Making the Implicit Explicit in a Pandemic:

Raising Awareness about Emotional Contagion Lowers COVID-19 Related Distress

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The outbreak of the 2019 novel coronavirus (COVID-19) has been a generation-defining moment. As viruses go, COVID-19 is a juggernaut. The social circumstances surrounding COVID-19 are constantly shifting in a whirlwind of uncertainty, breeding distress related to the pandemic that encompasses a variety of negative emotions, such as panic, fear, sadness and irritability (Moccia et al., 2020; Qiu et al., 2020). As epidemiologists point out, contagion of thoughts and feelings can interact with physical contagion to help or hinder public health outcomes (Bauch & Galvani, 2013). The question we examine here is: can raising awareness of the largely subconscious process of negative emotional contagion lessen its influence and – specific to this pandemic – lessen people's feelings of distress about COVID-19?

Emotional contagion is defined as the sharing or "triggering" of emotions, both implicitly and explicitly via person-to-person interaction (Hatfield, Cacioppo, & Rapson, 1993); in dyads; groups; organizations and societies (Barsade, Coutifaris, & Pillemer, 2018). Although recipients of emotional contagion may sometimes be aware of the process as it occurs (Parkinson & Simons, 2009), emotional contagion has often been treated as an implicit process, or one which happens outside of a person's conscious awareness (Barsade, Ramarajan, & Westen, 2009; Hatfield, Bensman, Thornton, & Rapson, 2014).

More broadly, implicit processes have been defined as processes where the origin, the content, or the ongoing process of one's emotions, thoughts or behaviors is not recognized in the moment (Barsade et al., 2009; Gawronski, Hofmann, & Wilbur, 2006). Similarly, Hollands and colleagues (2016) describe non-conscious behaviors as those in which people fail to recognize the causal influence of a given stimulus on their behaviors. While a variety of dual process theories have examined aspects of the implicit-explicit interaction (Gyurak, Gross, & Etkin, 2011; Smith & Neumann, 2005), these could benefit from incorporating a systematic explanation of making people aware of the influence of different cognitive and affective implicit processes on subsequent feelings, thoughts, or behaviors.

The implicit bias literature is the source of most studies examining the consequence of making implicit processes explicit. There is evidence that making previously implicit processes salient, or explicit, do indeed reduce the impact of bias on subsequent behavior (Burns, Monteith, & Parker, 2017; Chaney, Sanchez, Alt, & Shih, 2020). Indeed, several classic works have theorized about the impact of attention to implicit effects in reducing undesired behaviors (Greenwald & Banaji, 1995), and including in the affective domain (Schwarz and Clore, 1983).

Making Negative Emotional Contagion Explicit

Little is currently known about how to reduce negative emotional contagion, and susceptibility to contagion is often treated as stable, or determined by individual differences in tendency to mimic; or in attentiveness to and perception of others' emotions (Doherty, 1997; Hatfield et al., 1993). Research on reducing negative emotional contagion often falls under the broader realm of emotion regulation, which refers to any attempt to inhibit, initiate, or change one's emotion (Koole, 2009). Within reasonable limits, cognitive reappraisal, situation modification and selection have robust support as adaptive methods of decreasing negative

emotion overall (Brooks, 2014; Campbell-Sills & Barlow, 2009; Gross, 1998; Webb, Lindquist, Jones, Avishai, & Sheeran, 2018). However, these strategies have historically focused on broad instances of negative mood events, and even work on interpersonal affective events has often explicitly excluded theory on contagion (Dixon-Gordon, Bernecker, & Christensen, 2015). Nascent research suggests that individuals may employ dissociation, or cognitive distancing from an interaction or target, to successfully combat negative emotional contagion (Rempala, 2013). We argue that learning that emotional contagion exists will reduce distress, as individuals have more knowledge about contagion in the moment and begin to feel that they are able to protect themselves emotionally from the negativity of others via mental distancing from negative affective events, that is, dissociation from the distress of others (Rempala, 2013).

Emotional Contagion Awareness in Reducing Distress in a Pandemic

The COVID-19 pandemic is a an important, naturally occurring field experiment in which to examine whether raising awareness of negative emotional contagion can help reduce distress about the pandemic. First, it is unusual to have so many people distressed by the same cause, for so long, with news and social media offering continual coverage. This is relevant, as prior research has shown that media coverage led to a powerful increase in distress even for people who were not directly part of other highly publicized traumatic events, as in the Boston Marathon bombings (Holman, Garfin & Silver, 2014) and the Ebola Crises (Thompson, Garfin, Holman & Silver, 2017). Garfin, Silver & Holman (2020) also recently posited that the stress increased by global media exposure could lead to subsequent behaviors which can tax emotional and psychological resources unnecessarily in the COVID-19 crisis. Finally, the COVID-19 pandemic has been tied at a population level to reduced mental health – as of June 2020, survey data from the U.S. Census Bureau (2020) suggests that nearly one in three U.S. residents currently meets clinical criteria for symptoms of an anxiety disorder, compared to less than one in ten in 2019.

Given the above, reducing the part of COVID-19 distress that is magnified through the process of negative emotional contagion is both theoretically and practically important. It has far-reaching implications for the management of contagion in crisis efforts, and may be indirectly relevant to community, group and team crisis research, where panic can negatively influence group health and decision-making (Garfin, Holman, & Silver, 2015; Weick, 1993). Indeed, with the tacit knowledge that mass negative contagion is often counterproductive in a pandemic, messaging toward the public often contains admonishments to "keep calm." However, these campaigns often do not explain emotional processes such as emotional contagion, nor provide actionable advice on how to avoid this contagion, which would get in the way of staying calm. Additionally, where advice for managing negative emotions is being given, there is little follow-up to see if such advice is taken and is useful. In this study we conduct an intervention that describes negative emotional contagion and what can be done about it, and we follow up to see if our intervention influences COVID-19-related distress over a month-long time period. We do so at a unique point in time, with widespread distress about a once-in-a-century global pandemic, where in addition to people's own negative emotions, they are surrounded by the negative emotions of their family, their neighbors, their friends, social media, the news and more. Here, we have both a strong context and a unique opportunity to

gain a more systematic understanding of how largely implicit affective processes are reduced when they are plainly explained and made salient. As we argue that understanding that one's own distress is being enhanced by that of others can enable people to consciously reduce this effect, we predict that being made aware of the process of emotional contagion will help reduce COVID-19 related distress.

In a multi-wave experimental study executed between April 28th and June 12th, 2020, we tested the impact of informing participants about emotional contagion and what to do about it within the context of COVID-19. Specifically, we predicted that making participants aware of how negative emotional contagion operates will decrease subsequent COVID-19-related distress, and that both self-efficacy and susceptibility to contagion would mediate this effect. Given evidence that women are more susceptible to emotional contagion (Doherty, Orimoto, Singelis, Hatfield, & Hebb, 1995), more stress-reactive (Dedovic, Wadiwalla, Engert, & Pruessner, 2009; Marin et al., 2012) and more likely to take preventive health measures during a similar pandemic (Leung et al., 2003), we also predicted that our intervention will be more salient and thus more effective for women. Results of our study indicated that our intervention reduced COVID-19-related distress beginning at the one-week follow-up and carrying into a two-week and one-month follow-up. In partial support of our mediation hypotheses, this effect was mediated by lowered susceptibility to contagion, but not by an increase in self-efficacy, for which we found only a small difference in the immediate post-test. Finally, as hypothesized, moderation analyses and subsequent subsample analyses revealed these results were significantly stronger for women than for men. In sum, we find that making the implicit explicit can significantly help reduce distress in a pandemic.

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