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Don't walk in her shoes! Different forms of perspective taking affect stress physiology

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ABSTRACT

Helping behavior predicts both positive and negative outcomes for helpers' health and well-being. One reason for this may be that helpers can engage in different kinds of perspective taking, which in turn have different effects on well-being. Imaging oneself in a suffering other's place, or imagine-self perspective taking (ISPT), has been shown to lead to greater levels of personal distress than merely thinking about the other's feelings, or imagine-other perspective taking (IOPT). However, no research has examined the effects of ISPT and IOPT live as a person is engaged in helping behavior. Since self-report on emotional states is obtrusive during pursuit of a helping goal we examined distress indirectly by exploring whether ISPT and IOPT might differentially affect stress physiology during helping behavior. The present research set out to explore whether different forms of perspective taking may differently affect a helper's stress physiology. We hypothesized that during helping ISPT would induce a pattern of negative arousal, or threat, while IOPT would predict relatively greater invigorating arousal, or challenge. 202 participants (83 women) engaged in ISPT, IOPT, or remaining objective while actively providing help to a suffering person via a speech task. As predicted, ISPT compared to IOPT/remaining objective resulted in relative threat, whereas IOPT resulted in marginally greater relative challenge. This effect was mediated by increased perceived demands of the situation. Moreover, self-reported distress was only associated with threat during ISPT, but not during IOPT. Different forms of perspective taking may have different effects on helpers' health and well-being.

1. Introduction

Engaging in helping behavior, both professionally and outside of professional contexts has been linked to harmful consequences for helpers (Bloom, 2014; Figley, 2002; Gleichgerrcht & Decety, 2013; Rothschild, 2002), but paradoxically, with beneficial, even life-prolonging, effects on helpers as well (Hojat et al., 2002; Poulin, Brown, Dillard, & Smith, 2013; Raposa, Laws, & Ansell, 2015). One possible reason for these disparate findings may be that helping may have different consequences depending on whether and how helpers take the perspective of those they are trying to help. In the present research, we propose and provide evidence that imagine-self perspective taking induces a state of physiological stress in the helper, while imagine-other perspective taking does not.

1.1. Imagine-self versus imagine-other perspective taking

One important precursor to prosocial behavior is thinking about the suffering of those in need of help, or perspective taking (Batson & Markman, 2009; Batson & Shaw, 1991). A small body of prior research suggests that there are two distinct ways in which people can take the perspective of suffering others, and that these forms of perspective taking have different effects on potential helpers. One form is thinking about how a suffering other feels, or imagine-other perspective taking (IOPT), and the other form is imagining oneself in the suffering other's shoes, or imagine-self perspective taking (ISPT). Prior work has revealed that while both ISPT and IOPT for suffering others lead to increased self-focus and self-other overlap (Cialdini, Brown, Lewis, Luce, & Neuberg, 1997; Davis, Conklin, Smith, & Luce, 1996), their consequences for the individual engaging in each form of perspective taking differ greatly (Lamm, Batson, & Decety, 2007). First, these two forms of perspective taking appear to lead to different

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emotions. While both IOPT and ISPT appear to lead to high other-focused tender and compassionate feelings, or "empathic concern," ISPT additionally leads to higher levels of personal distress, or negative self-focused affect (Batson, Early, & Salvarani, 1997; Batson & Markman, 2009). Second, these two forms of perspective taking appear to have different effects on the self-other distinction. IOPT involves significantly greater self-other distinction compared to ISPT (Batson, Sager, et al., 1997), while ISPT leads to greater self-related thoughts and fewer target-related thoughts compared to IOPT (Davis et al., 1996, 2004). In addition, research using functional magnetic resonance imaging (fMRI) technology suggests that brain activation under ISPT is similar to experiencing a target's pain oneself, while IOPT involves activation consistent with self-other distinction (Ames, Jenkins, Banaji, & Mitchell, 2008; Jackson, Brunet, Meltzoff, & Decety, 2006). Recent work has further shown that imagine-self perspective taking might be relatively automatic and unintentional, while imagine-other perspective taking is relatively deliberative, something people engage in out of their own volition (Cameron, Spring, & Todd, 2017). In sum, compared to IOPT, ISPT appears to be associated with more negative self-focused affect, greater self-other merging, cognitive and emotional contagion, unintentional or automatic processing, and experiencing the other's suffering as one's own.

1.2. Effects of perspective taking on helpers

In light of these findings, it appears that ISPT and IOPT are qualitatively different, with ISPT potentially being more burdensome than IOPT. This suggests that these two different forms of perspective taking may have different effects on helpers' health and well-being. However, it is important to note that prior research on ISPT versus IOPT has examined their effects outside of the helping context—that is, either before or in the absence of helping behavior. No research has examined consequences on the helper while the helper is actively engaged in a helping task. This is particularly noteworthy because the act of helping itself poses distinct emotional burdens on helpers, such as the strain of performing a difficult task on someone else's behalf (Bride, 2007; Neuberg et al., 1997), and it also poses distinct emotional rewards, such relief of distress in response to another's suffering (Cialdini et al., 1997). In light of this, it is unclear whether perspective taking continues to exert effects while a person is actually engaged in helping, despite the fact that helping efforts can take considerably longer than a period of perspective taking that might precede helping.

1.2.1. The possible role of challenge and threat

As a practical matter, assessing the effects of perspective taking during helping is challenging, because most ways of assessing helpers' emotional responses would require interruption of helping efforts. One way to address this is to assess the *physiological* effects of ISPT and IOPT during a helping task. Prior research on perspective taking and physiology has only addressed the question of whether perspective taking leads to arousal, finding that in fact both ISPT and IOPT lead to greater arousal than remaining objective (Lamm, Porges, Cacioppo, & Decety, 2008; Stotland, 1969). However, a much more important question with respect to health and well-being is what *kind* of arousal is associated with each kind of perspective taking. The biopsychosocial (BPS) model of challenge and threat holds that in arousal-inducing situations, individuals may experience one of two psychological states, challenge or threat, each associated with a unique cardiovascular pattern (Blascovich & Mendes, 2000; Seery, 2013). The BPS model is based on Lazarus's transactional stress model. In this model stressful situations are viewed as complex interactions between subjective appraisals of the demands of the situation and subjective appraisals of one's own resources (Lazarus & Folkman, 1984). During the primary appraisal process, situations become evaluated as threatening (potential harm), harmful (if harm was done), or positive and manageable or challenging. Then during the secondary appraisal process, individuals evaluate their own resources to determine whether the situation could be managed with the resources they have available or not. Stress is experienced when resources are perceived to fall short of demands, eliciting a coping strategy (e.g. flight, aggression, flexible adjustment of strategies), while challenge, a positive state of arousal, emerges when resources are perceived to match or exceed demands of the situation. Via this complex interactive process, the same situation can be experienced as stressful for one person and challenging or invigorating for another.

Physiologically, relative *challenge* (resources perceived to meet or exceed perceived demands) has been found to be accompanied by sympathetic-adrenal-medullary (SAM) axis activation, high ventricular contractility (VC), increased heart rate (HR), high cardiac output (CO) and low total peripheral resistance (TPR). Relative *threat* (resources perceived as falling short of perceived demands) has been found to be accompanied by SAM activation with additional hypothalamic-pituitary-adrenal axis (HPA) activation and the release of cortisol, high TPR, and low CO, with the heart working harder but less effectively than when at rest (Blascovich, 2000; Seery, 2013). In short, challenge is a state of positive or invigorating arousal while threat is a state of negative arousal, a stressful state with possible negative implications for health.

We propose that ISPT compared to IOPT or remaining objective leads to greater relative threat versus relative challenge, for two reasons. First, as reviewed, ISPT versus IOPT leads to cognitive and neural states that are similar to making a target's suffering one's own (Ames et al., 2008; Davis et al., 2004; Jackson et al., 2006). This state should literally increase the helper's perceptions of situational demands by introducing vicarious suffering. Perceived danger as well as uncertainty have been shown to elicit threat (Blascovich & Mendes, 2000; Mendes, Blascovich, Lickel, & Hunter, 2002) and imagining the self as the other should increase perceived uncertainty and danger as lines between self and others are blurred. In addition, ISPT leads to greater anxiety and distress than IOPT or remaining objective (Batson, Sager, et al., 1997). This anxious affect may signal low resources and high demands, thus indicating greater relative threat (Seery, 2013). In sum, the helper's perceptions of situational demands should be higher and the helper's estimate of personal resources should be lower as a result of ISPT compared to IOPT/no perspective taking.

1.3. Overview of the study

The current project sought to investigate whether ISPT compared to IOPT and no perspective taking (i.e., being objective) may differentially affect a helper's physiological states during pursuit of a helping goal. In keeping with previous research assessing challenge and threat, this project focused on a highly arousing situation—speech performance, framed as a helping task—in order to elicit sufficient arousal to distinguish between these states (Blascovich & Mendes, 2000). We hypothesized that in this situation ISPT would result in a threat physiological pattern relative to IOPT/no perspective taking.

1.3.1. Exploratory hypotheses

We also wished to explore a possible contributor to this effect, greater perceived demand under ISPT compared to IOPT or being objective. Greater demand under ISPT would be plausible for two reasons. First, negative affect, which is higher in ISPT versus IOPT, leads to reduced perceived resources and increased perceived demands (Blascovich & Mendes, 2000). Second, given that ISPT compared to IOPT or being objective induces cognitive and neural states that are more similar to personally experiencing the target's situation (Ames et al., 2008; Davis et al., 1996; Davis et al., 2004; Jackson et al., 2006; Ruby & Decety, 2001, 2003, 2004), this state should increase the perceived demands of the situation compared to IOPT/remaining objective. The reason for this is that, under ISPT, the helper does not have to deal with just the demands of the helping task, but also the