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Put your mask on first to help others: Attachment and sentinel behavior during the COVID-19 pandemic

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ABSTRACT

The objective of this research was to learn whether attachment style is related to the ways people try to warn, protect, and care for others during the pandemic and what kinds of personal protective measures they are taking. Data were collected in early May 2020 from 200 Amazon MTurk (AMT) workers who participated in exchange for payment. People who were high in attachment-related anxiety were more likely to behave as “sentinels” (i.e., warning loved ones to engage in safe practices such as hand washing, wearing a face mask), whereas those high in attachment avoidance were less likely to do so. These findings suggest that insecure attachment may contribute to people’s willingness to protect themselves and others during the pandemic.

1. Introduction

The Coronavirus (COVID-19) pandemic is one of the worst public health crises in modern history, causing tremendous pressure and anxiety for millions of people (e.g., Rosen et al., 2020). Although the pandemic has impacted the lives of everyone, there are considerable differences across people in the ways they manage the threat. Some people have made efforts to engage in safe practices, such as social distancing, whereas others have not. The objective of this research was to learn whether attachment styles – the characteristic ways people approach close relationships – are related to the ways people warn and care for others, and what kinds of protective measures they are taking themselves.

Attachment theory emphasizes the emotional bonds that people form with their primary caregivers, as well as the implications of those bonds for social and emotional functioning across the lifespan (Bowlby, 1969/1982). A thorough discussion of the attachment literature is beyond the scope of this brief report. For the present purposes it is sufficient to note that there are individual differences in how secure or insecure people relate to significant others in their lives. These differences, often referred to as attachment styles, are related to a wide array of interpersonal outcomes. For example, researchers have found that, compared to secure people, insecure people are less satisfied in their relationships (Mikulincer et al., 1997; Rom & Mikulincer, 2003).

The fact that insecure attachment is often associated with detrimental outcomes (e.g., ineffective coping, various forms of psychopathology) has led some scholars to ask why insecure attachment exists (Ein-Dor et al., 2010). That is, from an evolutionary perspective, it might seem that insecure attachment patterns would be selected against, given that they are associated with outcomes that are potentially detrimental for survival and reproduction (e.g., Belsky, 1999). One recent resolution to this paradox has been put forth as Social Defense Theory (SDT; Ein-Dor et al., 2010), an extension of attachment theory. SDT posits that insecure attachment may confer unique survival advantages for groups (vs. individuals) in the context of threat and danger. For instance, avoidant people are assumed to adopt “self-protective fight-or-flight reactions” (Ein-Dor et al., 2010, p. 132) because they are self-interested and motivated to save themselves. These cues (such as protecting themselves against danger) can be beneficial to the group if other people notice and take heed.

People who are anxiously attached tend to possess hyperactivating tendencies. They are more likely to become distressed when under threat, engage in catastrophizing, and focus on threat-related information (see Mikulincer & Shaver, 2007, for a review). Although these kinds

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1 The theory also makes predictions about secure attachment in the context of threat, but this is beyond the scope of this brief report. Generally speaking, SDT proposes that the desire to remain close to others (by those who are secure) may incur more harm than good, possibly leading to slower identification of threat and non-optimal reactions to danger.
of responses are often considered maladaptive, according to SDT, they have the potential to confer group-level advantages in situations that pose genuine threats. According to SDT, attachment-related anxiety is associated with an adaptive reaction called “sentinel behavior”—noticing ambiguous signs of threat, and warning others about the threat. More specifically, it has been suggested that those who are anxiously attached have a lower threshold for detecting danger and a higher propensity to alert others. It should also be noted that the research on SDT is built on the assumption that attachment anxiety is more closely related to peoples’ ability to detect social-oriented threats, despite the fact that attachment anxiety and trait anxiety may be correlated (see Ein-Dor & Perry, 2014). In the present research we sought to evaluate whether attachment anxiety was associated with sentinel behavior during the COVID-19 pandemic. That is, we examined whether attachment styles are associated with behaving in ways that are consistent with acknowledging a threat (e.g., self-focused sentinel behavior, such as wearing masks) and encouraging others to take appropriate precautions (e.g., other-focused sentinel behavior, such as asking loved ones to wear masks).

2. Method

2.1. Procedure

Sample size was determined a priori and data analysis did not begin until the target sample size was reached. On the basis of unique Amazon Mechanical Turk identifiers, we ensured that participants provided data only once. IRB approval was granted by the authors’ institution and there are no conflicts of interest to report. Informed consent was obtained electronically before taking part in the study. Participants were told that the purpose of the study was to better understand personality and individual differences during the COVID-19 pandemic. They were asked to provide basic demographic information and respond to several surveys about themselves, their experiences, and their relationships.

2.2. Participants

A total of 200 participants (118 males, 81 females, 1 non-disclosed) from Amazon MTurk participated on May 10, 2020 in exchange for payment. Ages ranged from 20 to 70 (M = 38.16, SD = 11.90). Of all participants who reported their ethnicity, 66.5% were White, 12% African American, 8.5% Hispanic, 8.5% Asian/Pacific Islander, 2.5% Native American, 1.5% indicated “Other,” and 0.5% chose not to disclose. On a 9-point scale asking, “In most matters (e.g., political, social, economic), where would you place yourself on the following scale (1 = extremely liberal, 9 = extremely conservative)” the sample leaned slightly liberal (M = 4.38, SD = 2.43). On a 4-point scale asking for annual household income (1 = under $20,000, 2 = $25,000–$49,999, 3 = $50,000–$99,999, 4 = $100,000 and over), the sample fell close to the average income bracket (M = 2.61, SD = 0.81).

2.3. Measures

2.3.1. Adult attachment

The Experiences in Close Relationships-Relationship Structures (ECR-RS; Fraley et al., 2011) was administered to assess individual differences in attachment. Attachment anxiety refers to the extent to which a person is concerned with rejection and abandonment in close relationships. Attachment avoidance captures the extent to which a person is uncomfortable with emotional intimacy and dependence on others. Participants were asked to complete the 9-item ECR-RS with respect to their general/global attachment, as well as their attachment to several interpersonal targets (i.e., mother, father, romantic partner). Cronbach’s α’s for anxiety and avoidance were all well above 0.80 for each relational domain. Items were rated on a Likert scale ranging from 1 = strongly disagree to 7 = strongly agree. Composite scores for each attachment dimension in each relational domain were computed such that higher scores reflect greater levels of insecure attachment (i.e., avoidance, anxiety). Refer to the Appendix for these items.

2.3.2. Sentinel behavior

To evaluate the two components of sentinel behavior (i.e., noticing ambiguous signs of threat and warning others about the threat), we asked participants to report on five protective measures (i.e., hand washing, social distancing, wearing face masks, refraining from touching face/mouth, disinfection of items) during the last 30 days of the COVID-19 pandemic on a 4-point scale from 1 = never to 4 = every time. They first reported on the extent to which they engaged in these behaviors themselves (i.e., self-focused behavior; α = 0.80). They then reported on the extent to which they recommended or encouraged others to engage in these behaviors (i.e., other-focused behavior; α = 0.88). These two composites were moderately correlated (r = 0.66).

3. Results

Descriptive statistics and correlations are depicted in Table 1.

Our basic analytic plan was pre-registered on the Open Science Foundation (OSF) project page (https://osf.io/v97c7/) before data analysis began. Multiple regressions were fit in R (version 3.5.1) using the lavaan package (Rosseel, 2012). Prior to conducting analyses, continuous predictors (i.e., attachment anxiety and avoidance) were mean-centered to assist in interpretability, as these variables do not have meaningful zero-points.

We ran a series of multiple regressions to examine whether individual differences in attachment would be associated with sentinel behavior. The first composite, self-focused sentinel behavior, was regressed onto attachment anxiety and avoidance for each interpersonal target (e.g., mother, father, romantic partners). We also assessed whether global (i.e., general) anxiety and avoidance predicted self-focused sentinel behavior. There were statistically significant associations between individual differences in attachment and self-focused sentinel behavior (see Table 2). That is, people who scored higher in attachment avoidance with respect to their close relationships in general were less likely than their less-avoidant counterparts to engage in self-focused sentinel behavior (β = −0.13, SE = 0.05, p < 0.01). Significant associations also emerged for other relationship domains, such as partner/romantic attachment.

The second composite, other-focused sentinel behavior, was regressed onto attachment anxiety and avoidance for general attachment, as well as attachment to each interpersonal target (e.g., mother, father, romantic partners). Similar to the aforementioned results, people who scored higher in attachment avoidance in general were less likely than their less-avoidant counterparts to engage in other-focused sentinel behavior (β = −0.20, SE = 0.06, p < 0.001). Also, those who were more anxious with respect to their close relationships were more likely to engage in other-focused sentinel behavior (β = 0.14, SE = 0.06, p < 0.001).

2 This sample size ensured that we have statistical power of approximately 80% to detect population correlations of 0.20 or higher, using a two-tailed test.

3 Although it was not our primary interest, we also explored whether personality traits were associated with sentinel behavior. These analyses are reported in the Supplement.

4 All participants were from the United States.

5 Security is an additive combination of the two dimensions (see Gillath et al., 2016). That is, a prototypically secure individual is someone who does not worry about the availability and responsiveness of his or her attachment figures (low anxiety) and is comfortable using others as a secure base (low avoidance).
Table 1
Means, standard deviations, and correlations among all variables.

| Variable          | 1     | 2     | 3     | 4     | 5     | 6     | 7     | 8     | 9     | 10    | 11    | 12    | 13    | 14    | 15    |
|-------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 1. General Avoidance | 1.00  |       |       |       |       |       |       |       |       |       |       |       |       |       |       |
| 2. General Anxiety  |       | 0.33  |       |       |       |       |       |       |       |       |       |       |       |       |       |
| 3. Mother Avoidance |       |       | 0.57  |       |       |       |       |       |       |       |       |       |       |       |       |
| 4. Mother Anxiety   |       |       |       | 0.37  |       |       |       |       |       |       |       |       |       |       |       |
| 5. Father Avoidance |       |       |       |       | 0.38  |       |       |       |       |       |       |       |       |       |       |
| 6. Father Anxiety   |       |       |       |       |       | 0.37  |       |       |       |       |       |       |       |       |       |
| 7. Partner Avoidance|       |       |       |       |       |       | 0.38  |       |       |       |       |       |       |       |       |
| 8. Partner Anxiety  |       |       |       |       |       |       |       | 0.37  |       |       |       |       |       |       |       |
| 9. Open-Mindedness  |       |       |       |       |       |       |       |       | 0.36  |       |       |       |       |       |       |
| 10. Conscientiousness|     |       |       |       |       |       |       |       |       | 0.61  |       |       |       |       |       |
| 11. Agreeableness   |       |       |       |       |       |       |       |       |       |       | 0.42  |       |       |       |       |
| 12. Negative Emotionality| |       |       |       |       |       |       |       |       |       |       | 0.33  |       |       |       |
| 13. Sentinel Other Behavior| |       |       |       |       |       |       |       |       |       |       |       | 0.19  |       |       |

Note: Means and SDS presented for raw attachment Avoidance and Anxiety scores, prior to mean centering.

Sentinel Self Behavior = the extent to which people personally engaged in safe practices during the last 30 days.

Sentinel Other Behavior = the extent to which people warned loved ones to engage in safe practices during the last 30 days.

Table 2
Multiple regression models: attachment and sentinel self-focused behavior.

| Variables               | β     | SE  | R²  |
|-------------------------|-------|-----|-----|
| Intercept               | 3.26  | 0.04| 0.04|
| General Avoidance       | −0.13 | 0.05| 0.08|
| General Anxiety         | −0.02 | 0.05| 0.08|
| Intercept               | 3.26  | 0.04| 0.07|
| Mother Avoidance        | −0.18 | 0.05| 0.07|
| Mother Anxiety          | −0.03 | 0.05| 0.07|
| Intercept               | 3.26  | 0.04| 0.06|
| Father Avoidance        | −0.16 | 0.05| 0.06|
| Father Anxiety          | −0.04 | 0.05| 0.06|
| Intercept               | 3.26  | 0.04| 0.06|
| Partner Avoidance       | −0.15 | 0.06| 0.06|
| Partner Anxiety         | −0.01 | 0.06| 0.06|

*p < .05.

Table 3
Multiple regression models: attachment and sentinel other-focused behavior.

| Variables               | β     | SE  | R²  |
|-------------------------|-------|-----|-----|
| Intercept               | 3.11  | 0.05| 0.06|
| General Avoidance       | −0.20 | 0.06| 0.06|
| General Anxiety         | 0.14  | 0.06| 0.11|
| Intercept               | 3.11  | 0.05| 0.11|
| Mother Avoidance        | −0.30 | 0.06| 0.11|
| Mother Anxiety          | 0.21  | 0.06| 0.11|
| Intercept               | 3.11  | 0.05| 0.11|
| Father Avoidance        | −0.22 | 0.06| 0.11|
| Father Anxiety          | 0.12  | 0.06| 0.11|
| Intercept               | 3.11  | 0.06| 0.11|
| Partner Avoidance       | −0.13 | 0.07| 0.11|
| Partner Anxiety         | 0.08  | 0.07| 0.11|

*p < .05.

6 Although general attachment anxiety significantly predicted other-focused sentinel behavior, the correlation was non-significant (see Table 1).
others’ goodwill, combined with a desire to maintain independence, may negatively bias their beliefs regarding the effectiveness of wearing a mask.

Although this study is among the first of its kind to investigate individual differences in adult attachment with respect to sentinel behavior during the pandemic, it is not without its shortcomings. Our findings are limited by the characteristics of our sample; that is, participants were largely White males from MTurk. Relatedly, it is important to note that Amazon MTurk participants’ characteristics may differ from those of the general population. For instance, it has been suggested that workers are typically younger and more educated (Boas et al., 2020). Given that our results are inconsistent with predictions that can be derived from Social Defense Theory, future work should seek to examine whether SDT is a viable framework worthy of empirical efforts. If SDT is not supported in future studies, scholars should consider replacing it with standard attachment theory. In either case, it will be important to discern why avoidant people fail to warn others about engaging in COVID-19 behaviors. One possibility is that avoidant people are less likely to protect themselves and others because they are more accustomed to looking out for their own interests, even if this occurs at others’ expense (Mikulincer & Shaver, 2007). This could be tested by evaluating peoples’ behavior in response to COVID-19 scenarios. Would avoidant individuals behave more selfishly? Perhaps they would be more likely than their less avoidant counterparts to engage in panic buying (e.g., toilet paper, hand soap/sanitizer), even if such “ruthless” behavior (Ein-Dor et al., 2010) prevents others from getting the items that they need. Alternatively, it could be the case that avoidant people have less social contact, which lends itself to fewer opportunities to engage in sentinel behavior. Such a possibility could be examined by collecting experience sampling data over the course of the pandemic. For instance, one might gather repeated measurements of social context at the daily level in order to explore whether being alone or in the presence of others moderates the association between attachment avoidance and sentinel behavior.

Moreover, future work might examine why those who are higher in attachment anxiety are more likely to warn and encourage others to engage in safe practices, despite not engaging in these behaviors themselves. Can this be explained by virtue of their working models? That is, anxious individuals have a negative model of self and do not view themselves as worthy of care. They may be less likely to “socially distance” themselves from others out of a fear of rejection or concern about the availability and responsiveness of others. The current findings suggest that these questions might represent promising areas for further research.

CRediT authorship contribution statement

Elizabeth B. Lozano: Conceptualization, Methodology, Investigation, Writing - original draft. R. Chris Fraley: Investigation, Supervision, Writing - review & editing.

Appendix A. Supplementary data

Supplementary data to this article can be found online at https://doi.org/10.1016/j.paid.2020.110487.

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