Using the Trauma Film Paradigm to Explore Interpersonal Processes After Trauma Exposure

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Objective: The present study sought to examine ways in which social support might influence trauma symptoms using a variation of the trauma film paradigm. Method: Sixty-seven undergraduate female students in romantic relationships were randomized to watch a stressful film clip depicting a sexual assault, either in the presence (PP) or absence (PA) of their romantic partner. Results: Analyses showed that the PP condition experienced more intrusive memories of the film than the PA condition. In addition, participants in the PP condition whose romantic partner reported low relationship trust had higher film-related distress than participants in the PP condition whose romantic partner reported high relationship trust. Observational coding of partner behaviors after viewing the film clip found that greater expression of negative emotion from partners predicted participants’ negative affect and intrusive memories over time. Positive emotional support did not have any effect upon participants’ distress. Conclusions: Findings identify possible ways in which interpersonal processes influence trauma adjustment and suggest that the trauma film paradigm can be adapted to examine the role of interpersonal processes in post-trauma adjustment.

Keywords: trauma, social support, posttraumatic stress disorder, trauma film paradigm

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Although research has documented a strong association between posttraumatic stress disorder (PTSD) and social support (e.g., Brewin, Andrews, & Valentine, 2000), the specific nature of this relationship remains unclear. In particular, this literature has focused on the likely causal sequence of this association, specifically does social support buffer against the development of PTSD or does PTSD erode available social support (e.g., Kaniasty & Norris, 2008). Most studies in this literature have involved naturalistic samples of trauma survivors, with an understandable lack of control over confounding variables and retrospective reporting. Few studies have used experimental paradigms to study the relationship between interpersonal processes and PTSD symptoms. The purpose of the current study was to implement a variation of the trauma film paradigm to explore ways in which a romantic partner may affect adjustment in the aftermath of an analogue trauma stimulus.

A prominent working hypothesis about the relationship between social support and PTSD proposes that high levels of social support buffer against negative trauma reactions (e.g., Monson, Friedman, & Dekel, 2010). As discussed by Monson et al. (2010), most research in this arena focuses on close others, specifically romantic partners, which is natural given the observation that PTSD is associated with high levels of marital distress. At present, there has been little investigation of specific dyadic processes following trauma, particularly with reference to PTSD symptomatology. One theory, the social–cognitive processing model of adjustment to trauma (Lepore, 2001), posits that positive support from others, including discussion of the traumatic event, may help to reduce trauma-related distress, presumably by encouraging emotional processing. Lepore, Fernandez-Berrocal, Ragan, and Ramos (2004) used a variation of the trauma film paradigm to test this speculation. Participants were assigned to four conditions: (a) not talking about their reactions, (b) talking out loud to themselves about their reactions, (c) talking to a validating confederate about their reactions, or (d) talking to a confederate who encouraged the participant to take a less threatening appraisal of the film. Participants were shown a stressful film clip and asked to follow the condition instructions. Two days later, participants were re-exposed to the same film. Findings showed that individuals in Condition d showed the greatest reduction in emotional distress, intrusive thoughts, and physiological reactivity to the second viewing of the film. These findings suggest that supportive interpersonal processes may help alleviate posttrauma distress; however, support for this hypothesis in the literature has been mixed (Kaniasty, 2005).

The social–cognitive processing model also asserts that unsupportive or negative reactions from others can have the opposite effect and increase distress. In support of this hypothesis, one study found that unsupportive reactions from individuals in the trauma-exposed person’s support network were predictive of the onset and severity of PTSD symptoms 6 months after the trauma, controlling for baseline PTSD severity (Andrews, Brewin, & Rose, 2003). Another pro-
spective study of PTSD found that arguments with individuals in the trauma survivor’s support network 2 weeks after the trauma were predictive of PTSD symptoms 3 months later (Zoellner, Foa, & Brigidi, 1999). These studies suggest that negative interpersonal interactions may also impact trauma symptoms.

To date, few studies have used experimental paradigms to examine how aspects of social support, such as relationship quality and the differential effects of positive versus negative interpersonal behaviors, affect trauma response. Although experimental paradigms cannot fully represent real-world reactions to trauma, they offer several methodological advantages such as random assignment, additional control over confounding variables, and the ability to isolate specific mechanisms that may be relevant in the association between social support and PTSD. Moreover, experimental paradigms allow for prospective evaluation of distress response, a much-needed addition to the current literature on interpersonal processes and PTSD.

The trauma film paradigm, developed in the 1960s, is an experimental manipulation involving a short film clip displaying a scene with stressful content (e.g., a violent car crash, a gang rape). The film is used as an analogue stimulus designed to induce stress and approximate real-world responses to traumatic events. The paradigm consists of obtaining prefilm measures from participants, exposing them to a stressful film, obtaining postfilm measures, and then monitoring intrusions and mood for several days afterward. Carleton, Sikorski, and Asmundson (2010) have documented that this paradigm can be used to induce distress up to one week.

Most studies using the trauma film paradigm have focused on altering an individual’s cognitive processing of the stressful stimuli, to examine theories about how traumatic content is encoded (e.g., Holmes & Bourne, 2008). Given that the purpose of the trauma film paradigm is to provide an analogue stressor to examine factors that shape trauma response, incorporating interpersonal dimensions into the paradigm is a logical next step.

**Aims and Hypotheses**

The current study had three objectives that were designed to examine the role of social support using the trauma film paradigm, starting with a basic examination of social support and progressing to increasingly complex levels of detail. First, we were interested in the impact of the presence or absence of a romantic partner during and after viewing of an analogue trauma film. The results of Lepore et al. (2004) suggest that presence or absence of a confederate may not be a salient dimension for the current paradigm. However, because the participant was not acquainted with the confederate in the Lepore study, it is unclear how individuals will respond in the presence of a romantic partner. It is possible that the presence of a partner will influence responding simply by provision of a familiar, supportive other. As an exploratory hypothesis (Hypothesis 1), we speculated that the presence of a romantic partner during and after viewing of the analogue trauma film (partner present; PP) would reduce distress and intrusive memories of the film, relative to watching the film alone (partner absent; PA).

Recognizing that social support is more complex than the simple absence/presence of a romantic partner, we were also interested in the effect of the romantic partner’s perceived relationship quality on the participant’s distress following the stimulus film. It was theorized that romantic partners’ perceived relationship quality may be more salient in shaping participant’s distress in the PP condition as opposed to the PA condition, as individuals in the PP condition watched the film together. Consequently, it was predicted (Hypothesis 2) that for participants who watched a stressful film clip with their romantic partners, participants whose partners reported lower levels of relationship satisfaction and trust would have increased distress afterward compared to participants whose partners reported higher levels of relationship satisfaction and trust. This hypothesis was grounded in the larger literature noting a negative association between relationship satisfaction and PTSD (e.g., Allen, Rhoades, Stanley, & Markman, 2010). Because trust is valued by college-aged participants as an important quality in a romantic relationship (e.g., Fletcher, Simpson, & Thomas, 2000a), we speculated that this factor would show a similar pattern as relationship satisfaction in these analyses.

Lastly, we explored the impact of specific partner behaviors immediately following the film on the participant’s distress and intrusive memories of the film, to examine social support at the most detailed level of analysis. We hypothesized (Hypothesis 3), based on the social–cognitive processing model (Lepore, 2001), that negative emotional partner responses would be accompanied by higher levels of participant distress and intrusive memories, relative to positive emotional partner responses. As an exploratory hypothesis, we also examined partners’ physical behaviors and self-disclosure during this interval, to examine the impact of these processes on the participant’s emotional and cognitive responses.

**Method**

**Participants**

For clarity, the term participants will be used to describe the women who were selected to participate. Their romantic partners will be referred to as partners. Participants included undergraduate females who ranged in age from 18 and 25, were in a romantic relationship for at least 3 months, and were not currently in therapy or on psychotropic medications. Potential participants or romantic partners who had experienced a sexual assault were excluded from the study (n = 30). In addition, participants who had been exposed to any other type of trauma and scored 44 or higher (indicating elevated trauma symptoms) on the PTSD Checklist (PCL; Weathers, Litz, Herman, Huska, & Keane, 1993) in relation to that trauma were also excluded (n = 5). These criteria reduced participant risk. Two additional participants reported suicidal ideation and were excluded. A total of 67 undergraduate female students completed the study.

Sample demographics are presented in Table 1. The sample averaged 19 years old and was primarily Caucasian (50.7%) and African American (34.3%). Participants reported dating their partner for an average of 22.3 months (SD = 19.4) and having relatively high levels of relationship satisfaction (M = 17.7, SD = 3.6) on the Perceived Relationship Quality Components Inventory (see below). The sample reported minimal depression (M = 9.3, SD = 6.5) on the Beck Depression Inventory-II (A. T. Beck, Steer, & Brown, 1996) and an average total score of 24.3 (SD = 7.4) on the PCL. The majority (94%, n = 30) were heterosexual.
Measures

Inclusion/exclusion criteria.

Prior trauma exposure. The Traumatic Events Questionnaire (Vrana & Lauterbach, 1994) is an 18-item self-report measure of trauma exposure; individuals report whether they have directly experienced or witnessed a variety of traumatic events.

PTSD symptoms. The PTSD Checklist (PCL; Weathers et al., 1993) is a 17-item self-report measure assessing PTSD symptoms. Symptoms are rated on a 1 (not at all) to 5 (extremely) scale and totaled across items. Participants were asked to complete the PCL with regard to the worst traumatic event they experienced.

Sample descriptors.

Trait anxiety. Trait anxiety was assessed using the State–Trait Anxiety Inventory (STAI; Spielberger, Gorsuch, Lushene, Vagg, & Jacobs, 1983). The STAI is a 40-item measure of both situational (state) and enduring (trait) anxiety with internal consistency values ranging from .86 to .95 and test–retest reliability ranging from .65 to .75 in previous studies (Spielberger et al., 1983). Cronbach’s alpha was .89.

Depression. The Beck Depression Inventory—II (BDI-II; A. T. Beck et al., 1996) is a 21-item measure of depression. The BDI-II assesses depressive symptoms in the past 2 weeks and is rated on a 4-point Likert scale. The BDI-II has evidenced high validity and reliability in previous studies (A. T. Beck et al., 1996). Cronbach’s alpha for the current sample was .84.

Psychological distress.

Distress experienced during the film. Immediately after viewing the film, participants were asked to rate their peak emotional reactions to the film on a 0 (not at all) to 100 (completely) scale. Similar ratings were obtained for fear, helplessness, horror, anger, and disgust.

State anxiety. The State Anxiety subscale of the STAI was used to examine participants’ state anxiety at six time points: prior to viewing the film clip, immediately following viewing of the film clip, 5 min after viewing the film clip, and at each of the 3 days following the film clip. Internal consistency for all time points was high (≥.91).

Affect. The Positive and Negative Affect Schedule (PANAS; Watson, Clark, & Tellegen, 1988) was used to examine positive and negative affect; the PANAS consists of 10 items measuring positive affect and 10 items measuring negative affect. Items are rated on a scale ranging from 1 (very slightly or not at all) to 5 (extremely). The measure has demonstrated sensitivity when administered in relatively short intervals (Watson et al., 1988). Similar to the State subscale of the STAI, the PANAS was completed at six time points: prefilm, immediately postfilm, 5 min postfilm, and at each of the 3 days afterward. Cronbach’s alpha for positive and negative affect was generally high at all time points (≥.77 and ≥.88, respectively), with the exception of negative affect at the prefilm time point (.65).

Involuntary intrusions. Participants were given an intrusion diary similar to that used in previous studies (e.g., Holmes & Bourne, 2008) and instructed to record thoughts that appeared spontaneously about the film. They were instructed to record the content of these memories as soon as they occurred if possible, along with how distressing they found the intrusive memory on a 0 (not at all) to 10 (extremely) scale. Participants were asked to submit this information to an online portal when completing other Internet-based measures in the 3 days postfilm. A total score summing the total number of distressing intrusions experienced (i.e., distress ratings equal to or greater than one) 1, 2, and 3 days postfilm was created.

Three days postfilm, participants completed the Impact of Events Scale—Revised (IES-R; Weiss & Marmar, 1996), a 22-item measure used to assess distress related to a trauma. The eight-item re-experiencing subscale was used as a second measure of intrusions (e.g., “I thought about it when I didn’t want to”). Participants were asked to rate each item based upon their experience over the previous three days with regard to the film. Cronbach’s alpha was .87.

Relationship Quality. The Perceived Relationship Quality Components Inventory (PRQC; Fletcher, Simpson, & Thomas, 2000b) is an 18-item questionnaire. Romantic partners rated their romantic relationship on a 7-point Likert scale ranging from 1 (not at all) to 7 (extremely). Sample items include “How happy are you with your relationship?” “How much can you count on your partner?” The measure contains six domains (three items each) of relationship quality. Relationship satisfaction and trust were focused upon in this study, given previous literature (e.g., Allen et al., 2010; Fletcher et al., 2000a). Trust consisted of how much partners felt they could trust, depend upon, and count on participants. Satisfaction consisted of how satisfied, content, and happy...
partners were with their relationship. The PRQC has been demonstrated to be a reliable and valid measure with high internal consistency (Fletcher et al., 2000b). The PRQC was completed prior to viewing the film clip. Cronbach’s alpha for both relationship satisfaction (≥.86) and trust (≥.81) were high in the current sample.

Observational Coding System. Romantic partner behaviors in the 5-min period following the film clip were coded using a modified version of the Social Support Interaction Coding System (SSICS; Bradbury & Pasch, 1992), as used in previous research (J. G. Beck, Davila, Farrow, & Grant, 2006). The SSICS is an observational coding system that rates partner behaviors across positive and negative categories. The SSICS was originally designed as a microanalytic system in which each partner’s speaking turn is coded; previous research has shown that the SSICS can be successfully adapted to code couple interactions globally, whereby a single rating of each category is given for the overall interaction (J. G. Beck et al., 2006). This approach was used in the current study.

Because the SSICS was originally designed to examine partners’ behaviors during a structured interaction task, coding categories that did not apply to the unstructured interaction paradigm (e.g., positive instrumental, off-task) were not included. Three novel codes were added to examine the role of positive and negative physical behaviors and self-disclosure. Thus, the current coding system consisted of five categories: positive emotional (reassuring; comforting; expressing concern; conveying love, care, or esteem; validating; [e.g., “How are you doing?”; “Are you ok?”]) negative emotional (critical; sarcastic or insulting; minimizing; expressing negative affect toward participant; inattentive/disengaged; [e.g., “Why are you so upset?”; “It’s just a movie”]), positive physical (providing physical comfort or affection such as hand holding or moving closer to participant), negative physical (rejection of physical contact, physically turning away), and self-disclosure (discussing one’s reactions to the film in a positive context such as expressing uncomfortableness with the film; [e.g., “That was disgusting”]).

Four research assistants were trained in the use of the coding system by Matthew J. Woodward, who also served as a coder. Coders were trained on pilot videos before beginning coding of the data. Coders met weekly to review the previous week’s films and discuss issues with the coding system. Ratings for each participant were calculated as the mean of the five raters for each code. Interrater reliability was calculated for all videos using intraclass correlations (average measure, random, absolute agreement) and was strong for each category (positive emotional, .93; negative emotional, .86; positive physical, .87; negative physical, .82; self-disclosure, .90).

Procedures

All identified participants and their romantic partners attended the laboratory session. Upon arrival, informed consent was obtained and participants completed measures of trait anxiety, state anxiety, positive and negative affect, depression, relationship quality, trauma exposure, and PTSD symptoms, whereas partners completed measures of trait anxiety, state anxiety, and relationship quality. Participants then were blocked into low, moderate, and high relationship satisfaction groups. Blocking using relationship satisfaction was determined by a score of 1–4 (low), 4–5 (moderate), or 7 (high) on the PRQC Relationship Satisfaction subscale, using norms established during prescreening of the larger subject pool. Blocks were randomly assigned either to watch the analogue trauma film with their partner (PP condition, n = 32) or without their partner (PA condition, n = 35). If participants were in the PA condition, their partner waited in a separate location.

Participants were shown an 11-minute scene depicting a gang rape from the movie The Accused. Immediately afterward, participants rated their distress and recompleted measures of state anxiety, positive affect, and negative affect. Participants were instructed how to complete the intrusion diary and other online questionnaires during the next three days. Once per day, participants completed measures of state anxiety, positive affect, negative affect, and intrusive memories using an online survey system (SurveyMonkey). On the third day, participants also completed the IES-R. Both participants and partners were debriefed following participating; participants were compensated with course credit and partners received $10.

Results

Data were examined and corrected for skew, kurtosis, and univariate and multivariate outliers prior to data analysis. Variables for partner-coded positive/negative physical behaviors were positively skewed and transformed using a square root transformation. Three raw scores assessing the number of intrusions from the intrusion diary were identified as univariate outliers (i.e., z-score greater than 3.29) and were transformed by assigning them a score one unit larger than the next highest score in the distribution. One participant was removed from the analyses due to several significant univariate outliers on multiple outcomes, indicating she may not be representative of the sample. No multivariate outliers were found. Effect sizes are reported for between-groups comparisons using Cohen’s d. Guidelines for interpreting effect size followed Cohen’s suggestions whereby .20, .50, and .80 were considered small, medium, and large effects, respectively. To keep effect sizes on a similar scale, standardized coefficients are reported in regression-based analyses. Coefficients represent the change in standard deviation units on the dependent variable based upon a one standard deviation change in the predictor variable.

Equivalency of Conditions

Chi-square and t tests were used to examine the equivalency of the two conditions. No significant differences were found between conditions on age, race, income, whether couples were sexually active, length of relationship, depression, trauma exposure, partner prefilm affect, or participant prefilm affect (see Table 1). A significant group difference was found on the PCL, t(54.1) = −2.13, p = .04, d = .53, indicating the PP condition reported significantly

1 Additional information on the adapted coding system used in this study can be found in a supplemental file.
higher PTSD symptoms ($M = 26.3, SD = 8.4$) prior to the film than the PA condition ($M = 22.5, SD = 5.8$).

### Efficacy of the Film Clip in Producing Distress

Paired samples $t$ tests comparing distress ratings from pre- to immediately postfilm were used to check whether the film clip induced distress. Results showed a significant change from pre- to postfilm for all outcomes including positive affect (prefilm $M = 29.9, SD = 9.6$; postfilm $M = 19.3, SD = 6.2$; $t(66) = 9.04, p < .001, d = 1.31$), negative affect (prefilm $M = 13.4, SD = 3.4$; postfilm $M = 23.1, SD = 9.3$; $t(66) = -9.83, p < .001, d = 1.39$), and state anxiety (prefilm $M = 32.4, SD = 9.4$; postfilm $M = 52.1, SD = 13.0$; $t(66) = -13.74, p < .001, d = 1.74$). In addition, examination of overall mean mood ratings during the film revealed high ratings of negative emotions, in particular horror ($M = 78.3, SD = 29.4$), anger ($M = 84.8, SD = 24.2$), and disgust ($M = 95.3, SD = 13.7$), indicating the film was perceived as distressing.

**Question 1: What is the impact of the presence or absence of a romantic partner during and after viewing the analogue trauma film?**

**Distress experienced during the film.** Independent samples $t$-tests comparing the PP and PA conditions on reported fear, helplessness, horror, anger, and disgust experienced during the film revealed no significant differences, suggesting that participants who watched the film clip with their romantic partner did not perceive the film as less distressing than participants who watched it without their romantic partner.

**Distress experienced following the film.** Repeated measures mixed modeling analyses were used to examine whether groups differed in their change in affect and intrusive memories over time. Separate analyses were run with each dependent variable: positive affect, negative affect, state anxiety, and intrusive memories of the film. In each analysis, the three fixed effects were included: (a) a within-subjects effect of time, (b) a between-subjects effect of condition, and (c) the interaction between time and condition. PCL scores were entered as a covariate given baseline differences in the two conditions. For analyses, examining positive affect, negative affect, and state anxiety, time spanned prefilm to 3 days postfilm. For the analysis examining intrusive memories, time spanned 1, 2, and 3 days postfilm. As these analyses were primarily focused on whether the groups differed over time, the condition variable, and the interaction between time and condition were the main variables of interest.

A significant change over time was found, $F(5, 65.1) = 21.4, \beta = .40, p < .001$, for positive affect. Pairwise comparisons revealed that positive affect was higher at prefilm than at all other time points (all $p$s $< .01$) and that positive affect immediately postfilm and 5 min postfilm was lower than all other time points (all $p$s $< .001$). No significant effects were found for condition ($p = .71$) or the interaction between condition and time ($p = .80$).

In the analysis examining negative affect, a significant change over time was found, $F(5, 67.0) = 20.3, \beta = -.47, p < .001$. Pairwise comparisons showed that negative affect immediately postfilm and 5 min postfilm was significantly higher than all other time points (all $p$s $< .001$). There was no significant difference between conditions ($p = .53$) or in change over time by condition ($p = .53$).

Results for state anxiety were similar to the findings for negative affect; there was a significant change in state anxiety over time, $F(5, 66.1) = 39.4, \beta = -.44, p < .001$, with state anxiety immediately postfilm and 5 min postfilm significantly higher than all other time points (all $p$s $< .001$). Prefilm state anxiety was also significantly lower than all other time points (all $p$s $< .01$), with the exception of state anxiety three days postfilm. No significant effect was found for condition ($p = .44$) or the Condition $\times$ Time interaction ($p = .64$).

For film-related intrusive memories, a significant condition effect was found, $F(1, 63.7) = 4.363, \beta = -.30, p = .04$, in which participants in the PP condition ($M = 3.89, SD = 3.88$) experienced more intrusive memories of the film than those in the PA condition ($M = 2.26, SD = 2.28$). In addition, a significant effect of time was found, $F(2, 62.5) = 23.9, \beta = -.62, p < .001$, indicating a significant decrease in intrusive memories incrementally over the 3 days postfilm. No Condition $\times$ Time effect was found, ($p = .26$), indicating groups did not differ in their rate of change in intrusive memories over time. An analysis of covariance comparing scores on the IES-R Intrusions subscale by condition while covarying for PCL scores also noted a significant difference, $F(1, 56) = 4.55, p = .04$, wherein participants in the PP condition ($M = 90, SD = .76$) reported more re-experiencing symptoms of the film, relative to those in the PA condition ($M = 50, SD = .48; d = .63$).

**Question 2: Does partner relationship quality impact participant distress?** Regression analyses were used to examine whether condition interacted with the partner’s perceived relationship quality to impact participant’s positive affect, negative affect, and state anxiety. As previous research has suggested that social support may be most influential shortly following a trauma (Kaniasty & Norris, 2008), analyses were limited to the time point immediately after the film clip. Moderation analyses were conducted following Aiken and West (1991). Continuous variables were mean centered prior to creating the interaction term. Relationship quality and condition were entered in the first step of the regression and the interaction was entered in the second step. If a significant interaction was found, simple slopes analysis was used to specify the nature of the interaction. Two dimensions of relationship quality were examined, relationship satisfaction and trust, both drawn from subscales of the PRQC.

No moderation effects were found for relationship satisfaction on positive affect ($p = .29$), negative affect ($p = .88$), or state anxiety ($p = .62$). However, consideration of trust revealed a different pattern. No significant moderation effect was found for positive affect ($p = .66$). Examination of negative affect immediately following the film revealed an interaction between condition and partner-rated relationship trust ($\beta = -.38, p = .01$). Simple slopes analyses revealed that participants in the PP condition whose romantic partner reported low relationship trust had significantly higher postfilm negative affect than participants in the PP condition whose romantic partner reported high relationship trust ($p < .001$, see Figure 1). The slope for the PA condition was not significant ($p = .80$). A similar moderation effect was found between condition and partner-rated relationship trust for state anxiety immediately following the film ($\beta = -.34, p = .92$), such that participants in the PP condition whose romantic partner reported low relationship trust had significantly higher postfilm...
state anxiety than participants in the PP condition whose romantic partner reported high relationship trust \((p < .01, \text{see Figure 2})\). The slope for the PA condition was not significant \((p = .98)\).

**Question 3: Does partners’ behavior immediately following the film impact participants’ distress and intrusive memories of the film over time?** Given the findings noted above, it was important to examine partner behavior more closely following the film. Repeated measures mixed modeling was used to examine the impact of partners’ behaviors during the 5-min interaction interval on participants’ postfilm distress over time. As with analyses exploring Question 2, analyses were each run for positive affect, negative affect, state anxiety, and intrusive memories. For analyses examining positive affect, negative affect, and state anxiety, time spanned postfilm to 3 days postfilm. For the analysis examining intrusive memories, time spanned 1, 2, and 3 days postfilm. Examination of bivariate correlations between positive emotion and self-disclosure revealed a large correlation between these two variables (.91), suggesting these coding categories may have been assessing similar constructs. Consequently, the self-disclosure code was removed from the analyses due to concerns about multicollinearity. The four other codes (i.e., positive emotional, negative emotional, positive physical, negative physical), along with the time variable, were all entered together as fixed effects in each analysis.

The analysis for negative affect showed that greater negative emotion from partners was associated with higher negative affect for participants over time, \(F(1, 34.5) = 6.33, \beta = .31, p = .02\); however, no association was found between positive emotional \((p = .33)\), positive physical \((p = .45)\), and negative physical behaviors \((p = .82)\) on negative affect over time. Similarly, the analysis for intrusive memories showed that greater negative emotion from partners was associated with more intrusive memories in the three days following the film, \(F(1, 26.0) = 10.34, \beta = .60, p = .003\); however, no association was found between positive emotional \((p = .84)\), positive physical \((p = .12)\), and negative physical behaviors \((p = .24)\) on intrusive memories over time. Analyses for positive affect and state anxiety did not reveal a significant association between these outcomes and any of the four codes \((p \geq .14)\).

**Discussion**

The current study used the trauma film paradigm to explore ways in which a romantic partner may affect adjustment to an analogue trauma stimulus. Analyses showed that participants who watched the film clip with their romantic partner did not differ in distress during or after the film compared to participants who watched the film clip without their romantic partner. However, the PP condition experienced significantly more intrusive memories of the film than the PA condition. To examine interpersonal processes in finer detail, moderation analyses were used to examine the role of partner’s relationship satisfaction and trust on participants’ distress following the film. Although no moderation effects were found for relationship satisfaction, analyses revealed that condition interacted with relationship trust to impact multiple outcomes. In particular, participants in the PP condition whose partners indicated low relationship trust had higher postfilm anxiety and postfilm negative affect relative to participants whose partners indicated high relationship trust. Finally, analyses examining couples’ interactions shortly after the film found that negative emotion from partners predicted participants’ negative affect and intrusive memories of the film in the days following, whereas positive emotional support had no effect upon participants’ distress.

It is notable that the groups did not differ in affect experienced during or after the film (Question 1). Results suggest that social support during and after trauma is more complex than the mere presence/absence of a close other. The current findings indicate that social support following an analogue trauma appears to hinge on the nature of the relationship and what the relationship provides rather than the presence/absence of a partner.

Moderation analyses indicated that when romantic partners reported higher relationship trust, participants had better postfilm adjustment than participants whose romantic partner reported lower relationship trust (Question 2). These results augment previous findings of an association between relationship quality and PTSD (Allen et al., 2010). Because relationship quality was evaluated prior to presentation of the analogue trauma, these findings suggest that ongoing relationship dynamics may have influenced the way that partners responded to the participant following the film, which then had an effect upon participants’ distress.

Contrary to hypotheses, romantic partners’ relationship satisfaction had no effect on participants’ distress. However, most re-
search examining relationship satisfaction and trauma outcomes has come from studies on male veterans (Monson et al., 2010), whereas this study used a sample of undergraduates. Relationship trust seemed more relevant in this study, consistent with previous research indicating that relationship trust ranks highly among college-aged participants with respect to important qualities in a romantic relationship (e.g., Fletcher et al., 2000a). Findings suggest that relationship satisfaction and trust operated differently in this sample, with trust serving as more operative mechanism on participants’ distress.

The observational coding data specify interpersonal elements further by examining partner behaviors along positive/negative dimensions. Results showed that negative emotion from partners influenced participants’ negative affect and intrusive memories of the film. No effects were found for positive emotion from partners on any outcomes. As coding of negative emotion included a variety of behaviors (e.g., invalidation, inattention, criticism), future work is needed to dismantle this association and determine if a particular facet of negative emotion was more toxic. Regardless, these findings are notable given the question within the trauma literature concerning the importance of positive versus negative interpersonal behaviors. Because few studies have attempted to compare positive versus negative social behaviors within the same study, these results have the potential to expand our available conceptualizations of social support following trauma (Kaniasty, 2005; Monson et al., 2010). Results from the current study suggest that negative behaviors from a romantic partner may be more influential to posttrauma affect than positive behaviors, which is salient given theories of PTSD emphasizing the role of positive support in preventing PTSD (Lepore, 2001). Positive support in this study did not appear to buffer against distress, while negative behaviors were associated with increased levels of negative emotion and more intrusive thoughts about the trauma film. Given that much of the previous work on the buffering effects of social support has been cross-sectional and has not parsed social support along positive/negative dimensions, few studies have used the appropriate methodology to address this question. The current study illustrates how experimental paradigms can improve upon methodological limitations of previous research.

In considering the differences between conditions in participants’ intrusive memories, several possibilities come to mind. Partners may have served as a cue for participants in the PP condition given that they were present during viewing of the film clip and the film depicted male-on-female sexual assault. Using this paradigm with a different trauma film (e.g., motor vehicle accident) in future studies may provide further insight into whether trauma film type affected group differences on intrusive memories. A second possible explanation is that watching the film clip with a romantic partner may have created an environment that increased the saliency of partner behaviors. Results from the moderation analyses finding that partners’ relationship quality only impacted participants’ distress in the PP condition support this notion. Thus, partner behaviors, particularly negative partner behaviors, may have been less likely to shape participants’ intrusive memories in the PA condition. For example, it may have been easier for a participant to dismiss a romantic partner’s criticism of her distress knowing that he had not witnessed the content of the film. However, as partners’ behaviors in the PA condition were not assessed, this hypothesis should be regarded as speculative.

Although the current study sheds light on interpersonal processes following trauma exposure, some limitations should be mentioned. The most notable is that this study used an experimental paradigm as an approximation of stress reactions in real-world trauma. Although the trauma-film paradigm has an extensive literature (e.g., Holmes & Bourne, 2008) and allows for improved methodological rigor in studying trauma reactions, this paradigm is an approximation of real-world phenomena and may not fully encapsulate aspects of actual trauma. Whether these findings generalize to women who have experienced an actual sexual assault is unknown. In addition, this study selected a mentally healthy sample of female college students. Whether these processes function the same way in other couples is unknown. Taken as a whole, the generalizability of these findings to other samples and contexts is unknown and more studies utilizing this paradigm are needed. Although female college students are often the victim of sexual assault, they are not the only at-risk population. This paradigm may also be relevant for understanding other at-risk groups, such as female service members. It may also be informative to examine this paradigm in individuals with PTSD, assuming there is no adverse risk to participants. Nevertheless, this study provides some initial attempts to experimentally examine interpersonal processes in trauma and may help advance understanding of the association between social support and PTSD.

Overall, the findings of the current study indicate that the utility of having a close other present in the aftermath of trauma depends on the nature of the relationship. Relationships in which one’s partner lacks trust have increased potential for greater posttrauma distress, presumably owing to negative interpersonal interactions. These findings support theories acknowledging the influence of interpersonal processes in PTSD yet question aspects of these theories, such as the speculation that positive support protects against the development of trauma-related pathology. Moreover, these analyses extend the current focus within this literature. Research in the trauma literature has traditionally focused on relationship satisfaction in conjunction with PTSD. However, other aspects of relationship quality, such as trust, have been relatively ignored (Monson et al., 2010). This gap in the literature is notable given that these constructs, although related, are distinct (Fletcher, Simpson, & Thomas, 2000b). In addition, previous research has found that relationship trust may shape relationship satisfaction and how relationship conflict is managed (Campbell, Simpson, Boldry, & Rubin, 2010), further highlighting the need for empirical research to move beyond a primary focus on relationship satisfaction. These results suggest that relationship trust may be an important interpersonal dynamic in trauma outcomes and needs further exploration, which may inform PTSD interventions. As supported by the current results, enhancing relationship trust may be an important but overlooked component of interpersonal dynamics that may also decrease negative interpersonal behaviors, which this study suggests are salient in trauma outcomes. Results also have the potential to inform interventions for PTSD incorporating interpersonal elements into treatment. Findings suggest that these therapies may benefit more from focusing on reducing negative behaviors from caregivers as opposed to increasing positive behaviors, which have traditionally received more attention (Monson et al., 2010).

Given the robust association found between social support and PTSD, it is surprising that few studies in the trauma literature have
attempted to use experimental paradigms to explicate this relationship. Because of the complexity surrounding the relationship between social support and PTSD, experimental paradigms offer methodological advantages to circumvent issues that have hampered previous work. Whereas previous experimental paradigms studying social processes in trauma have been more scripted in design (Lepore et al., 2004), this study indicates that experimental paradigms can be adapted to examine unscripted behaviors, better approximating real-world responses posttrauma. Future studies may advance these findings by utilizing different trauma films, and examining this paradigm with different samples, such as older adults and clinical samples. Taken as a whole, the current study paves the way for other experimental studies on interpersonal processes in PTSD and suggests that incorporating social dimensions into the trauma film paradigm may provide meaningful contributions to the literature.

References


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