifically, a different attribution style exists in such individuals. For example, men with erectile or ejaculatory difficulty are more likely to attribute negative sexual experiences to stable internal factors such as their own sense of personal inadequacy, a pattern that starkly contrasts with attribution theory expectation of minimizing negative emotional impact (Bradley, 1978; Rowland, Kostelyk, & Tempel, 2016a; Scepkowski et al., 2004; Simkins-Bullock, Wildman, Bullock, & Sugrue, 1992; Snyder & Higgins, 1988). Research on attribution and sexual dysfunction in women with orgasmic difficulty has uncovered a pattern somewhat similar to men's, suggesting that the phenomenon is apparent across sexes and for a variety of sexual problems (Loos, Bridges, & Critelli, 1987; Rowland, Medina, & Dabbs, 2017). Thus, men and women with a sexual difficulty are more likely to internalize negative sexual outcomes by blaming themselves—even when the negative outcome is not specific to their sexual difficulty—in contrast to those not having a sexual problem who are more likely to attribute the negative outcome to the partner or situation/circumstance. Furthermore, when the sexual experience is especially positive, those experiencing a sexual difficulty are more likely to attribute the outcome to unstable, situational factors rather than take credit for it.

The above studies suggest that men and women with sexual response or performance problems are more likely to assume an internal attribution (i.e., “something is wrong with me”), assigning blame and control over the problem to themselves. Initially, such individuals may avoid self-blame but, as the problem persists, they direct their attribution inward (Barlow, 1986; Fichten, Spector, & Libman, 1988). Recent research on the topic suggests that sexual problems may structurally represent a form of internalizing psychopathology similar to anxiety and/or depression (Forbes & Schniering, 2013). Such internalization can be maladaptive, as it sustains negative feelings toward future sexual situations, thus decreasing self-efficacy and potentially creating a self-fulfilling prophecy that sustains or even exacerbates the sexual problem (Abramson et al., 1989; Frank & Maass, 1985; Rowland, Adamski, Neal, Myers, & Burnett, 2015). Indeed, men with sexual problems are known to approach sexual situations more negatively, or avoid them entirely, than their functional counterparts, giving support to this assumption (Rowland, Tai, & Slob, 2003).

The Role of Sexual Scripts

Attribution patterns are influenced by social scripts, with such scripts prescribing normative behavior within specific cultural contexts (Wiederman, 2005). Outside sexual situations, sex

differences in attribution styles are likely influenced, in part, by these social scripts; for example, women are more likely to attribute successful outcomes to luck or circumstance than men, whose attributions tend to be more self-serving (Brophy & Kruger, 2013; Frieze, Whitley, Hanusa, & McHugh, 1982). Social scripts are relevant to *sexual* scripts, influencing what behaviors are expected, appropriate, and arousing (Wiederman, 2005) during sexual interaction and, should outcomes be particularly positive or negative, to whom responsibility should be attributed. Thus, just as with social scripts, sexual scripts may vary across the sexes and may change over time; for example, men are typically expected to initiate sex and take at least partial responsibility for women's orgasms, and they experience enhanced self-esteem for a successful orgasmic experience for the woman. In contrast, women are expected to present themselves as physically desirable and sexually responsive to the man's overtures and performance (Chadwick & van Anders, 2017; Salisbury & Fisher, 2014; Wiederman, 2005). When scripts deviate from the norm, as with erectile failure or anorgasmia, attributions are likely affected—traditional self-serving attributions may take on a more self-critical/self-defeating orientation. Thus, attribution styles—internalized versus externalized—are likely to vary by sex/gender, the individual's sexual functioning status, and cultural factors, and all these are likely to vary as expectations change over time.

Orgasmic Phase Problems in Men and Women

Problems with the orgasmic phase of the sexual response cycle are fairly common in both men and women. In men, an estimated 10–35% report ejaculating before they wish, attributing the problem to their inability to delay their ejaculatory response, although only about 10% meet the DSM-5 criteria for premature ejaculation (Althof et al., 2014; Lewis et al., 2010; Rowland & Kolba, 2015; Serefoglu et al., 2014). In women, an estimated 20–40% report difficulty reaching orgasm, although when arousal phase problems are excluded, this prevalence diminishes to an estimated 10–30%. In either case, however, a considerable portion of the individuals are distressed by the condition—about 50% of women and 30–70% of men depending on a variety of parameters—such that they may take steps to ameliorate the problem (Graham, 2014; Laan & Both, 2011; Lewis et al., 2010; Meana, 2012; Rowland & Kolba, 2016).

Many men and women with orgasmic phase problems, however, do not fit within the criteria of an actual dysfunctional diagnosis. For example, community-based samples suggest that although some women can masturbate to orgasm, a large proportion of women, estimated as high as 50%, fail to reach orgasm during vaginal–penile intercourse—even with adjunctive manual or oral stimulation from the partner

(Dawood, Kirk, Bailey, Andrews, & Martin, 2005; Rowland & Kolba, 2016; Wade, Kremer, & Brown, 2005). Similarly, ejaculatory problems in men are both less common and less concerning during masturbation, with the condition typically exacerbated during partnered sex (Rowland, de Gouvea Brazao, Strassberg, & Slob, 2000).

Thus, although many of these men and women may not fit within a clinical diagnosis of a sexual dysfunction, a significant portion of them are distressed or bothered by their situation, with potential implications for the sexual and overall relationship (Rowland & Kolba, 2016, 2017; Rowland et al., 2017). Indeed, such persistent negative outcomes may well affect the individual's overall sense of sexual self-efficacy and are likely to lead to attributions regarding the cause of the phenomenon.

Aims of the Current Study

Research on attribution has focused on negative sexual outcomes in both men and women, but to our knowledge only one study has directly compared attribution patterns across sexes within the context of sexual scenarios. In that study, men tended to make more self-serving attributions than women, whereas women tended to make more self-derogatory attributions, but these differences were limited only to negative (vs. positive) sexual outcomes (Maass & Volpato, 1989). That study also used a relatively small sample size (slightly over 100) recruited partly from among younger participants (37% ranged in age from 15 to 19 years) and displaying, as far is discernible, low prevalence or admission of sexual problems. In contrast, the current study compared both men and women with and without an orgasmic phase problem, using a large non-clinical, community sample and relying on the preferred methodology of using specific sexual scenarios so as to increase self-involvement in the attribution process.

In this analysis, we posed two primary questions: (1) Do men and women differ in their patterns of internal (self) and external (partner, circumstance) attributions in response to positive and negative sexual outcomes and (2) Do men and women with *orgasmic difficulties* differ in their attribution responses? These questions were addressed while statistically controlling a number of potentially relevant covariates, including age, level of distress about the problem, severity of the problem, importance of sex, sexual arousal difficulties, self-reported anxiety or depression, and the quality of the overall relationship. A secondary goal of this study was to compare and contrast our findings with those of research conducted some 25 years ago, social scripts for both men and women presumably having undergone substantial change over the past quarter century.

Method

Participants

Participants for this study included 820 men and 753 women at least 18 years of age ($M = 24.4$, $SD = 7.7$; range = 18–76), drawn from a community-based convenience sample visiting one of 12 postings in the forums on reddit.com, or visiting the research home page on facebook.com. Men and women were recruited separately for slightly different versions of the questionnaire and thus self-selected on the basis of their identified sex. Participation in this study also occurred through self-selection, with the only promotion being a forum post identifying the need for men and women ages 18+ for a survey on sexual health. No paid advertisements were used; participants finding the survey through Facebook were directed to the posting by their general interest in issues regarding men's or women's sexual health.

Of the 820 men, 277 comprised the *Men's Orgasmic Difficulty (MOD)* group,¹ identified through responses of 3, 4, or 5 (1 = almost never to 5 = almost always) to the question "Do you ejaculate [have an orgasm] too soon or before you want?" (assuming a timeframe of "over most of your adult sexual life"). Of those men falling into the 3–5 category on this item, 55% responded "3" (about half the time), 32% responded "4" (about 75% of the time), and 13% responded "5" (nearly all the time). Furthermore, 55% of those men responding "3" indicated moderate to high distress/bother about the situation; 72% of those responding "4" indicated moderate to high distress/bother; and 61% of those responding "5" indicated moderate to high distress/bother. A second subgroup of 543 men indicated no or minimal difficulty regarding ejaculating before desired (responding "1" or "2" on this question) and was used as a (non-MOD) comparison group.

Of the 753 women, 365 women comprised the *Women's Orgasmic Difficulty (WOD)* group,² identified through their responses of 3, 4, or 5 on a five-point scale (1 = almost never to 5 = almost always) to the question "Do you have problems/difficulty reaching orgasm?" asked in the context of partnered sex. Of those women falling into the 3–5 category on this item, 45% responded "3" (about half the time), 24% responded "4" (about 75% of the time), and 31% responded "5" (nearly all the time). Furthermore, 49% of those women responding "3" indicated moderate to high distress/bother about the situation; 66% of those responding "4" indicated

¹ These men showed symptoms of premature ejaculation (PE), "including ejaculating before desired" (wording borrowed from DSM-5, American Psychiatric Association, 2013), but were not formally diagnosed as such.

² These women showed signs of female orgasmic disorder (FOD) but did not necessarily meet the DSM-5 criteria and were not diagnosed as such.

moderate to high distress/bother; and 70% of those responding “5” indicated moderate to high distress/bother. A second subgroup of 388 women indicated no or minimal difficulty reaching orgasm in a partnered context (responding “1” or “2” on this question) and was used as a (non-WOD) comparison group. Together, the MOD and WOD groups were referred to simply as the OD group.

Measures

As part of the survey development, a pilot was conducted with two focus groups of women ($n = 23$) (for the women’s version) and two focus groups of men ($n = 20$) (for the men’s version) to appraise overall item face validity and reliability, ensure clarity of the items, and assess the time required for survey completion (Marshall & Rossman, 2006). Specifically, we wanted to know how long respondents needed to complete the survey, how they were interpreting questions (face validity), whether items were confusing or vague and if so how they might be re-phrased or re-worded, which items were considered sensitive by potential participants (see Catania, Gibson, Chitwood, & Coates, 1990), how likely, given anonymity, participants would be to complete the survey and, where response categories were provided (e.g., the attribution component of the survey), whether those categories covered the universe of possible responses.

The first portion of the 24-item (male) or 26-item (female) online opt-in survey gathered information about demographics, lifestyle behaviors, medications, partnership status, and overall relationship characteristics and satisfaction. Using the past 6–9 months as a timeframe, the second portion gathered information specific to sexual response and included items related to frequency of sex, sexual desire, sexual arousal, lubrication response, orgasmic response, orgasmic latency, distress, and partner distress. These items (PE for men or anorgasmia for women) were similar to (i.e., updated or clarified by the focus groups) or identical with ones used in validated questionnaires, such as the Premature Ejaculation Profile (PEP) and Premature Ejaculation Diagnostic Tool (PEDT) for men (Patrick et al., 2005; Symonds et al., 2007) and the Female Sexual Function Index (FSFI) for women (Rosen et al., 2000). The 6–8 items taken from these standardized instruments were embedded within the larger 24- or 26-item survey and were selected on the basis of paralleling one another across male and female surveys so as to allow direct comparison of responses.

The final part of the questionnaire—containing the items most relevant to this analysis—presented a number of hypothetical scenarios involving sexual successes or failures, with respondents ascribing possible attributions to each scenario. These scenarios were more specific than ones used in prior studies by Maass and Volpato (1989) or Scepkowski et al.

(2004), yet followed the general pattern of having participants situate themselves within particular sexual circumstances (e.g., Nobre & Pinto-Gouveia, 2008; Rowland et al., 2017). For this analysis, we selected only those scenarios that had meaning and equivalency for both male and female participants. One scenario indicated a positive sexual outcome and three indicated negative sexual outcomes. The positive outcome was: a highly pleasurable and satisfying experience with your partner; the negative outcomes were: (1) problems with becoming aroused during sex with one’s partner (including getting an erection for men); (2) problems reaching orgasm during sex with one’s partner for women or, alternatively for men, problems from preventing oneself from ejaculating too quickly; and (3) problems in that one’s partner showed a lack of interest in having sex with the participant. For each scenario, participants responded to six possible attribution items, with each scored on a five-point Likert-type scale (1 = completely irrelevant; 5 = very relevant, indicating a high level of endorsement). Two were related to the self, that is, the participant’s own (lack of) skill and ability or own (lack of) effort and motivation; two were related to the partner, that is, the partner’s (lack of) skill and ability or the partner’s (lack of) effort and motivation; and two were related to the situation (e.g., especially [un]favorable circumstances on this occasion). These scenarios and response options are detailed in Table 1.

Procedure

The final, anonymous online survey took approximately 15–20 min to complete. Participant approval was obtained through the institutional review board (IRB) at the authors’ university. Informed consent was obtained from participants prior to their opening of the survey. Participants were also provided with IRB contact information in case they had questions regarding informed consent, wanted to file a complaint, or contact the research team.

Analytical Design

ANCOVA and MANCOVA were used, respectively, to assess sex differences (Sex) and OD effects (OD) for the single positive scenario and for the three negative scenarios combined, with interaction (i.e., Sex by OD) and post hoc effects specified. Because there were six attribution items for each scenario (two for self, two for partner, and two for circumstance), six ANCOVAs (for the one positive scenario) and six MANCOVAs (combining across the three negative scenarios) were conducted. For each analysis, a set of non-collinear covariates was included to determine whether Sex and OD effects persisted when other sources of variance that differentiated group status were controlled.

Table 1 Scenarios and attribution choices used in the survey in the context of partnered sex**Positive scenario**

1. You have an extremely pleasurable, satisfying sex with your partner

You attribute this to:

• Your sexual skill and ability	Self
• Your effort, motivation, and involvement	Self
• Your partner's sexual skill and ability	Partner
• Your partner's effort, motivation, and involvement	Partner
• General ease of sexual satisfaction on that occasion	Situation
• Especially favorable circumstances on that occasion	Situation

Negative scenarios

1. You have difficulty becoming sexually aroused during sex with your partner

2. Your partner seems less interested than usual in having sex with you

3. You are unable to reach orgasm (for women) or reach orgasm too soon (for men) during sex with your partner

You attribute this to:

• Your lack of sexual skill and ability	Self
• Your lack of effort, motivation, and involvement	Self
• Your partner's lack of sexual skill and ability	Partner
• Your partner's lack of effort, motivation, and involvement	Partner
• General difficulty of sexual satisfaction	Situation
• Especially unfavorable circumstances on that occasion	Situation

For each attribution choice, participants responded on a five-point scale, 1 = completely irrelevant; 5 = very relevant. Wording of attribution choices for positive and negative items was slightly different

The final covariates included “age,” “overall importance of sex,” “ongoing anxiety or depression,” “quality of the overall relationship,”³ and “difficulty becoming aroused.” These covariates had been selected from a larger set of demographic and psychosexual variables based on previous findings indicating relatedness to attributions from sexual outcomes and were then culled to ensure non-collinearity (Rowland & Kolba, 2015; Rowland et al., 2017).⁴

A second set of analyses assessed sex differences only among those participants reporting an OD disorder. Because OD participants also responded to questions regarding the magnitude or intensity of their problem and the level of distress due to the problem, these analyses determined whether sex differences persisted when these variables were statistically controlled. In order to control for the number of comparisons, alpha was set at 0.01 and only effects achieving this significance level are reported as significant.

³ Analyses were run both with and without this variable, as its inclusion eliminated some participants who were not currently or recently in a relationship. The overall results (significant covariates) did not differ between analyses.

⁴ “Interest in sex” correlated positively with “importance of sex” ($r [1571] = .63$), and “overall relationship quality” correlated positively with “sexual relationship quality” ($r [1571] = .70$).

Results

Description of the Sample

Table 2 shows the comparison of demographic and psychosexual data across control and orgasmic difficulty participants, and male and female respondents. Many differences across sexes and OD/non-OD groups were found; these variables were among those considered as candidates for statistically controlled covariates in all comparisons.

Attribution Differences Using ANCOVA and MANCOVA: Sex and OD Status

Positive Scenario

ANCOVA was used to analyze main and interaction effects of Sex and OD status, controlling for the five covariates indicated above, for the positive sexual scenario of “having an extremely pleasurable, satisfying sexual encounter.” Six ANCOVAs were run, two attribution items for each of the three attribution possibilities: self, partner, and circumstance (Table 3).

Sex differences were found for the two partner attribution items: “partner sexual skill and ability” ($F[1,1552] = 22.79$, $p < .001$, partial $\eta^2 = 0.015$) and “partner effort, motivation, and involvement” ($F[1,1552] = 17.29$, $p < .001$, partial

Table 2 Comparison of groups on demographic, medical, and sexual and relationship items

Item	Male (n = 820)	Female (n = 753)	p	Orgasmic difficulty (n = 642)	Control (n = 931)	p
<i>Demographics</i>						
Age (year)	25.99 (0.25)	22.68 (0.15)	<.001	24.16 (0.25)	24.88 (0.21)	.027
<i>Medical and personal history</i>						
Medical risk for sexual problem, %	12.8	18.5	<.001	16.0	15.2	.574
Reporting ongoing anxiety or depression, %	19.7	33.2	<.001	28.4	23.7	.013
Alcoholic drinks per week (1 = 0, 2 = 1–5, 3 = 6–10, 4 = > 10)	2.00 (0.03)	1.81 (0.02)	<.001	1.91 (0.03)	1.93 (0.02)	.153
<i>Sexual and relationship parameters</i>						
Currently has sexual partner, %	75.5	83.8	<.001	80.0	79.6	.006
Importance of having sex ^a	3.89 (0.03)	3.70 (0.03)	<.001	3.76 (0.03)	3.89 (0.03)	.001
Satisfied with primary sexual relationship ^a	3.76 (0.04)	4.06 (0.04)	<.001	3.73 (0.04)	4.00 (0.04)	<.001
Satisfied with overall relationship ^a	4.06 (0.04)	4.41 (0.04)	<.001	4.18 (0.04)	4.23 (0.04)	.338
Interested in sex ^a	4.49 (0.02)	4.26 (0.03)	<.001	4.32 (0.03)	4.47 (0.02)	<.001
Level of distress ^a	3.87 (0.10)	3.00 (0.06)	<.001	3.46 (0.04)	1.68 (0.03)	<.001
Arousal difficulty ^a	1.66 (0.03)	2.21 (0.04)	<.001	3.10 (0.06)	1.71 (0.04)	<.001
Frequency of sex ending in orgasm+	2.48 (1.72)	3.21 (1.82)	<.001	3.14 (1.75)	2.48 (1.52)	<.001

Mean ± SE, unless indicated otherwise

^a1 = not at all or never; 5 = very often or most of the time. +1 = one or more times daily, 2 = two to three times per week, 3 = about 1 time per week, 4 = about one time every two weeks, 5 = about once a month, 6 = less than once a month, 0 = does not apply. Comparisons were made using *t* tests. Percentage comparisons were made using Chi-square

Table 3 Comparison of male and female groups on attributions for the scenario having a positive sexual outcome

	Very pleasurable sex		
	Male	Female	η^2
	M SD	M SD	
<i>Positive scenario</i>			
Self skill/ability	3.48 (0.99)	3.37 (0.97)	0.002
Self effort	4.19 (0.82)	4.24 (0.79)	0.002
Partner skill/ability	3.71 (0.95)*	3.95 (0.86)*	0.017
Partner effort	4.37 (0.83)*	4.52 (0.66)*	0.014
Ease of satisfaction	3.50 (1.04)*	3.76 (1.02)*	0.011
Favorable circumstance	3.22 (1.13)	3.41 (1.16)	0.004

Significant two-tailed effects are indicated in bold, with those <.01 also indicating with an asterisk. For η^2 , 0.01 = small effect, 0.06 = medium effect, 0.14 = large effect

$\eta^2 = 0.011$),⁵ with women giving more credit for the positive outcome to their partners than men. Attribution to circumstance was greater for women than for men on “general ease of satisfaction for the particular occasion” ($F[1, 1547] = 16.76$, $p < .001$, partial $\eta^2 = 0.011$). Self-attributions did not differ between sexes.

⁵ Interpretation of partial η^2 , 0.01 = small, 0.06 = medium, 0.14 = large (Draper, 2018). <http://www.psy.gla.ac.uk/~steve/best/effect.html>.

A main effect for OD status was also found, with OD participants more likely than non-OD participants to attribute the positive outcome to especially favorable circumstances ($F[1, 1548] = 20.13$, $p < .001$, partial $\eta^2 = 0.013$). A Sex by OD interaction regarding attribution to circumstance ($F[1, 1548] = 7.49$, $p = .006$, partial $\eta^2 = 0.005$) indicated that men with OD gave more credit to circumstance than men without OD, but women with and without OD did not differ.

Thus, women were more likely than men to credit their partner, and OD participants were more likely than non-OD participants to credit circumstance. Whereas OD status made no difference in women’s attribution, OD men viewed circumstance for the positive outcome as more relevant than non-OD men. However, effect sizes were generally quite small, with the overall adjusted R^2 values (which included covariates) in the range of 0.05–0.09.

Several covariates significantly affected attribution patterns. Self-reported “importance of sex” most consistently affected attributions (five of six analyses), with greater importance of sex positively related to stronger endorsements of self, partner, and circumstance (median partial $\eta^2 = 0.028$). Age, “arousal difficulty,” and “relationship satisfaction” were significant on at least two of six analyses, though effect sizes for these three variables were small (partial $\eta^2 < .010$). Nevertheless, such findings indicate the broad range of factors that affect attributions.

Table 4 Comparison of male and female groups on attributions for scenarios having negative sexual outcomes

	Scenario 1			Scenario 2			Scenario 3		
	Lack of partner interest			Lack of arousal			Orgasm difficulty		
	Male	Female	η^2	Male	Female	η^2	Male	Female	η^2
M SD	M SD		M SD	M SD		M SD	M SD		
<i>Negative scenarios</i>									
Self skill lacking	2.19 (1.30)	2.33 (1.38)	0.002	1.79 (1.18)	1.83 (1.11)	0.001	2.22 (1.34)	2.12 (1.32)	0.004
Self effort lacking	2.44 (1.35)*	2.71 (1.35)	0.008	2.45 (1.47)*	3.01 (1.41)	0.037	1.74 (1.04)*	2.77 (1.43)	0.144
Part skill lacking	1.87 (1.13)	1.92 (1.01)	0.004	2.02 (1.23)*	2.30 (1.26)	0.013	1.45 (0.83)*	2.41 (1.32)	0.154
Part effort lacking	3.06 (1.43)	3.13 (1.37)	0.003	2.44 (1.47)*	2.90 (1.44)	0.026	1.52 (0.93)*	2.78 (1.46)	0.205
General difficulty	2.40 (1.26)	2.51 (1.28)	0.002	2.29 (1.34)*	2.86 (1.40)	0.043	1.72 (1.04)*	3.09 (1.45)	0.241
Unfavorable circumstance	3.49 (1.34)*	3.96 (1.13)	0.039	3.35 (1.47)*	3.95 (1.10)	0.058	2.49 (1.44)*	3.57 (1.26)	0.158

Significant two-tailed effects are indicated in bold, with those $<.01$ also indicating with an asterisk. For η^2 , 0.01 = small effect, 0.06 = medium effect, 0.14 = large effect

Negative Scenarios

With two attribution items for each of the three attribution possibilities—self, partner, and circumstance—six MANCOVAs were run to assess Sex and OD status differences across the three negative scenarios simultaneously: (1) “partner is less interested in having sex with you than usual,” (2) “you’re unable to become sexually aroused (for women) or get an erection (for men) during sex with your partner,” and (3) “you’re unable to reach orgasm during sex (for women)” or “you ejaculate before you wanted to (for men).” Included in the analyses were the five covariates indicated above (Table 4).

Sex differences were found on all six attributions related to “unable to become sexually aroused” or “difficulty with orgasm” (anorgasmia for women, rapid ejaculation for men) ($F[1,1542-1548] \geq 12.59$, $p < .001$, partial η^2 ranged from .008 to .201). Generally, women were more likely than men to attribute these negative outcomes not only to their own lack of motivation/effort, but also to their partner’s lack of skill/ability, the partner’s lack of motivation/effort, and particularly unfavorable circumstances. In addition, women were more likely than men to assume unfavorable circumstances for the scenario “partner less interested in having sex with you than usual” ($F[1,1548] = 48.15$, $p < .001$, partial $\eta^2 = 0.032$).

OD status effects were also found: OD participants were more likely than non-OD participants to attribute all three negative sexual experiences to their own lack of skill/ability ($F[1,1548] \geq 10.25$, $p \leq .001$, partial $\eta^2 = 0.007-0.039$), and less likely to blame poor circumstances ($F[1,1549] \geq 12.62$, $p \leq .001$, partial $\eta^2 = 0.008-0.037$). For two scenarios, “difficulty becoming sexually aroused” and “difficulty with orgasm” (anorgasmia for women, rapid ejaculation for men), OD participants were more likely than non-OD participants to blame

their partner’s lack of skill/ability ($F[1,1548] \geq 7.27$, $p \leq .007$, partial $\eta^2 = 0.005-0.009$), but most of this effect was related to women’s attributions (see next paragraph). OD effect sizes were generally small to medium.

Sex by OD interactions revealed that OD women were more likely than non-OD women (1) to attribute negative outcomes for “difficulty becoming sexually aroused” to their partner’s lack of skill/ability, whereas OD and non-OD men showed no difference ($F[1,1548] = 15.91$, $p < .001$, partial $\eta^2 = 0.011$); and (2) OD women placed more blame on general difficulty of satisfaction on that occasion than non-OD women, whereas OD and non-OD male participants did not differ ($F[1,1548] \geq 48.44$, $p \leq .001$, partial $\eta^2 = 0.031-0.046$).

Several covariates significantly affected attribution patterns of negative sexual outcomes, but again these effects were small to moderate (partial $\eta^2 \leq .055$). Specifically, age, overall relationship satisfaction, and importance of sex were negatively related to attributions: generally, as age and relationship satisfaction increased, all attributions/blame—whether toward self, partner, or circumstance—decreased. In contrast, importance of sex was positively related to stronger attributions.

Thus, women were more likely than men to attribute negative outcomes not only to their own lack of motivation and effort, but also to their partner’s lack of skill/ability, their partner’s lack of motivation/effort, and particularly unfavorable circumstances—effects that ranged from weak to strong, with adjusted R^2 values ranging from 0.08 to 0.450. In addition, compared with men and women without OD, men and women with OD blamed both their own and their partner’s lack of skill and ability and were less likely to attribute such outcomes to circumstance. Women more so than men found their partner’s lack of skill and ability as partially responsible for their difficulty becoming aroused.

Attribution Differences Using ANCOVA and MANCOVA Restricted to Men and Women with OD Status

Positive Scenario

ANCOVA was used to analyze sex differences for the positive sexual scenario: “having an extremely pleasurable, satisfying sexual encounter” in only the subsample of men and women having orgasmic problems (OD status) to determine whether differences persisted when further controlling for covariates. Specifically, these analyses were undertaken because, in addition to controlling for the five covariates indicated above, two additional covariates could be statistically controlled: “severity of the OD problem” and the “intensity of the distress due to the problem.” Six ANCOVAs were run, two attribution items for each of the three attribution possibilities: self, partner, and circumstance.

Sex differences were found for both partner attribution items, partner skill/ability, and partner effort/motivation ($F[1,640-645] \geq 7.60, p \leq .006$, partial $\eta^2 = 0.012-0.20$), with women giving more credit for the positive outcome to their partners than men. Self and circumstance attributions for the positive outcomes did not differ between the sexes.

Several covariates significantly affected attribution patterns. Self-reported importance of sex most consistently affected attributions (4 of 6 analyses: partial $\eta^2 = 0.027-0.049$), with greater importance related to stronger endorsements of self, partner, and circumstance attributions. Level of distress, intensity of the OD problem, and arousal difficulty were sporadically and weakly related to attribution endorsements, with partial $\eta^2 < .008$.

Negative Scenarios

Six MANCOVAs were run to assess sex differences across the three negative scenarios simultaneously: (1) “partner is less interested in having sex with you than usual,” (2) “you’re unable to become sexually aroused (for women) or get an erection (for men) during sex with your partner,” and (3) “you are unable to reach orgasm during sex (for women)” or “you ejaculate before you intended to (for men).” Included in the analyses were the five covariates indicated above, as well as two additional covariates: “severity of the OD problem” and the “intensity of the distress due to the problem,” included to determine whether differences persisted when controlling for these two covariates.

Sex differences were found on all attributions except self-assessed lack of skill and ability. Scenarios regarding “you’re unable to become sexually aroused (for women) or get an erection (for men) during sex with your partner,” and “you are unable to reach orgasm during sex (for women)” or “you ejaculate before you intended to (for men)” showed the most

consistent patterns, with the general pattern of women with OD attributing their difficulty more strongly to their own lack of motivation and effort, their partner’s lack of skill/ability and lack of motivation/effort, and less favorable circumstances than men with OD ($F[1,638-645] \geq 16.69, p \leq .001$, partial $\eta^2 = 0.026-0.199$, i.e., ranging from small/medium to large).

Several covariates were significant. Self-reported overall relationship satisfaction was most consistently related to attributions (three of six analyses), with lower satisfaction associated with stronger attribution to the role of the partner (i.e., stronger blame being associated with lower relationship satisfaction) and circumstance (partial $\eta^2 = 0.013-0.037$). Level of distress was weakly related to one attribution (partial $\eta^2 = 0.011$), and intensity of the problem was not related at all.

Discussion

To our knowledge, this study is the first to revisit, extend, and offer modification to the findings of Maass and Volpato (1989) who, almost 30 years ago, reported sex differences regarding attributions within the context of sexual scenarios. In their analysis, men were found to blame their partners more for negative outcomes than women, whereas women displayed more self-derogatory attributions, taking blame for negative outcomes more than men. In addition, women’s self-derogatory attributions were correlated with histories of sexual problems, but a similar relationship was not found in men. In contrast to negative scenarios, no significant differences emerged with respect to positive sexual outcomes.

The current analysis—using a large community sample comprised of men and women with and without sexual problems—confirmed the presence of sex differences in attributions with respect to negative sexual scenarios, even when relevant covariates were statistically controlled. It also demonstrated a clear relationship between sexual problems and attribution patterns in women, but in contrast to Maass and Volpato (1989), detected a similar pattern in men, a finding that has also been reported in more recent investigations on this topic (Bach, Brown, & Barlow, 1999; Rowland et al. 2017; Rowland, Mikolajczyk, Pinkston, Reed, & Lo, 2016b; Scepkowski et al., 2004).

Sex Differences in Attributions

Our results differed in substantial ways from those of Maass and Volpato (1989). In contrast to their study, for example—and probably related to our large sample size—our study detected sex differences, albeit fairly mild, for the positive outcome, with women giving more credit to their partners and to the specific circumstance than did men. Although

the findings across the two studies differ in this respect, the underlying patterns were partially consistent: Women were generally more reluctant than men to take credit for a positive (sexual or otherwise) experience (Brophy & Kruger, 2013; Frieze et al., 1982; Maass & Volpato, 1989). But in contrast, we found that men were no more likely than women to attribute the positive experience to their own skill or effort, that is, to assume more credit for the outcome. Such sex differences were preserved when analyzing only the men and women with OD—with OD women giving more credit to their partners than OD men.

For the negative scenarios, sex differences were pervasive, often with effect sizes ranging from moderate to large. As expected, and consistent with Maass and Volpato (1989), women were more self-blaming than men, attributing negative outcomes to their own lack of motivation and effort. But, in contrast to their study, women were also more “other-blaming” than men, attributing the problem at least partly to their partner’s lack of skill/ability and motivation/effort as well as to unfavorable circumstances. In other words, the women in our study appeared to both internalize *and* externalize more than men. These same patterns emerged when only the OD groups were included in the analysis. Such findings suggest that internal–external attributions do not represent a continuum (see Rotter 1966)—blaming oneself more does not necessarily mean blaming other attribution endpoints less. It may be, for example, that women are more passionate/invested/engaged in their sexually intimate relationships than men, indicating a higher level of endorsement/attribution to whatever objects of attribution might exist so as to explain negative sexual outcomes (e.g., Garcia, Reiber, Massey, & Merriwether, 2012). Other factors such as lower self-efficacy among women compared with men might partly account for women’s stronger internalization *and* externalization of attributions. Men may simply be more reluctant to strongly attribute negative outcomes to any particular individual, object, or situation. Such overall patterns further suggest that conclusions that men “are more self-serving” and women “more self-derogatory” represent an oversimplification of attribution processes (Maass & Volpato, 1989), where numerous other relational, emotional, and personality factors come into play. Although we are not the first to challenge this oversimplification regarding sex differences in attribution (e.g., Sohn, 1982), our study is the first to extend the issue specifically to sexual situations.

Role of Sexual (OD) Difficulty

Differences across OD and non-OD groups were generally consistent with previous research, demonstrating that OD participants were more likely than non-OD participants to attribute a positive outcome to especially favorable circumstances, and a negative outcome to their own lack of skill/ability. They were

also less likely to blame situational/circumstance variables than non-OD participants for negative outcomes—findings consistent with prior research examining this issue (Fichten et al., 1988; Loos et al., 1987; Nobre & Pinto-Gouveia, 2008; Rowland et al., 2016b, 2017; Scepkowski et al., 2004). These effects, though for the most part small to moderate, have now shown consistency over numerous studies involving different populations.

Perhaps of greater interest and novelty were the results of the interactions between Sex and OD status. Women with OD were more likely than either women without OD or men with or without OD to lay partial blame for negative outcomes on the skill/ability of their partner. This finding echoes recent research indicating that young women believe, in part, that men bear responsibility for physically stimulating their female partner to orgasm (Salisbury & Fisher, 2014) and, further, that men may be motivated to do so, as it reinforces their sense of prowess and masculinity (Chadwick & van Anders, 2017). On the other hand, this reliance may not necessarily represent a lack of empowerment or a counterproductive sexual script, but rather may partly reflect the realities of sexual intercourse, where glans stimulation is a given, but clitoral stimulation is not—thereby requiring clear intentionality on the part of both partners in order for female orgasm to happen. As part of the social script, women “give” their bodies to men, and they expect men to reciprocate in kind (Frith, 2013). More importantly, however, the fact that women “assume” and perhaps even “expect” such reciprocation signifies an empowerment that likely did not exist 25 years ago, consistent with the idea that attributional processes may change over time, culture, and developmental status (Frith, 2013; Maass & Volpato, 1989; Mezulis et al., 2004; Wiederman, 2005). Thus, women are likely under increasing pressure to contribute to a positive sexual experience while simultaneously expecting that men will facilitate their reaching orgasm.

Other Sex by OD interactions indicated that for the positive sexual outcome, although those participants with OD gave more credit to circumstance than those without OD, this increased credit was largely due to women’s attributions. That is, both OD groups (male and female) were more likely to attribute a positive outcome to circumstance than non-OD groups, affirming their general tendency to look to non-stable, external causes for unexpectedly positive sexual outcomes. But women did so more than men. For the negative scenarios, OD women placed much greater blame on general difficulty of satisfaction than non-OD women, whereas OD and non-OD male participants did not differ in this respect.

Covariates

Our study identified two significant covariates—both with relatively small effect sizes—that were consistently related to attribution differences. Overall “relationship satisfaction”

and “importance of sex” repeatedly appeared as factors contributing to variance in attribution processes—whether related to self- or other-blaming for negative outcomes, or taking credit for positive outcomes. The first variable—relationship satisfaction—generally mitigated otherwise strong attributions regarding the self or partner, while the latter—importance of sex—sometimes intensified them. In other words, men and women with better overall relationships tended to be more moderate in their attributions—we hypothesize that better communication among such couples may help them better understand the dynamics and processes related to positive and negative sexual experiences, perhaps resulting in more self-reflective strategies (Aubin & Heiman, 2004; Hendrickx, Gijs, Janssen, & Enzlin, 2016; McCabe et al., 2010; Stephenson & Meston, 2016; ter Kuile, Both, & van Lankveld, 2010).

On the other hand, importance of sex—a proxy for sexual interest as well as potential proxies for such variables as partner sexual engagement and performance anxiety—showed mixed directional correlations with attributions to negative scenarios. Generally, however, the more important sex was deemed, the greater the likelihood of stronger attributions. Taken together, such covariates may represent initial therapeutic talking points for individuals and couples struggling with sexual problems that impact their relationship dynamics.

Perhaps equally important were those covariates having little impact regarding sex differences in attributions. Difficulty with arousal, level of distress about OD, and intensity of the OD problem exhibited minimal or no effects, indicating that although these variables may have differed significantly across men and women as well as OD and non-OD groups, they neither obviated nor explained sex or OD status differences in attributions.

Explaining Disparities Among Studies

So although consistencies exist between this study and the findings of Maass and Volpato (1989), how might disparities between the studies be explained? We note several conceptual and methodological possibilities. From a conceptual standpoint, we believe that a number of previous studies have oversimplified the nature of sex differences with regard to sexual outcomes, a point first raised with regard to sex differences in general attributions in the 1980s (Frieze et al., 1982; Sohn, 1982). Second, social and sexual scripts have likely changed significantly over the past 30 years (see Garcia et al., 2012), particularly comparing our fairly young male and female samples to the broader age range reported in Maass and Volpato (1989). Third, although subgroups of both men and women suffered orgasmic difficulties, the nature of those orgasmic difficulties was not identical. Women having difficulty reaching orgasm do not necessarily deprive their partner of sexual satisfaction, but men reaching orgasm prematurely

might well do so, differences that could influence attribution processes. Women might believe, for example, that they can do little to prevent their partner from ejaculating prematurely, but they might also feel slighted, assuming that their partner could do much more to facilitate their own progression toward orgasm (Rowland & Kolba, 2017; Salisbury & Fisher, 2014). Finally, from a methodological standpoint, our study, with its large sample size, was highly powered and therefore able to detect differences that might otherwise have gone unnoticed in previous studies. Additionally, in comparison with most previous studies (cf. Maass & Volpato, 1989), our study used sexual scenarios that optimized self-engagement, thereby maximizing the impact of positive and negative outcomes on our dependent variables (attributions).

Strengths and Limitations

Our study included the benefits (e.g., robust sample size, wide distribution) and limitations (non-probability sample) common to most Internet and non-Internet survey studies (Catania, Dolcini, Orellan, & Narayanan, 2015). For example, anonymity afforded through an Internet approach reduces social desirability and improves the likelihood for revelation in responding (Manzo & Burke, 2012; Ong & Weiss, 2000), though anonymous Internet-based responses cannot be independently verified. Furthermore, systematic bias within the sample is a potential problem for any opt-in non-probability study, perhaps limiting generalizability to the overall population. Internet users, for example, are less likely to be drawn from older populations, lower socioeconomic classes, and particular regions of the U.S. (Statista, 2017). Thus, we recognize that our results need to be replicated in community samples that draw more participants from wider economic and age brackets and that allow parsing out potential differences due to other variables such as race, cultural background, and sexual orientation.

Second, we did not include non-sexual scenarios in our questionnaire, leaving open the possibility that attribution differences between men and women simply represented a broader cognitive framework associated with diminished self-efficacy. And finally, comparison of outcome variables across men and women with and without OD involves grouping of respondents on subject characteristics, a process which itself may select for various known or unknown covariates. Thus, although we controlled for many relevant covariates across groups, other unknown selected factors might account for some of the observed differences between men and women with and without OD.

Finally, effect sizes for sex differences for the positive scenario were, as noted previously, small, suggesting that such differences may not be highly relevant to relational interactions. Nevertheless, the differences that did emerge fit well within the larger pattern of attribution processes both

in women as compared to men and in people experiencing sexual difficulties as compared to those not experiencing sexual difficulties.

Compliance with Ethical Standards

Conflict of interest The authors declare that they have no conflict of interest.

Ethical Approval All procedures performed in this study involving human participants were in accordance with the ethical standards of the institutional review board and with the 1964 Helsinki Declaration and its later amendments or comparable ethical standards.

Informed Consent Informed consent was obtained from all individual participants included in the study.

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