



Kiss and Makeup? Examining the Co-occurrence of Conflict and Sex

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Abstract

Although conflict and sex frequently occur in relationships, little research has examined their interconnectedness. Some evidence suggests their co-occurrence can benefit relationships, whereas other evidence suggests the opposite. We sought to clarify such contrasting evidence by conducting a dyadic daily-diary study of 107 newlywed couples that included a 6-month follow-up assessment. Although conflict (operationalized as one partner doing something the other did not like) was unassociated with the likelihood of sex on a given day, it predicted a lower likelihood the following day. Moreover, despite the fact that sex co-occurring with (vs. occurring independent of) conflict was less enjoyable, it partially reduced the negative effects of conflict on both spouses' daily relationship quality. The extent to which sex and conflict co-occurred was unassociated with intimates' changes in marital satisfaction 6 months later. The implications of engaging in post-conflict sex are nuanced: although such sex is less enjoyable, it temporarily buffers relationship quality in that moment.

Keywords Sex · Conflict · Makeup sex · Marriage · Daily diary

Introduction

“...the only sex you're going to have better than make-up sex is if you're sent to prison and you have a conjugal visit.”—Jerry Seinfeld, *Seinfeld*

People commonly believe romantic couples engage in highly passionate sex following conflict (i.e., “make-up sex”)—a notion that is perpetuated by cultural references (as demonstrated by Jerry Seinfeld) and popular psychology (e.g., Ben-Zeev, 2013). Little empirical research, however, has examined the co-occurrence of conflict and sex, the quality of such sex, or its implications for long-term relationship outcomes. Moreover, studies exploring these issues provide conflicting evidence. Given that conflict and sex occur in nearly all long-term relationships, and given that each independently impacts relationship outcomes (e.g., Campbell, Simpson, Boldry, & Kashy,

2005; McNulty, Wenner, & Fisher, 2016; Murray, Holmes, & Pinkus, 2010), the goal of the current study was to explore (1) the frequency with which conflict and sex coincide, (2) whether sex that co-occurs with (vs. in the absence of) conflict is indeed more satisfying in the moment, and (3) whether sex that co-occurs with conflict benefits the broader relationship in the moment and over time. When referring to our study, we use the terms sex “co-occurring” and “coinciding” with conflict to mean sex that occurs on the same day as conflict (as from our measures we cannot confirm sex always followed conflict). Further, we define conflict as intimates' reports of a partner's behavior they did not like, which is consistent with perspectives that conflict need not be limited to specific verbal disagreements (e.g., Canary, Cupach, & Messman, 1995; Guerrero & Floyd, 2006), but rather tend to involve instances where one partner's actions interfere with the other (Peterson, 1989).

Does Conflict Coincide with Sex?

As previously noted, there is contradictory evidence regarding whether conflict and sex frequently coincide in romantic relationships (see also Birnbaum, Mikulincer, & Austerlitz, 2013). On the one hand, some studies suggest conflict can act as a sexual catalyst that provides couples with the opportunity to enhance their intimacy. One cross-sectional study, for example, demonstrated that couples who reported more frequent conflict

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also reported more frequent sex (Christopher & Cate, 1985). Likewise, a daily-diary study of adolescent females demonstrated that intimates who did (vs. did not) engage in conflict on a given day were more likely to also engage in sex on that same day (Fortenberry et al., 2005).

Conversely, a somewhat larger body of work demonstrating that negative mood and stress predict sexual dysfunction suggests sex is *less* likely to co-occur with conflict. For example, two independent daily-diary studies demonstrated that intimates were less likely to have sex on days in which they reported relatively high (vs. low) negative mood and stress (Burleson, Trevathan, & Todd, 2007; Fortenberry et al., 2005). Moreover, intimates who reported relatively high (vs. low) positive mood or positive (vs. negative) feelings about their relationships were more likely to engage in sex that same day (Burleson et al., 2007; Dewitte, van Lankveld, Vandenberghe, & Loeys, 2015) and the next day (Burleson et al., 2007).

Given such contrasting evidence, comprehensive research is needed to advance the literature and provide a clearer understanding of the extent to which conflict and sex co-occur. Perhaps most notably, it is critical such research assess intimates' relationship conflict independent of their negative affect. Although conflict and negative affect are related, they are distinct constructs that may have opposing effects on couples' sexual relationship (see Fortenberry et al., 2005). Moreover, such research must assess both couple members' daily sex and conflict (i.e., daily-diary design). Such daily assessments would capture the natural frequency of these behaviors in couples' lives and their immediate implications for the relationship (Laurenceau & Bolger, 2012), while capitalizing on a dyadic, within-person design. We are not aware of any published research, however, that assesses both couple members' daily occurrences of relationship conflict (independent of negative affect) and sex and thus this was one of the primary goals of the current research.

Is Sex that Coincides with Conflict Especially Satisfying?

Regardless of whether conflict and sex frequently coincide, most couples likely engage in conflict and sex on the same day at least occasionally; however, it remains unclear whether such sex is more satisfying than sex that occurs in the absence of conflict, as lay beliefs (e.g., Ben-Zeev, 2013) suggest. According to the basic tenets of excitation transfer theory (Zillmann, 1971, 1983), physiological arousal experienced in one situation can transfer over and intensify subsequent situations. Indeed, arousal-inducing situations such as riding a roller coaster (Meston & Frohlich, 2003), exercising (Cantor, Zillmann, & Bryant, 1975), walking across an anxiety-provoking bridge (Dutton & Aron, 1974), or watching a negative-affect-inducing film (White, Fishbein, & Rutsein, 1981) can enhance feelings of sexual attraction (for a review, see Foster, Witcher, Campbell,

& Green, 1998). Given that conflict also heightens physiological arousal (see review by Robles & Kiecolt-Glaser, 2003), it is possible that such arousal may spill over to subsequent occurrences of sex such that the sex is experienced as more exciting and arousing.

Nevertheless, there is also reason to believe that sex co-occurring with (vs. occurring in the absence of) conflict may be *less* satisfying. Indeed, clinicians have long-recognized conflict as a risk factor for increased sexual issues (for a review, see Metz & Epstein, 2002) and decreased sexual desire (especially among women; Ferreira, Fraenkel, Narciso, & Novo, 2015). Accordingly, intimates who experience relationship conflict may be less satisfied with subsequent occurrences of sex.

Does Sex that Coincides with Conflict Harm or Benefit the Relationship?

There is also conflicting evidence regarding the extent to which the co-occurrence of conflict and sex impacts relationship outcomes. Although relationship conflict is associated with poorer mood (for a review, see Fincham & Beach, 1999) and poorer relationship satisfaction (e.g., Karney & Bradbury, 1995; Kluwer & Johnson, 2007; McGonagle, Kessler, & Gotlib, 1993), sex is associated with more positive mood (Burleson et al., 2007; Debrot, Meuwly, Muise, Impett, & Schoebi, 2017; Kashdan, Goodman, Stikma, Milius, & Mcknight, 2017) and relationship satisfaction (Meltzer et al., 2017; Muise, Impett, & Desmarais, 2013). Thus, it is possible that, sex that co-occurs with conflict reduces conflict's negative effects and helps buffer its overall impact on that day's relationship functioning. Emerging research supports this possibility. Couple members who touch affectionately report less stress following a laboratory-induced stressor (Jakubiak & Feeney, 2017) and report enhanced intimacy (Debrot, Schoebi, Perrez, & Horn, 2013). Likewise, although not focused on relationship conflict specifically, a daily-experience study of stress and sexual activity demonstrated sex (vs. no sex) on a given day was associated with declines in negative mood and anxiety the following day (Burleson et al., 2007).

Although such findings provide suggestive evidence that sex may help couples recover from conflict, insofar as sex can boost mood and lower stress, many of these studies examined recovery from stress arising from evaluative non-relationship laboratory tasks (e.g., Coan, Schaefer, & Davidson, 2006; Robinson, Hoplock, & Cameron, 2015) rather than examining when one's romantic partner is the source of stress. Thus, although such literature suggests sex should have positive effects on daily mood and help reduce distress after a stressor, it is unclear whether this remains true when the stressor is conflict with one's partner. Further, there is reason to believe that sex that co-occurs with conflict harms intimates' relationship satisfaction. Being mindful and present during sex is critical for optimal sexual satisfaction and functioning (Brotto, 2018; Kleinplatz

& Ménard, 2007); relationship conflict can be cognitively taxing, which could detract from such mindfulness. Indeed, those who are chronically concerned about their relationship (i.e., high in attachment anxiety) experience intrusive worries during sex that detract from their sexual experience (Birnbaum, Reis, Mikulincer, Gillath, & Orpaz, 2006). It is thus possible that conflict weighs on individuals and compromises their ability to enjoy subsequent sexual encounters, which could negatively impact their relationship quality.

The Present Study

In light of the reviewed evidence, we aimed to answer three research questions (given the lack of clear evidence, we refrained from making directional hypotheses). First, we aimed to test whether sex is more likely to occur on days when couples do (vs. do not) experience conflict. Second, we aimed to explore whether sex that co-occurs with (vs. in the absence of) conflict is more (or less) satisfying. Third, we aimed to explore whether sex buffers the negative effects of conflict on intimates' relationship outcomes (at both the daily level and over time). Although not our primary goal, we also explored potential gender differences given evidence that conflict may enhance men's but lower women's sexual attraction to their partner (Birnbaum et al., 2013).¹

To test these questions, we used a 14-day daily-diary study of newlywed couples with a 6-month longitudinal follow-up, which allowed us to examine sex and conflict in couples' everyday lives, assess the impact of such sex on both partners, and independently assess each couple members' daily reported conflict and daily mood. The 6-month follow-up enabled us to explore whether couples for whom sex more (vs. less) frequently co-occurs with conflict experience relationship benefits or costs over time. As a reminder we operationalized conflict as something one couple member did that the other disliked. Although research has examined the association between sex and mood across a variety of ages (e.g., adolescents, middle-aged women; see Burleson et al., 2007; Fortenberry et al., 2005), there are advantages to assessing sex and conflict in young, committed couples. Indeed, newlyweds are an opportune sample because, relative to those in more established marriages, those in the first few years of their marriages experience significant change and adjustment (Bradbury, 1998), have a higher risk of divorce (Kreider & Ellis, 2011), highly value sex (Greenblat, 1983), and have more frequent sex (e.g., Call, Sprecher, & Schwartz, 1995; McNulty et al., 2016); meaning the co-occurrence of conflict and sex may be more likely in

newlywed couples than in longer-term couples. Yet, relative to those in less committed or non-cohabiting relationships, newlyweds typically have consistent access to their partner (and the possibility of sex) and have high levels of interdependence that provide more opportunities for conflict (Kelley & Thibaut, 1978). Thus, to provide one of the strongest tests to date of the interconnectedness of sex and conflict, we sampled recently married couples. We are unaware of any published studies that directly assess the joint effects of sex and conflict on newlywed couples' daily sexual experiences and relationship functioning.

Method

Participants

Participants were 113 first-married heterosexual newlywed couples. We recruited all participants by mailing invitations to couples who applied for marriage licenses in Dallas County, TX (for more information about this sample, see McNulty, Meltzer, Makhanova, & Maner, 2018; Meltzer, 2017; Meltzer et al., 2017; Reynolds & Meltzer, 2017, and Supplemental Materials (SM) Sect. 1). Of the 113 couples (226 individuals) who opted to participate in the broader study, we excluded 6 couples who did not participate in the diary portion of the study. Thus, our final sample consisted of 107 couples (214 individuals; see Table 1 for demographics).² Notably, our sample was relatively more ethnically diverse than typical studies of first-married newlyweds (Karney & Bradbury, 1995; Karney, Kreitz, & Sweeney, 2004). We determined our sample size by considering the number of eligible couples willing to participate, our available financial resources, and our planned study time period (12 months, although we extended our timeline one month to maximize sample size). Given our central hypotheses were at the daily level (Level 1), our final sample of 214 individuals providing 2,539 days of data provided adequate statistical power to detect our effects. Our sample of 107 dyads enabled us to detect small effect sizes for our key daily and longitudinal effects with 80% power (see Finkel, Eastwick, & Reis, 2015 and SM section 2 for more details).

Procedure and Measures

Within the first 4 months of marriage, intimates completed questionnaires online at Qualtrics.com or by mail (if requested). These questionnaires included an approved consent form, measures assessing intimates' sexual and marital satisfaction, additional measures beyond the scope of these analyses (for a comprehensive list, see SM), and instructions to complete questionnaires independent of one's spouse. Couples received \$100

¹ Throughout, we use the term gender to refer to gender/sex differences. During study enrollment, marriage licenses were afforded to unions of a man and a woman, which likely reflects one's sex assigned at birth. To avoid confusion with "sex" the action, we opt to use the term gender.

² Data are available upon request to the second author.

Table 1 Sample demographics

	Husbands (<i>N</i> = 107)			Wives (<i>N</i> = 107)		
	<i>M</i> (SD)	%	<i>N</i>	<i>M</i> (SD)	%	<i>N</i>
Age (in years)	28.23 (5.57)	–	106	26.90 (4.77)	–	106
Relationship length (in years)	3.26 (2.69)	–	107	3.31 (2.83)	–	106
Income (in thousands)	44.20 (48.02)	–	98	31.88 (31.05)	–	95
Education (in years)	15.26 (2.81)	–	107	15.92 (2.89)	–	106
Full-time employment	–	71.0	76	–	54.2	58
Full-time student	–	12.1	13	–	12.1	13
Ethnicity	–	–	–	–	–	–
Black	–	28.0	30	–	26.2	28
White	–	47.7	51	–	48.6	52
Latino/Latina	–	15.9	17	–	15.0	16
Other	–	7.4	8	–	9.3	10
Religion	–	–	–	–	–	–
Christian-Protestant	–	39.3	42	–	36.4	39
Christian-Catholic	–	19.6	21	–	20.6	22
Agnostic	–	3.7	4	–	4.7	5
Atheist	–	5.6	6	–	2.8	3
None	–	12.1	13	–	8.4	9
Other	–	16.8	18	–	24.2	26

Percentages for ethnicity and religion do not add up to 100% due to missing responses. Relationship length refers to the time since the couple started dating

for completing these baseline questionnaires and participating in a corresponding in-lab session (beyond the current study's scope). The day following their session, spouses completed a 14-day daily diary. Specifically, every night for 14 nights, spouses completed a brief questionnaire assessing their daily (1) relationship conflict, (2) sex, and (3) marital satisfaction, as well as additional measures beyond the scope of these analyses (see SM). Couples received \$1 per person per diary completed, and they received a \$7 bonus if both spouses completed all 14 diaries. On average, wives completed 11.96 diaries (*SD* = 3.52) and husbands completed 11.77 diaries (*SD* = 3.84). Six months subsequent to baseline, we re-contacted couples to complete follow-up questionnaires that again included measures of sexual and marital satisfaction and measures beyond this study's scope (see SM). For descriptive statistics of included measures see Table 2.

Daily Conflict

Each day of the diary, participants indicated whether their "spouse did something today that [they] did not like." Participants who responded yes provided an open-ended description of the conflict.

Daily Sexual Experience

Each day of the diary, participants indicated whether they had sex with their partner that day. We did not provide a definition of

"sex," and let participants decide what constituted sex to them. Participants who responded yes rated their satisfaction with that sex: "How satisfied were you with the sex you had with your partner today?" on a scale from 1 (*Not at all*) to 7 (*Very much*).

Table 2 Descriptive statistics for measures

	<i>M</i>	<i>SD</i>	α
<i>Person-level measures</i>			
Global marital satisfaction: baseline	–0.001	0.95	
Quality of Marriage Index	41.34	4.73	.92
Semantic differential	93.93	12.05	.94
Kansas Marital Satisfaction Scale	18.79	2.52	.93
Global marital satisfaction: Follow-up	0.005	0.97	
Quality of Marriage Index	39.94	7.11	.96
Semantic differential	91.70	16.02	.97
Kansas Marital Satisfaction Scale	18.05	3.73	.97
Global sexual satisfaction: baseline	148.06	20.44	.92
Global sexual satisfaction: follow-up	145.07	21.84	.93
<i>Daily measures</i>			
Daily sexual experience	6.34	1.08	N/A (1 item)
Daily global sexual satisfaction	4.90	1.98	N/A (1 item)
Daily marital satisfaction	6.22	1.11	.95

Daily Global Sexual Satisfaction

Each day of the diary, regardless of whether they reported sex, participants indicated their global satisfaction with their sex life (assessed with a single item: “How satisfied were you with your sex life today?;” see Meltzer et al., 2017) on a scale from 1 (*Not at all*) to 7 (*Extremely*).

Daily Marital Satisfaction

Each day of the diary, participants completed a version of the 3-item Kansas Marital Satisfaction Scale (KMSS; Schumm et al., 1986) that we modified to assess daily marital satisfaction (e.g., “How satisfied were you with your partner today?”). Specifically, participants indicated the extent to which they were a) satisfied with their partner, b) their relationship with their partner, and c) their marriage that day on a scale from 1 (*Not at all*) to 7 (*Extremely*). We averaged across all available items to form an index of daily marital satisfaction.³

Global Sexual Satisfaction

At baseline and the 6-month follow-up, we assessed participants’ sexual satisfaction using the Index of Sexual Satisfaction (Hudson, Harrison, & Crosscup, 1981). Participants rated the frequency of 25 statements (e.g., “Our sex life is very exciting”) on a scale from 1 (*Never*) to 7 (*Always*). We reverse scored and summed items (range, 25–175) such that higher scores reflect higher sexual satisfaction.

Global Marital Satisfaction

At baseline and the 6-month follow-up, we assessed participants’ marital satisfaction using three scales of global relationship satisfaction: (1) the Quality of Marriage Index (Norton, 1983) that requires participants to indicate their agreement to six general questions about their marriage; (2) a semantic differential scale (Osgood, Suci, & Tannenbaum, 1957) that requires participants to rate their perceptions of their marriage on 7-point scales between 15 pairs of opposing adjectives (e.g., *Dissatisfied*—*Satisfied*); and (3) the previously described 3-item KMSS [Schumm et al., 1986; e.g., “How satisfied are you with your marriage?,” using a scale ranging from 1 (*Not at all satisfied*) to 7 (*Extremely satisfied*)]. Given that all three measures were highly correlated (all $r_s \geq .83$), we standardized

³ We inadvertently omitted the question: “How satisfied were you with your relationship with your partner today?” from paper diaries. Thus, for the diaries completed on paper ($n = 123$ diaries), we averaged the two questions they answered (satisfaction with their partner and their marriage, $\alpha = .92$).

participants’ totals and averaged across measures, helping to ensure our effects were not limited to one measure.

Analytic Approach

We analyzed our data using mixed modeling and generalized linear mixed modeling (for the odds-ratio analyses) in SPSS version 24. Because both couple members completed all diaries on the same day, we estimated 2-level cross models with random intercepts, where we nested persons within dyads and crossed person and days (Kenny, Kashy, & Cook, 2006; see section 3 of SM for all syntaxes). In instances where gender moderated effects, we report separate effects for husbands and wives; in instances where gender did not moderate effects, results were pooled across husbands and wives (though we retained the interaction terms in these models).

For all analyses, we treated both conflict and sex as dyadic variables. Spouses do not always report the same daily behaviors including conflict and sex (Jacobson & Moore, 1981), and oftentimes a combination of couple members’ reports best reflects reality (Funder, 1987). Indeed, couple members’ reports of conflict and sex were correlated (for conflict, $r = .31$; for sex, $r = .83$). We effects-coded daily conflict such that $-1 =$ neither partner reported conflict and $1 =$ one or both partners reported conflict.⁴ We reasoned that even if just one couple member disliked their partner’s behavior on a given day, their dissatisfaction likely shapes whether sex occurs (Kelley & Thibaut, 1978) because both parties must agree to sex. We effects-coded daily sex such that $-1 =$ neither partner reported sex and $1 =$ one or both partners reported sex.

Results

Across all 2539 diary entries, couples reported (1) conflict on 494 days (per couple, range = 0–7 days, $M = 2.33$, $SD = 1.85$), (2) sex on 864 days (per couple, range = 0–13 days, $M = 4.15$, $SD = 2.88$), and (3) co-occurring conflict and sex on 140 days (per couple, range = 0–6 days, $M = 0.68$, $SD = 1.13$).

Do Conflict and Sex Frequently Co-occur?

To test whether conflict and sex frequently occur on the same day, we estimated a generalized linear mixed model predicting the binary outcome of sex (No = 0, Yes = 1) from couples’ reports of conflict (conflict = reference). Conflict on a given day was unassociated with the likelihood of sex on the same day, *odds ratio* (OR) = 0.86, $CI_{95\%}$ [0.56, 1.32], $p = .494$. To explore whether conflict predicts sex the next day, we repeated

⁴ We report results using actor and partner reports of conflict in the SM section 5.



Fig. 1 Intimates' satisfaction with sexual experiences on conflict relative to non-conflict days

the previous analysis but replaced the outcome variable with whether couples reported sex the next day, controlling for sex the same day. Conflict on a given day predicted a lower likelihood of sex the next day, $OR = 0.60$, $CI_{95\%} [0.38, 0.95]$, $p = .029$. Put another way, couples were 1.68 times more likely to have sex the day following a non-conflict day relative to a conflict day.

Is Sex that Co-occurs with Conflict Especially Satisfying?

Daily Satisfaction with Sexual Experience

We regressed intimates' reports of sexual satisfaction when sex occurred onto Conflict, Gender ($-1 =$ Wives, $1 =$ Husbands), and the Conflict \times Gender interaction. On days when dyads reported co-occurring conflict and sex, intimates rated the sexual experience as less satisfying (see Fig. 1), $b = -0.27$, $CI_{95\%} [-0.38, -0.16]$, $t(339.80) = -4.79$, $p < .001$, effect-size $r = .25$, relative to sex that occurred on a day without conflict.

Daily Global Sexual Satisfaction

We regressed intimates' daily global feelings of satisfaction with their sex life (answered on all days) onto daily conflict, daily sex, intimates' gender, and all possible interactions. Intimates reported lower global sexual satisfaction on days in which conflict occurred, $b = -0.24$, $CI_{95\%} [-0.33, -0.16]$, $t(1134.60) = -5.56$, $p < .001$, effect-size $r = .16$, but higher global sexual satisfaction on days in which sex occurred, $b = 0.88$, $CI_{95\%} [0.80, 0.97]$, $t(1146.41) = 19.82$, $p < .001$, effect-size $r = .51$; no higher-order interactions reached significance (all $ps > .170$).

Baseline and Follow-up Global Sexual Satisfaction To test whether the frequency of couples' co-occurring conflict and sex was associated with intimates' global sexual satisfaction at baseline and the 6-month follow-up, we again estimated a mixed model [this time to account for the two repeated assessments ($0 =$ baseline, $1 =$ follow-up) nested within spouses] that regressed sexual satisfaction onto the intercept, time, couples'

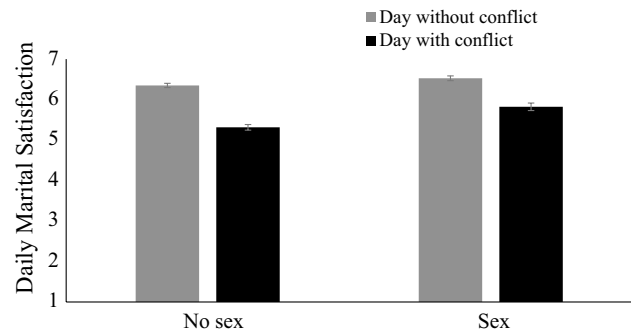


Fig. 2 Associations between daily conflict, sex, and intimates' daily marital satisfaction

co-occurring sex and conflict frequency (aggregated over the diary; grand-mean centered), couples' conflict frequency and sex frequency (each aggregated over the diary; both grand-mean centered), and the three-way interaction of each of these frequency variables with gender and time (and applicable lower-order terms); we additionally estimated a random slope for time. There was no significant main effect of couples' co-occurring conflict and sex frequency, $b = -.28$, $CI_{95\%} [-3.92, 4.48]$, $t(96.31) = 0.13$, $p = .895$, effect-size $r = .01$, nor interactions between such co-occurrence and time or between co-occurrence, time, and gender ($ps > .173$). That is, couples' co-occurring conflict and sex frequency was unassociated with intimates' initial sexual satisfaction and changes in satisfaction over time.

Does the Tendency for Sex and Conflict to Coincide Predict Relationship Outcomes?

Daily Marital Satisfaction

To explore whether sex altered the effects of conflict on relationship quality, we regressed intimates' daily marital satisfaction onto daily conflict, daily sex, gender, and all possible interactions. As depicted in Fig. 2, the association between conflict and intimates' daily marital satisfaction, $b = -0.43$, $CI_{95\%} [-0.49, -0.38]$, $t(1144.49) = -16.22$, $p < .001$, effect-size $r = .43$, depended on daily sex, $b = 0.08$, $CI_{95\%} [0.03, 0.13]$, $t(1130.90) = 3.16$, $p = .002$, effect-size $r = .09$, such that the negative association between daily conflict and intimates' daily marital satisfaction was weaker on days the couple engaged in sex, $b = -0.35$, $CI_{95\%} [-0.44, -0.27]$, $t(1151.12) = -7.97$, $p < .001$, effect-size $r = .23$, relative to days when sex did not occur, $b = -0.52$, $CI_{95\%} [-0.57, -0.46]$, $t(1108.04) = -17.70$, $p < .001$, effect-size $r = .47$.

Temporal Sequence

To inform the causal direction of our findings, we conducted two analyses. First, we examined whether sex on a conflict day predicted changes in marital satisfaction from the previous day, by repeating the daily marital satisfaction model above (regressing daily marital satisfaction onto conflict, sex, gender, and all interactions), controlling for yesterday's (person-centered) marital satisfaction. Second, we examined whether sex on a conflict day could predict increases in marital satisfaction that extend to the following day, by regressing tomorrow's marital satisfaction onto today's conflict, today's sex, gender, and all interactions, controlling for today's (person-centered) marital satisfaction. Our original key finding—that sex partially reduced the negative effect of conflict on marital satisfaction—remained significant when controlling for yesterday's satisfaction, but did not predict tomorrow's satisfaction (see section 4 of SM), suggesting that engaging in sex on the same day as conflict dampened reductions in marital satisfaction from the previous day, but did not carry over to affect the next day's satisfaction.

Baseline and Follow-up Global Marital Satisfaction To test whether the frequency of couples' co-occurring conflict and sex was associated with intimates' marital satisfaction at baseline and at the six-month follow-up, we re-estimated the comparable analyses for sexual satisfaction (described above) but replaced global sexual satisfaction with global marital satisfaction. There was no significant main effect of co-occurring conflict and sex frequency on intimates' marital satisfaction, $b = .05$, $CI_{95\%} [-0.16, 0.25]$, $t(98.75) = 0.46$, $p = .650$, effect-size $r = .05$, nor were there interactions between such co-occurrence and time or between time, co-occurrence, and gender ($ps > .186$), suggesting couples' co-occurring conflict and sex frequency was unassociated with intimates' initial marital satisfaction and changes in marital satisfaction over time.

Additional Analyses

We conducted additional analyses to ensure our effects were not attributable to negative affect, conflict frequency, sexual frequency, whether the conflict involved sex/affection, or conflict severity. By and large, our pattern of results remained robust to these variables (for analyses and results, see section 3 of SM).

Discussion

Our results do not support the lay idea that “make-up sex” is especially satisfying. Indeed, intimates enjoyed sex less on conflict (vs. non-conflict) days. Nevertheless, sex did partially buffer intimates against reduced daily marital (but not global sexual) satisfaction on days when conflict co-occurred. Moreover, the frequency with which conflict and sex co-occurred was

unassociated with intimates' global sexual and marital satisfaction at the start of marriage or changes in these variables over time, despite having adequate statistical power to detect relatively small effects.

Our study is one of the first to our knowledge to examine the co-occurrence of conflict and sex in a dyadic daily-diary context. Although there is emerging research on mood and sex (e.g., Burleson et al., 2007), conflict is distinct from negative affect, and our results hold independent of intimates' daily affect. Likewise, the current study extends prior work on stress and affection (e.g., Jakubiak & Feeney, 2017) by examining contexts in which intimates' partners are the source of stress. Moreover, we provide a strong, ecologically valid test of relational conflict and sex by examining these events in newlywed couples' everyday lives.

Our study contributes to the integration of sex and relationship research (Diamond, 2013; Maxwell & McNulty, 2019; Muise, Maxwell, & Impett, 2018) by adding to emerging research examining the role of touch and affection in couples' daily lives (e.g., Debrot et al., 2017) and to the growing recognition that everyday sexual experiences are shaped by broader relationship contexts (e.g., Dewitte et al., 2015). Indeed, our findings underscore the importance of considering the daily relationship context, as daily conflict may be one critical context in which sex may be less enjoyable. Given conflict is often associated with lower mood, our findings also fit with research demonstrating that having sex when not particularly in the mood yields both benefits and drawbacks for intimates (e.g., Kim, Muise, & Impett, 2018). From an applied perspective, our study provides empirical support that refutes popular lay notions of sex that co-occurs with conflict, which is important given that media portrayals of sexuality often lack scientific support (e.g., Ménard & Kleinplatz, 2008). Our findings can thus be useful for clinicians to dispel such popular myths.

The current findings also contribute to the literature on relationship conflict by elucidating a previously under-explored way that couples can momentarily cope with conflict in everyday life: having sex. Our finding that sex partially reduced the negative effect of conflict on marital satisfaction implies that sex may, at least in the moment, be a successful strategy to buffer against the immediate negative implications of conflict. We would be remiss, however, if we did not acknowledge that such a strategy may not be effective in the long term. Indeed, in the current study, the co-occurrence of conflict and sex was unassociated with marital satisfaction 6 months later (though future research should examine longer follow-up periods). If sex is used as an attempt to resolve a conflict, it may be a welcome distraction in the moment—similar to other indirect positive behaviors such as humor (see review by Overall & McNulty, 2017)—but ultimately the issues may remain unresolved, and subsequent relationship quality may suffer. Future research may benefit from examining long-term effects among couples who often have sex as a strategy to reduce conflict.

It is also worth noting that having sex on a conflict day did not affect intimates' global satisfaction with their sex life. This may be in part because such global feelings tend to be more stable than feelings of relational satisfaction (e.g., Fallis, Rehman, Woody, & Purdon, 2016; Maxwell et al., 2017). Nevertheless, future research may benefit from further exploring this issue.

Limitations and Future Directions

Despite our study's strengths, there are certainly limitations that open the possibility for future research. As aforementioned, there are several advantages to studying newlyweds; nevertheless, it remains unclear whether our results generalize to longer-term couples. There is some evidence that the ability of sex to improve one's mood may be dampened for those in longer-term relationships (i.e., over 20 years; Burlison et al., 2007). Further, because our newlyweds were highly satisfied, we detected a relatively low incidence of daily conflict (e.g., Campbell et al., 2005), which consequently limited instances where sex coincided with conflict. Given the typically high relationship satisfaction of newlyweds, we opted to conceptualize conflict broadly—as any partner behavior the participant did not like—and did not examine the extent to which a verbal disagreement occurred between partners. Although our results held controlling for negative affect and were not driven by conflict severity, it is nevertheless possible that different results could occur if we limited our definition of conflict to times both partners agree they engaged in a verbal disagreement. Although we had enough instances of conflict in which to test our hypotheses, different results may occur in samples with more frequent and severe conflicts or with lower marital satisfaction (i.e., non-newlywed samples), and future research would benefit from testing these possibilities.

In light of the typically high levels of relationship satisfaction in newlywed couples, we presumed we were capturing instances of consensual, wanted sexual experiences. This may have not been the case, however, given that 13% of U.S. spouses report their partner has forced unwanted sex (Basile, 2002; see also Smith et al., 2018). It is also possible couple members were not coerced to have sex following conflict, but rather willingly engaged in unwanted sex (i.e., sexual compliance; for a review, see Impett & Peplau, 2003), which is a common occurrence in relationships (Katz & Tirone, 2010) and might have accounted for why the sexual experiences were less satisfying. It is possible we captured some instances of sexual compliance following conflict, especially given achieving intimacy is a common motivation for complying with a partner's sexual wishes (Impett & Peplau, 2003). It is important for future work to (1) confirm sexual experiences following conflict are wanted and consensual and (2) assess whether individuals feel increased pressure to have sex after conflict.

Additionally, from our data, we are unable to identify the exact mechanism through which sex reduces, at least partially, the negative effects of conflict on daily relationship quality. One possibility may be that sex restores feelings of intimacy lost during conflict (Prager et al., 2015). Likewise, we are unable to identify why sex that co-occurs with (vs. occurs in the absence of) conflict is less satisfying. Perhaps sex that co-occurs with conflict is characterized by less cuddling or less foreplay and “mood setting,” which all contribute to lower sexual satisfaction (Frederick, Lever, Gillespie, & Garcia, 2017). Future research would benefit from examining intimacy and other potential mechanisms.

Lastly, although the additional temporal-sequence analyses provide some evidence for causal ordering, we are unable to draw conclusive causal claims. Given this study was designed for broader research questions, we unfortunately did not directly assess whether sex occurred after (vs. before) conflict; although it is likely that sex followed conflict in most cases because sex typically occurs at night right before couples sleep (Dutton, 2003). Future studies could more directly assess how close in time sex and conflict occurred, and directly assess whether sex was an attempt to resolve conflict.

Conclusion

Should couples engage in “make-up” sex? The current results suggest such sex may offer some short-term benefits, but that couples should also temper their expectations accordingly. Although sex helped to buffer the negative implications of conflict for intimates' daily marital satisfaction, it did not buffer against global marital satisfaction or changes in marital satisfaction over time. Future research may uncover why cultural myths about passionate make-up sex pervade.

Authors' contribution Andrea L. Meltzer designed the broader study, prepared materials and collected the data. Jessica A. Maxwell formulated hypotheses, performed data analyses, and drafted the manuscript. Both authors commented on previous versions of the manuscript. Both authors read and approved the final manuscript.

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Compliance with Ethical Standards

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

Ethics approval This study was performed in line with the principles of the Declaration of Helsinki. Approval was granted by the Ethics Committee of Southern Methodist University.

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

Consent to publish Not applicable.

Data and/or code availability Data to reproduce the results are available upon email request to Andrea L. Meltzer (meltzer@psy.fsu.edu). Code is available in the supplemental materials.

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