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Disgust, mental contamination, and posttraumatic stress: Unique relations following sexual versus non-sexual assault

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ABSTRACT

Disgust and mental contamination (or feelings of dirtiness and urges to wash in the absence of a physical contaminant) are increasingly being linked to traumatic event exposure and posttraumatic stress (PTS) symptomatology. Evidence suggests disgust and mental contamination are particularly relevant to sexual assault experiences; however, there has been relatively little direct examination of these relations. The primary aim of the current study was to assess disgust and mental contamination-based reactivity to an individualized interpersonal assault-related script-driven imagery procedure. Participants included 22 women with a history of traumatic sexual assault and 19 women with a history of traumatic non-sexual assault. Sexual assault and PTS symptom severity predicted greater increases in disgust, feelings of dirtiness, and urges to wash in response to the traumatic event script. Finally, assault type affected the association between PTS symptom severity and increases in feelings of dirtiness and urges to wash in response to the traumatic event script such that these associations were only significant among sexually assaulted individuals. These findings highlight the need for future research focused on elucidating the nature of the relation between disgust and mental contamination and PTS reactions following various traumatic events.

1. Introduction

Emerging research supports a role for disgust, defined as a rejection or revulsion response aimed at removing oneself from the presence of a potential contaminant (Davey, 1994), in posttraumatic stress (PTS) symptomatology that may be unique from other affective experiences. For example, persistent feelings of disgust differentiate individuals with posttraumatic stress disorder (PTSD) from those with depression, chronic pain, or non-disordered individuals as well as, or better than, other affective reactions such as fear, anxiety, anger, or sadness (Finucane, Dima, Ferreira, & Halvorsen, 2012; Foy, Sipprelle, Rueger, & Caroll, 1984). In addition, intensity of disgust experienced during a traumatic event (i.e., peritraumatically) predicts PTS symptom severity after accounting for the effect of peritraumatic fear responses (Engelhard, Olatunji, & de Jong, 2011) and other types of psychopathology (e.g., obsessive–compulsive [OC] symptoms; Badour, Bown, Adams, Bunaciu, & Feldner, 2012). However, little empirical investigation has focused on advancing our limited understanding of this relation.

Traumatic events involving sexual victimization may be particularly likely to elicit disgust responses. For example, sexual assault victims frequently report ongoing distress related to feelings of self-focused disgust (Petrak, Doyle, Williams, Buchan, & Forster, 1997), and one study found that sexually assaulted adolescents were six times more likely to retrospectively endorse the presence of peritraumatic disgust as well as report significantly greater intensity of peritraumatic disgust compared to non-sexually (physically) assaulted adolescents (Feldner, Frala, Badour, Leen-Feldner, & Olatunji, 2010). Furthermore, those with histories of both assault types rated the sexual assaults as significantly more disgusting than the physical assaults. Conversely, no differences emerged in terms of presence or intensity of peritraumatic fear or helplessness.

Sexual assault also may be particularly likely to lead to the belief that one has been contaminated by the experience. Feelings of disgust, contact with bodily products (e.g., saliva, semen, and blood) and perceptions of violation, debasement, immorality, or impurity during a sexual assault may result in perceived contamination (Rachman, 2004, 2006). For example, Fairbrother and Rachman

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(2004) demonstrated that 70% of women reported having an urge to wash following a sexual assault, with more than one quarter of these individuals continuing to experience such urges for up to a year post-assault. Contamination concerns in the context of sexual victimization may center around persistent perceptions of internal dirtiness and an inability to remove the source of pollution even when one is no longer in contact with the perpetrator (Fairbrother & Rachman, 2004; Rachman, 2004, 2006). These characteristic internal feelings of dirtiness may result, at least in part, from an internalization of feelings of disgust experienced in relation to the sexual assault experience (Olatunji, Elwood, Williams, & Lohr, 2008). Further, it has been postulated that this phenomenon, termed mental contamination (or mental pollution; Rachman, 2006), can be elicited by internal experiences such as thoughts, images, or memories in the absence of a physical contaminant (Fairbrother & Rachman, 2004; Herba & Rachman, 2007). Consistent with this idea, Fairbrother and Rachman (2004) documented greater feelings of dirtiness, urges to wash, anxiety, and distress in response to an idiographic assault script as compared to a pleasant script among sexual assault victims.

Despite growing recognition that experiences of sexual assault may lead to both feelings of disgust and mental contamination, there has been a relative dearth of empirical research examining associations between these two factors and how they may relate to PTS symptomatology. Preliminary work suggests women with PTSD report elevated disgust and guilt (but not fear) in response to idiographic reminders of childhood sexual abuse as compared to those without PTSD (Shin et al., 1999). Moreover, positive correlations have been observed between sexual assault-related feelings of mental contamination and PTS symptom severity among sexually assaulted women (Fairbrother & Rachman, 2004) even after accounting for symptoms of depression and general elevations in anxiety (Olatunji et al., 2008). Theory suggests feelings of mental contamination should involve disgust as well as other emotions such as shame, humiliation, contempt, and anxiety (Herba & Rachman, 2007; Rachman, 2004, 2006). However, extant research has been limited by examining these constructs separately.

In addition to simultaneously examining disgust, mental contamination, and PTS symptomatology, two additional gaps in this literature further constrain our understanding of this area. First, although disgust and mental contamination may relate to PTS symptoms following sexual assault, it is important to examine whether these phenomena are relatively unique to traumatic experiences that are sexual in nature or if they play an important role following other traumatic events (similar to anxiety and fear). Non-sexual assaults may be ideal comparisons given that both sexual and non-sexual assaults involve aspects of interpersonal violation. While research on mental contamination in particular has been limited to considering situations involving sexual violation, Rachman (2004, 2006) suggests mental contamination may also emerge following other types of experiences involving violations of morality, betrayal and contact with individuals perceived to be impure or morally "untouchable." Empirical evidence also suggests reminders of interpersonal assault (collapsed across sexual and non-sexual) result in greater elicitation of disgust as compared to reminders of non-interpersonal traumatic events (e.g., accidents, natural disasters; Badour et al., 2011). Therefore a timely, significant, and unique extension to this research is to compare linkages among disgust, mental contamination, and PTS symptoms among sexual versus physical assault survivors.

Second, given disgust and mental contamination have been most extensively researched within the context of obsessive–compulsive disorder (OCD; Cougle, Lee, Horowitz, Wolitzky-Taylor, & Telch, 2008; Elliott & Radomsky, 2009; McKay, 2006; Radomsky & Elliott, 2009; Stein, Liu, Shapira, & Goodman, 2001) it is important to examine if disgust, mental contamination, and PTS symptomatology are uniquely related above and beyond the presence of OC symptoms. This is a particularly important specificity test in light of a growing literature documenting the co-occurrence of PTS and OC symptoms among traumatic event-exposed individuals (Boudreaux, Kilpatrick, Resnick, Best, & Saunders, 1998; Brown, Campbell, Lehman, Grisham, & Mancill, 2001; Huppert et al., 2005; Solomon et al., 1991).

With this background, the current study sought to begin addressing several gaps in this literature. First, this study utilized the well-established script-driven imagery paradigm to examine how PTS symptom severity relates to a range of affective reactions including feelings of mental contamination, disgust, and anxiety in response to cues of traumatic sexual or non-sexual assault. This approach is a significant strength over questionnaire-based measures in that it allows for an examination of real-time affective reactivity to traumatic event cues that is characteristic of the hallmark PTS symptomatology (Hopper, Frewen, Sack, Lanius, & van der Kolk, 2007; Orr & Roth, 2000). It was hypothesized that PTS symptom severity would relate to greater increases in (1) mental contamination (i.e., feelings of dirtiness and urges to wash), (2) disgust, and (3) anxiety in response to an individualized traumatic event script. It was further hypothesized that individualized sexual assault cues, compared to non-sexual assault cues would elicit greater increases in (1) mental contamination and (2) disgust. Similar increases in anxiety were expected across groups. Next, as feelings of disgust and mental contamination are theorized to be relatively unique correlates of sexual assault and related PTS reactions, it was hypothesized that the associations between PTS symptom severity and increases in (1) mental contamination and (2) disgust elicited by the traumatic event script would be greater among individuals with a history of sexual assault than those with a history of non-sexual assault. It was anticipated that the association between PTS symptom severity and increases in anxiety would be elevated among individuals with both traumatic event types. Finally, it was hypothesized that these relations with PTS symptoms would remain significant even after accounting for severity of OC symptomatology, suggesting unique associations with PTS symptomatology.

2. Method

2.1. Participants

The sample consisted of 40 female adults (M_{age} = 28.18, SD = 13.93) with a positive history of traumatic event exposure as defined by meeting criterion A of the *Diagnostic and Statistical Manual Fourth Edition* (DSM-IV) diagnosis for PTSD (i.e., exposure to an event characterized by perceived threat of death or serious injury that is accompanied by a response of extreme fear, helplessness, or horror; American Psychiatric Association [APA], 1994). Participants were divided into two non-overlapping groups based on self-reported history of traumatic sexual or non-sexual assault (i.e., physical assault). Participants in the sexual assault group denied any history of physical assault and participants in the non-sexual assault group denied any history of sexual assault.

The sexual assault group (n = 22) included persons who endorsed an index traumatic sexual assault (and denied a history of non-sexual assault). The non-sexual assault group (n = 18) included persons who endorsed an index traumatic assault that was physical in nature (and denied a history of sexual assault). Participants in the sexual assault group endorsed the following range of non-exclusive acts: attempted sexual assault (n = 1), vaginal intercourse (n = 15), oral intercourse (n = 4), anal intercourse (n = 2), and other sexual act (n = 3). In the sexual assault group, participants' relationship to the assailant included relative (n = 4), intimate partner/spouse (n = 2),